As filed with the Securities and Exchange Commission on January 30, 2025

Registration Statement No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CELULARITY INC.
(Exact name of registrant as specified in its charter)

Delaware	2834	83-1702591
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

170 Park Avenue
Florham Park, New Jersey 07932
(908) 768-2170
(Address, including zip code and telephone number, including area code of registrant's principal executive offices)

Robert J. Hariri, M.D., Ph.D.
Chief Executive Officer and Chairman
Celularity Inc.
170 Park Avenue
Florham Park, New Jersey 07932
(908) 768-2170
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public:
As soon as practicable after the date this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: X

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer X	Smaller reporting company X Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B) of the Securities Act. ☐

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information contained in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION** **DATED JANUARY 30, 2025**

Up to 6,521,739 Shares of Class A Common Stock
Up to 6,521,739 Pre-Funded Warrants to purchase up to 6,521,739 Shares of Class A Common Stock

Celularity Inc.

We are offering up to 6,521,739 shares of our Class A common stock at an assumed public offering price of $2.30 per share, the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025. The actual public offering price per share of Class A common stock will be determined between us and the underwriters at the time of pricing and may be at a discount to this assumed offering price. Therefore, the assumed public offering price used throughout this prospectus may not be indicative of the final offering price.

We are also offering up to 6,521,739 pre-funded warrants (each a "Pre-funded Warrant") to purchase up to 6,521,739 shares of our Class A common stock, exercisable at an exercise price of $0.001 per share, to those purchasers whose purchase of Class A common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding Class A common stock immediately following the consummation of this offering. The purchase price of each Pre-funded Warrant is equal to the price per share of Class A common stock being sold to the public in this offering, minus $0.001. The Pre-funded Warrants will be immediately exercisable and may be exercised at any time until all of the Pre-funded Warrants are exercised in full. For each Pre-funded Warrant we sell, the number of shares of Class A

common stock that we are offering will be decreased on a one-for-one basis.

Our Class A common stock is listed on The Nasdaq Capital Market under the symbol "CELU". There is no established trading market for the Pre-funded Warrants and we do not intend to list the Pre-funded Warrants on any securities exchange or nationally recognized trading system.

You should read this prospectus, together with the additional information described under the headings "Where You Can Find More Information" carefully before you invest in any of our securities.

Investing in our securities is highly speculative and involves a high degree of risk. See "*Risk Factors*" beginning on page 14 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per Share	Per Pre-funded Warrant	Total
Public offering price	$	$	$
Underwriting discount[(1)]	$	$	$
Proceeds to us, before expenses	$	$	$

(1) The underwriting discount does not include a non-accountable expense allowance equal to 1.0% of the public offering price payable to the underwriters. See "Underwriting" for a description of compensation payable to the underwriters.

We have granted a 45-day option to the representative of the underwriters to purchase up to additional 978,260 shares of Class A common stock and/or up to 978,260 Pre-funded Warrants solely to cover over-allotments, if any.

The underwriters expect to deliver the securities to purchasers on or about , 2025.

ThinkEquity

The date of this prospectus is , 2025

celularity®

AN INTEGRATED-INDUSTRIALIZED BUSINESS MODEL

	ADVANCED BIOMATERIALS	BIOBANKING SERVICES	CELL THERAPY
ANTICIPATED REVENUE DRIVERS	• Current suite of commercial tissue-based products • Out-license relationships: Genting Innovations (Asia & PRC) and Biocellgraft (US)	• Controlled, operational raw material supply chain • Lifebank® newborn stem cell banking program • Adult Cell Banking Program launched 2Q 2024	• CDMO for autologous / allogeneic cell therapy products • Development partnerships: Regeneron, Aesthetics
GROWTH DRIVERS	• Medical Device 510(k) Product Development Pipeline • Out-license opportunities • Commercial CDMO Services	• Exclusive Obstetrics/birthing center Network • Adult Stem Cell Banking launch in Q2 with Fountain Life partnership	• Phase 3 readiness with phase 2 data in autoimmune and degenerative disease • 10+ year manufacturing and process development expertise Out-license opportunities

THE COMPANY TODAY

- Marketing 6 commercial stage products in regenerative medicine.
- ***Growing Revenues:*** *$36*MM revenue for nine months ended 9/30/2024; 239% YoY growth
- ***Commercial Pipeline:*** On track for three FDA Medical Device 510(k) filings in 2025-27.
- ***Compelling Phase II*** cell therapy data in autoimmune and degenerative diseases.
- ***Capacity & Capability:*** State-of-the-art R&D and GMP manufacturing expertise using placental API.

THE OPPORTUNITY

- Established commercial and developmental stage company in cellular and regenerative medicine.
- Proven track record in product development and growing commercial experience with innovative technologies.
- Leveraging pro-active regulatory strategy to broaden commercial portfolio.
- Phase III ready cell therapy in autoimmune/degenerative disease Broad opportunities in age-related diseases/longevity.
- Existing commercial-scale capabilities and capacity

ADVANCED BIOMATERIAL PRODUCTS

DEGENERATIVE DISEASE	INDICATION	DISCOVERY	REGULATORY	COMMERCIALIATION
Amniotic Membrane Allograft	Wound Care		361 HCT/P	BIOVANCE
Tri-Layer Amniotic Membrane Allograft	Wound Care		361 HCT/P	3L
Tri-Layer Amniotic Membrane Allograft	Ocular Protective Cover		361 HCT/P	Biovance 3L OCULAR
Amniotic Membrane Allograft	Wound Care		361 HCT/P	CentaFlex
Tri-Layer Amniotic Membrane Allograft	Wound Care		361 HCT/P	REBOUND
Placental Connective Tissue Matrix	Wound Care		361 HCT/P	Interfyl
Celularity Tendon Wrap (CTW)	Surgical Tendon Management		510(k)	
FUSE Bone Void Filler	Orthopedics / Bone, Spine, Dental		510(k)	
Celularity Placental Matrix (CPM)	Soft Tissue Management		510(k)	

CURRENT COMMERCIAL BUSINESS: *REGENERATIVE BIOMATERIAL PRODUCTS*

BIOVANCE

Completely decellularized placenta-derived allograft; provides dermal scaffold to serve as a foundation for advanced wound healing.

Interfyl

Connective tissue matrix (CTM) from chorionic plate of human placenta; provides structural support while maintaining its elasticity.

3L

Completely decellularized placenta-derived allograft; **unique 3-layer design** with improved structural integrity and handleability.

Biovance 3L OCULAR

Designed for ocular surface diseases and disorders.

CentaFlex

Completely decellularized human placental umbilical cord; provides stronger and more durable support for soft-tissue repair.

REBOUND

Completely decellularized Full Thickness placenta-derived allograft matrix consisting of a 3-layer design.

Launched 9/24

BRIDGE TO THE FUTURE: THREE FDA 510(K) FILINGS PLANNED IN 2025-2027

	Development	Pre-RFD*	Q-Sub	510(k) Studies Progress	510(k) Submission	Market Size 2023	Market Size 2031	CAGR**
Celularity Tendon Wrap	✓	✓	✓	80%	H2 2025	$ 2.2B	$ 4.7B	+7%
Fuse Bone Void Filler	✓	✓	✓	60%	H2 2026	$ 3.4B	$ 6.2B	+6%
Celularity Placental Matrix	✓	✓		50%	H2 2027	$14.6B	$21.8B	+5%

CELL THERAPY DISRUPTIVE VALUE OPPORTUNITY

- Highly proprietary cell therapy platform. Substantial human clinical experience with multiple cell therapy products.
- Multiple partnership-ready clinical stage assets in cell therapy.
- 3 clinical stage assets applicable to longevity and preservation of human performance.
- Placental Natural Killer (NK) cell product is a first-in-class “Senoablatant” for age-related diseases.
- Senoablation is a novel strategy for age-related frailty/sarcopenia and immunosenescence.

CELL THERAPY PIPELINE

Platform	Candidate	Optimization	Indications	Discovery	Pre-clinical	Phase 1/2	Phase 3
MLASC	PDA-001/002	Unmodified	Autoimmune (Crohn’s) & Degenerative Disease (DFU)				(Phase 3 Ready)
MLASC	PDA-001/002	Unmodified	FSHD			(Phase 1 Ready)	
pNK	CYNK-001	Unmodified / CAR + persistence + Stealth + Reduced Lymphodepletion	Age-Related Disease				
pT	undisclosed	CAR + Persistence + Stealth	Solid Tumor				
pT/ pNK	undisclosed	CAR + Persistence + Stealth	Autoimmune Disease				

LEVERAGING MANUFACTURING CAPABILITIES AND CAPACITY

Deep manufacturing and product development expertise supported by a fully integrated R&D and commercial-scale manufacturing infrastructure

World Class Facility
Purpose-built facility staffed by highly specialized scientists, engineers and technicians.

Fully Integrated
150,000 sq. ft., including laboratory and advanced manufacturing space for cellular medicine and biomaterial products.

Scalable Production
Clinical Scale – (9) Grade C/ISO 7 GMP suites and (6) Grade D/ISO 8 GMP labs

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ABOUT THIS PROSPECTUS

You should carefully read this prospectus before deciding to invest in our securities. Neither we nor the underwriters have authorized anyone to provide you with additional information or information different from that contained in this prospectus filed with the Securities and Exchange Commission (the "SEC"). We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The underwriters are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

The information provided in this prospectus contains estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry. We obtained the industry and market data in this prospectus from our own research as well as from industry and general publications, surveys and studies conducted by third parties. This data involves a number of assumptions and limitations and contains projections and estimates of the future performance of the industry in which we operate that are subject to a high degree of uncertainty, including those discussed in "Risk Factors." We caution you not to give undue weight to such projections, assumptions, and estimates. Further, industry and general publications, studies and surveys generally state that they have been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information. While we believe that these publications, studies, and surveys are reliable, we have not independently verified the data contained in them. In addition, while we believe that the results and estimates from our internal research are reliable, such results and estimates have not been verified by any independent source.

For investors outside the United States ("U.S."): We and the underwriters have not done anything that would permit this offering or the possession or distribution of this prospectus in any jurisdiction where action for those purposes is required, other than in the U.S. Persons outside the U.S. who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus outside of the U.S.

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Exchange Act of 1934, as amended (the "Exchange Act"), that involve risks and uncertainties. All statements other than statements of historical facts contained in this prospectus are forward-looking statements. You should not rely upon forward-looking statements as predictions of future events. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our business, financial condition, and results of operations. In some cases, you can identify these forward-looking statements by terms such as "anticipate," "believe," "continue," "could," "depends," "estimate," "expects," "intend," "may," "ongoing," "plan," "potential," "predict," "project," "should," "will," "would" or the negative of those terms or other similar expressions, although not all forward-looking statements contain those words. We have based these forward-looking statements on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, strategy, short- and long-term business operations and objectives, and financial needs. These forward-looking statements include, but are not limited to, statements concerning the following:

- the success, cost, timing and potential indications of our cellular therapy candidate development activities and clinical trials, as well as our ability to expand our biomaterials business and leverage our core expertise in cellular therapeutic development and manufacturing to generate revenues by providing contract manufacturing and development services to third parties;
- the size of the markets for our therapeutic candidates and biomaterials products, and our ability to serve those markets;
- the timing of the initiation, enrollment and completion of any potential clinical trials in the United States and foreign countries;
- our ability to obtain and maintain regulatory approval of our therapeutic candidates in any of the indications for which we plan to develop them, and any related restrictions, limitations, and/or warnings in the label of any approved therapeutic;
- our ability to maintain compliance with Nasdaq's continued listing standards;
- our ability to obtain funding for our operations, including funding necessary to complete the clinical trials of any of our therapeutic candidates;
- our ability and plans to research, develop, manufacture and commercialize our therapeutic candidates, as well as our degenerative disease products;
- our ability to attract and retain collaborators with development, regulatory and commercialization expertise;
- our ability to successfully commercialize our therapeutic candidates and biomaterials products and the ability for such therapeutic products and biomaterials products to qualify for reimbursement;
- our ability to develop and maintain sales and marketing capabilities, whether alone or with potential future collaborators;
- our estimates regarding future expenses, revenues, capital requirements and needs for additional financing;

- our use of cash and other resources; and
- our expectations regarding our ability to obtain and maintain intellectual property protection for our therapeutic candidates, degenerative disease products, and our ability to operate our business without infringing on the intellectual property rights of others.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in "Risk Factors." Furthermore, these forward-looking statements are based on information available as of the date of this prospectus, and current expectations, forecasts and assumptions, and involve a number of risks and uncertainties that could cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Some factors that could cause actual results to differ include:

- We have incurred net losses in every period since our inception, have no cellular therapeutic candidates approved for commercial sale and we anticipate that we will incur substantial net losses in the future. There is substantial doubt about our ability to continue as a going concern, which may affect our ability to obtain future financing and may require us to curtail our operations. We will need to raise additional capital to support our operations. This additional funding may not be available on acceptable terms or at all. Failure to obtain this necessary capital or address our liquidity needs may force us to delay, limit or terminate our operations, make further reductions in our workforce, discontinue our commercialization efforts for our biomaterials products as well as other clinical trial programs, liquidate all or a portion of our assets or pursue other strategic alternatives, and/or seek protection under the provisions of the U.S. Bankruptcy Code.
- We have substantial indebtedness, which is secured by all of our assets. Payments on our outstanding debt and debt maturities could impact our liquidity, require us to modify our operations to meet any payment obligations and could force us to seek protection under the provisions of the U.S. Bankruptcy Code.
- If sales of our currently commercialized biomaterial products decline significantly and we do not have alternative products to market, our business would be significantly harmed.
- Our placental-derived cellular therapy candidates represent a novel approach to cancer, infectious and degenerative disease treatments that creates significant challenges.
- If we are unable to obtain regulatory approval for our lead candidates and effectively commercialize our lead therapeutic candidates for the treatment of patients in approved indications, our business would be significantly harmed.
- We rely on distribution arrangements for the sale of our biomaterials products. We may incur costs to meet demand forecasts that do not materialize or we may be unable to meet demand if our distribution partners do not provide adequate forecasts.
- Our commercial biomaterials business may be impacted if The Centers for Medicare & Medicaid Services and Medicare Administrative Contractors do not reverse their Local Coverage Determination, or LCD, for skin substitute grafts and cellular and tissue-based products, or CTPs.
- We will continue to rely on third parties to conduct potential future clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of, or commercialize, our therapeutic candidates.
- The U.S. Food and Drug Administration, or FDA, regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory of our therapeutic candidates.
- We may not be able to file Investigational New Drug, or IND, applications to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit us to proceed without additional information or at all, and if so, we may encounter substantial delays in our clinical trials or may not be able to conduct our trials on the timelines we expect.

- We operate our own manufacturing and storage facility, which requires significant resources; manufacturing or other failures could adversely affect our clinical trials and the commercial viability of our therapeutic candidates and our biobanking and degenerative diseases businesses. We may not be successful in our plan to leverage our core expertise in cellular therapeutic development and manufacturing to generate revenues by providing contract manufacturing and development services to third parties.

- We rely on donors of healthy human full-term post-partum placentas to manufacture our therapeutic candidates and biomaterials products, and if we do not obtain an adequate supply of such placentas from qualified donors, development of our placental-derived allogeneic cells may be adversely impacted.

- Our potential future clinical trials may fail to demonstrate the safety and/or efficacy of any of our therapeutic candidates, which would prevent or delay regulatory approval and commercialization.

- If our efforts to protect the proprietary nature of the intellectual property related to our technologies are inadequate, we may not be able to compete effectively in our market.

- We are, and in the future may be, party to agreements with third parties. Disputes may arise with such third parties regarding the terms of such agreements, including terms governing payment obligations, contractual interpretation, or related intellectual property ownership or use rights, which could materially adversely impact us, including by requiring the payment of additional amounts, or requiring us to invest time and money in litigation or arbitration.

- Our therapeutic candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, limit their commercial potential or result in significant negative consequences.

- We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

- Our relationship with customers, physicians, and third-party payors are subject to numerous laws and regulations. If we or our employees, independent contractors, consultants, commercial partners and vendors violate these laws, we could face substantial penalties.

- Our business could be materially adversely affected by the effects of health pandemics or epidemics, as well as geopolitical conflicts, inflation, bank failures and recessions, in regions where we or third parties on which we rely have concentrations of clinical trial sites or other business operations.

- We will continue to incur significant costs as a result of operating as a public company, and our management will be required to devote substantial time to various compliance initiatives.

- In our Annual Report on Form 10-K for the year ended December 31 2023, we disclosed material weaknesses in our internal control over financial reporting. As such, our consolidated financial statements might contain material misstatements and/or we could be required to restate our financial results. Moreover, failures in internal controls may also cause us to fail to meet reporting obligations, negatively affect investor confidence in our management and the accuracy of our financial statements and disclosures, or result in adverse publicity and concerns from investors, any of which could have a negative effect on the price of our Class A common stock, subject us to regulatory investigations and penalties or stockholder litigation, and adversely impact our business, results of operations and financial condition.

Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

PROSPECTUS SUMMARY

The following summary highlights selected information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. It does not contain all the information that may be important to you and your investment decision. You should carefully read this entire prospectus, including the matters set forth under "Risk Factors," and our financial statements and related notes included elsewhere in this prospectus. In this prospectus, unless context requires otherwise, references to "we," "us," "our," "Celularity," or "the Company" refer to Celularity Inc., a Delaware corporation, and its consolidated subsidiaries, unless the context otherwise requires.

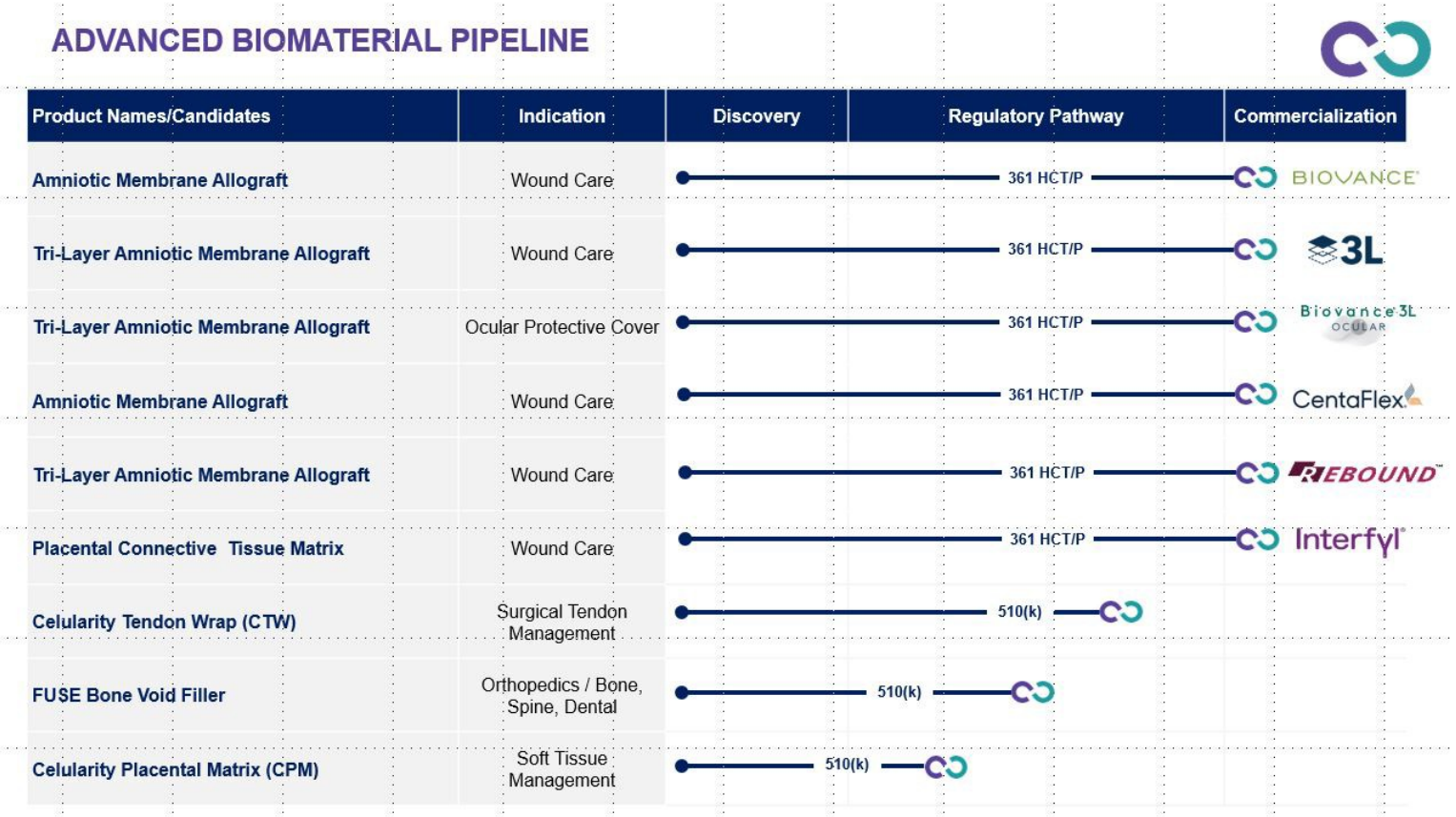
Overview

We are a regenerative and cellular medicines company focused on addressing aging related and degenerative diseases. Our goal is to ensure all individuals have the opportunity to live healthier longer. We develop off-the-shelf placental-derived allogeneic cell therapy product candidates including mesenchymal-like adherent stromal cells, or MLASCs, for which we have clinical datasets from Phase I and Phase II clinical studies and are prioritizing Phase III-ready programs in diabetic foot ulcer, or DFU, and Crohn's Disease, or CD. It also includes natural killer, or NK cells, product candidates for which we have clinical datasets from Phase I and Phase II clinical studies and are currently investigating in preclinical studies as senoablatant candidates. We believe that by harnessing the placenta's unique biology and ready availability, we will be able to develop therapeutic solutions that address a significant unmet global need for effective, accessible and affordable therapeutics. Our advanced biomaterials business today is comprised primarily of the sale of Biovance 3L and Rebound product lines, directly or through our distribution network. Biovance 3L is a tri-layer decellularized, dehydrated human amniotic membrane derived from the placenta of a healthy, full-term pregnancy. It is an intact, natural extracellular matrix that provides a foundation for the wound regeneration process and acts as a scaffold for restoration of functional tissue. Rebound is a full thickness extracellular matrix that contains amnion and chorion. We are developing new placental biomaterial products to deepen the biomaterials commercial pipeline. We also plan to leverage our core expertise in cellular therapeutic development and manufacturing to generate revenues by providing contract manufacturing and development services to third parties. The initial focus of this new service offering will be to assist development stage cell therapy companies with the development and manufacturing of their therapeutic candidates for clinical trials.

We are working toward a set of milestones with respect to off-the-shelf placental-derived allogeneic biomaterial product candidates and cell therapy product candidates, respectively. With respect to our biomaterial product candidate pipeline, we expect to submit a 510(k) application for our Celularity Tendon Wrap, or CTW, in the second half of 2025. We expect to advance the development of our FUSE Bone Void Filler, or FUSE, with the objective of a 510(k) filing in the second half of 2026, and to advance the development of our Celularity Placental Matrix, or CPM, with the objective of a 510(k) filing in the second half of 2027. With respect to our MLASCs cell therapy product candidate, we expect in the first half of 2025 to request an End of Phase 2, or EOP2, meeting with the FDA as part of which we intend to discuss with the FDA our Phase 3 plan and protocols. In addition, with respect to our MLASCs cell therapy product candidate, we expect to complete, in the first half of 2025, our assessment of previously generated data that is one factor in determining whether to progress our MLASCs cell therapy product candidate in CD to a Phase 3 clinical trial.

Our Celularity IMPACT manufacturing process is a seamless, fully integrated process designed to optimize speed and scalability from the sourcing of placentas from full-term healthy informed consent donors through the use of proprietary processing methods, cell selection, product-specific chemistry, manufacturing and controls, or CMC, advanced cell manufacturing and cryopreservation. The result is a suite of allogeneic inventory-ready, on demand placental-derived cell therapy products. We also operate and manage a commercial biobanking business that includes the collection, processing and cryogenic storage of certain birth byproducts for third-parties. A biobank is an organized collection of biological human material and its associated information stored for future retrieval and use in research, regenerative medicine, and innovation. We provide a fee-based biobanking service to expectant parents who contract with us to collect, process, cryogenically preserve and store certain biomaterial, including umbilical cord blood and placenta derived cells and tissue. We receive a one-time fee for the collection, processing, and cryogenic preservation of the biomaterials, and a storage fee to maintain the biomaterials in our biobank payable annually generally over a period of 18 to 25 years. We intend to explore opportunities to diversify our biobanking business, including adult cell banking.

Our current science is the product of the cumulative background and effort over two decades of our seasoned and experienced management team. We have our roots in Anthrogenesis Corporation, or Anthrogenesis, a company founded under the name Lifebank in 1998 by Robert J. Hariri, M.D., Ph.D., our founder and Chief Executive Officer, and acquired in 2002 by Celgene Corporation, or Celgene. The team continued to hone their expertise in the field of placental-derived technology at Celgene through August 2017, when we acquired Anthrogenesis. We have a robust global intellectual property portfolio comprised of over 350 patents and patent applications protecting our Celularity IMPACT platform, our processes, technologies and current key cell therapy programs. We believe this know-how, expertise and intellectual property will drive the rapid development and, if approved, commercialization of these potentially lifesaving therapies for patients with unmet medical needs.



Our Advanced Biomaterial Products

We develop and market off-the-shelf placental-derived allogeneic advanced biomaterial products including allografts and connective tissue matrices for soft tissue repair and reconstructive procedures in the treatment of degenerative disorders and diseases including those associated with aging. Our advanced biomaterial products include:

- Biovance®, a human amniotic membrane allograft designed to cover or offer protection from the surrounding environment in soft tissue repair and reconstructive procedure.
- Biovance®3L, a Tri-Layer Biovance® human amniotic membrane allograft designed for use as a covering, barrier, or wrap to surgical sites.
- Biovance® 3L Ocular, a tri-layer Biovance® human amniotic membrane allograft designed to support the treatment of ocular surface disease and ocular surgical applications.
- Interfyl®, a decellularized human placental connective tissue matrix designed for use to replace or supplement damaged or inadequate integumental tissue.
- CentaFlex®, a decellularized human placental matrix allograft derived from human umbilical cord designed for use as a surgical covering, wrap, or barrier to protect and support the repair of damaged tissues.

- Rebound™, a full thickness, placental derived extracellular matrix that contain amnion and chorion for use as a wound covering or barrier to protect and support full thickness wounds.

We also are developing new placental-derived advanced biomaterial products to deepen our commercial pipeline. We plan to explore opportunities to generate revenue and leverage our core expertise in advanced biomaterial product manufacturing by providing contract manufacturing services under which we manufacture one or more of our advanced biomaterial products for a distributor to sell under its own brand name(s). We also pursue opportunities to generate revenues that leverage our core expertise in cellular therapeutic development and manufacturing by providing contract manufacturing and development services to third parties. Contract manufacturing and development optimization services can help accelerate translational and clinical discoveries and mitigate the complexity and risk associated with introducing new cell therapeutics, including process variability, vulnerable supply chains, and manufacturing capacity constraints on scalability. Likewise, our biomaterial contract manufacturing and development services support scale-up for small and large commercial volumes, including tissue procurement, prototyping, private branding, and product distribution. Leveraging over three decades of experience in human tissue procurement and biobanking, we maintain supplies of cryopreserved placental tissue procured from informed consent donors so it is available on demand to be converted rapidly to finished biomaterial products, thereby addressing the structural vulnerabilities and inefficiencies inherent to most tissue supply chains.

Addressable Markets

According to Global Market Insights, the global tendon repair market was valued at $2.2 billion with a 10 year compounded annual growth rate of 7.8% and the global bone graft substitute market was valued at $3.4 billion with a 10 year compounded annual growth rate of 6.8%. Furthermore, according to Nova 1 Advisors, the U.S. wound care market was estimated at $14.6 billion with a 10 year compounded annual growth rate of 5.1% and, according to Allied Market Research, the global dermal filler market is estimated to be approximately $5.1 billion with a 10 year compounded annual growth rate of 10.8%.

Our Strategy

Our goal is to lead the next evolution in cellular and regenerative medicine by delivering off-the-shelf allogeneic cellular therapies, at greater scale and quality with attractive economics. We believe achieving this goal will result in placental-derived allogeneic cellular therapies becoming a standard of care in various indications across cancer, infectious and degenerative diseases, and enable us to make potentially lifesaving therapies more readily accessible to more patients throughout the world. We plan to achieve this mission by:

- ***Leveraging the inherent advantages of placental-derived cells***. Our cells come from the postpartum placenta donated by healthy donors who have signed an informed consent, representing a renewable, economical, and highly scalable starting material collected under rigorous controls. We use those cells to produce on-demand, off-the-shelf investigational allogeneic cellular therapy products investigational medicines that are designed to sidestep treatment delays inherent to more costly autologous cellular therapies and other allogeneic cellular therapy approaches, all while offering the potential for greater in vivo expansion, persistence, potency, and acceptance. Further, we believe the immunological naïveté of placental cells may allow for potentially less toxicity.
- ***Capturing efficiencies through our integrated Celularity IMPACT platform.*** Manufacturing allogeneic cell therapeutic candidates involves a series of complex and precise steps. We believe a critical component to our success will be to leverage our rapidly scalable, end-to-end supply chain. Applying proprietary manufacturing know-how, expertise and capacity utilizing our purpose-built U.S.-based cGMP, compliant facility, we believe our fully integrated manufacturing operations and infrastructure will allow us to improve the manufacturing process, eliminate reliance on contract manufacturing organizations, or CMOs, and more rapidly advance therapeutic candidates. We also plan to leverage this core expertise to generate revenues by providing contract manufacturing and development services to third parties.
- ***Selectively targeting indications with unmet patient need with potential for accelerated development***. Our pipeline reflects our intent to leverage the unique biology of the placenta to develop placental-derived allogeneic cells for indications where the demonstrated properties of such cells could provide an advantage, both in terms of development (sourcing and proliferation) and potential efficacy (affinity). In selecting indications, we evaluate where the biological properties of placental-derived cells position them for success, as well as where there is a clearly defined regulatory pathway providing the potential for accelerated development to address unmet patient need.

- ***Growing our existing commercial business and deepening the pipeline of placentally derived biomaterial products.*** We intend to grow our existing commercial business both through higher volumes of product sold through existing domestic distribution relationships as well as distribution relationships outside of the United States. We plan to continue to invest in new biomaterials programs, some or all of which may require different regulatory pathways than Section 361 HCT/Ps. We are currently developing a tendon wrap indicated for the management and protection of tendon injuries in which there has been no substantial loss of tendon tissue. We are also developing a bone void filler product for use in orthopedic surgical markets. We have preliminary data from a knee osteoarthritis animal model that placentally derived extracellular matrix may decrease joint pain and promote chondrogenesis in damaged cartilage. These programs have been developed to offset the changes in the reimbursement environment which the Center for Medicare & Medicaid Services, or CMS, has been exploring over the last 12-18 months. These products achieve two goals: the first is to address significant unmet needs in their particular medical specialties; and the second is to achieve reimbursement in a different

vertical of CMS which is more consistent without deteriorating reimbursement.

- ***Continuing to invest in basic and translational research.*** We intend to continue to invest in the discovery and development of additional pipeline cell franchises and explore other placental-derived cell opportunities. Preclinical and early clinical data demonstrating the unique biological activity and potential of placental-derived stem cells, provide potential for multiple highly effective cellular therapy programs.

- ***Benefiting from collective experience of deep, seasoned management team.*** We have a deep, seasoned management team with experience in all aspects of cellular medicine, including discovery and translational research, clinical development and product approval, manufacturing and process development and commercialization. For over two decades, the team has been at the vanguard of cellular medicine, and has collectively seen a number of programs, including one cellular therapy, through FDA-approval to commercialization.

Recent Developments

On October 9, 2024, the Company entered into an asset purchase agreement with Sequence LifeScience, Inc., or Sequence, pursuant to which the Company acquired Sequence's Rebound™ full thickness placental-derived allograft matrix product, or the Product, and certain assets related thereto, collectively the Asset. The aggregate consideration paid for the Asset was $5,500,000, which consisted of (i) an upfront cash payment of $1,000,000 (ii) an aggregate of up to $4,000,000 in monthly milestone payments, or the Milestone Payments, and (iii) a credit of $500,000 for the previous payment made by the Company to Sequence pursuant to that certain letter of intent between the Company and Sequence dated August 16, 2024. Pursuant to the terms of the Asset Purchase Agreement, the Milestone Payments are calculated based on 20% of net sales collected by the Company from its customers during the preceding calendar month, commencing the first full month after the closing of the transaction. The closing of the transaction occurred on October 9, 2024. Concurrently with the execution of the Asset Purchase Agreement, the Company entered into an exclusive supply agreement with Sequence for the manufacture and supply of the Product for a minimum period of six months. The Company retains the right to manufacture the Product internally and intends to commence a technology transfer as soon as practicable.

On November 25, 2024, the Company entered into a securities purchase agreement with an accredited investor pursuant to which the Company agreed to sell and issue to the investor and other purchasers in a private placement transaction, in one or more closings, unsecured senior convertible notes (the "November Notes") and warrants (the "November Warrants"). As of the date of this prospectus, the Company has issued and sold $750,000 in aggregate principle amount of November Notes and related November Warrants. The November Notes bear interest at an annual rate of 8% (increasing to 10% in the event of default as defined in the securities purchase agreement) and have a maturity date of one year from the date of issuance. Upon an event of default, the November Notes are convertible at the holder's option into shares of the Company's Class A common stock at a price per share equal to (i) $2.85 (adjusted for stock splits, reverse stock splits, stock dividends, or similar transactions); or (ii) the offering price of a subsequent financing transaction with gross proceeds of $2,500,000 or more, subject to a floor price of $1.00 per share. The November Warrants entitle the holder thereof to purchase shares of Class A common stock equal to the principal amount of November Notes purchased by such holder, divided by the exercise price of $2.85 per share. The exercise price, and the number of shares of Class A common stock issuable under the November Warrants, are subject to a one-time reset upon the completion of a subsequent financing transaction with gross proceeds of $2,500,000 or more, subject to a floor price of $1.00 per share. The November Warrants are immediately exercisable and have a five-year term.

On December 27, 2024, the Company entered into a securities purchase agreement with an institutional investor for the issuance and sale in a private placement (the "December Placement") of (i) 1,263,157 shares of the Company's Class A common stock and (ii) five-year warrants to purchase up to 1,263,157 shares of the Company's Class A common stock, at a purchase price of $2.375 per share of Class A common stock and accompanying warrant. Effective as of January 23, 2025, the December Placement was terminated.

On January 24, 2025, the Company agreed with the holder of warrants dated January 16, 2024 to purchase 535,274 shares of Class A common stock (the "2024 Warrant") and warrants dated January 9, 2020, as amended, to purchase 652,981 shares of Class A common stock (the "2020 Warrant" and together with the 2024 Warrants, the "Warrants") to amend the exercise price of the Warrants to $2.07 per share from $2.49 per share. The holder agreed to exercise the Warrants for gross proceeds to the Company of approximately $2.46 million.

On January 29, 2025, Dr. Robert Hariri, our CEO, extended the maturity date of his outstanding loans from December 31, 2024 to December 31, 2025.

Corporate Information

Celularity Inc., formerly known as GX Acquisition Corp. ("GX"), was a blank check company incorporated in Delaware on August 24, 2018. The Company was formed for the purpose of effectuating a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or other similar business combination with one or more businesses. On July 16, 2021 (the "Closing Date"), the Company consummated the previously announced merger pursuant to the Merger Agreement and Plan of Reorganization, dated January 8, 2021 (the "Merger Agreement"), by and among GX, Alpha First Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of GX ("First Merger Sub"), Celularity LLC (f/k/a Alpha Second Merger Sub LLC), a Delaware limited liability company and a direct, wholly owned subsidiary of GX ("Second Merger Sub"), and the entity formerly known as Celularity Inc., incorporated under the laws of the state of Delaware on August 29, 2016 ("Legacy Celularity"). Upon completion of the merger transaction, GX changed its name to Celularity Inc.

Our principal executive offices are located at 170 Park Avenue, Florham Park, New Jersey 07932, and our telephone number is (908) 768-2170. We maintain a website at *https://celularity.com/* where general information about us is available. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our securities.

Risk Factor Summary

Our business is subject to significant risks and uncertainties that make an investment in us speculative and risky. Below we summarize what we believe are the principal risk factors but these risks are not the only ones we face, and you should carefully review and consider the full discussion of our risk factors in the section titled "Risk Factors," together with the other information included in this prospectus. If any of the following risks actually occurs (or if any of those listed elsewhere in this prospectus occur), our business, reputation, financial condition, results of operations, revenue, and future prospects could be seriously harmed. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business.

Risks Related to Business and Industry

- We have incurred net losses in every period since our inception, have no cellular therapeutics approved for commercial sale and anticipate that we will incur substantial net losses in the future. We will need substantial additional financing to develop our therapeutics and implement our operating plans. If we fail to obtain additional financing, we may be unable to complete the development and commercialization of our therapeutic candidates.

- Our historical operating results indicate substantial doubt exists related to our ability to continue as a going concern.

- Our placental-derived cellular therapy candidates represent a novel approach to cancer, infectious and degenerative disease treatments that creates significant challenges. In addition, the gene-editing technology we use is relatively new, and if we are unable to use this technology in our intended therapeutic candidates, our revenue opportunities will be materially limited. Moreover, our therapeutic candidates are based on novel technologies, which makes it difficult to predict the time and cost of therapeutic candidate development and obtaining regulatory approval.

- We may not be able to submit INDs to commence additional clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit such trials to proceed.

- Clinical trials are expensive, time-consuming and difficult to design and implement.

- Our organizational changes and cost cutting measures may not be successful.

- We operate our own manufacturing and storage facility, which requires significant resources; manufacturing or other failures could adversely affect our clinical trials and the commercial viability of our therapeutic candidates and our biobanking and degenerative diseases businesses.

- Changes in funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new therapeutics and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal functions on which the operation of our business may rely, which could negatively impact our business.

- If we do not obtain and maintain federal and state licenses and registrations required for our current and future operations, our ability to generate revenue will be limited.

- Failure to maintain effective internal controls could cause our investors to lose confidence in us and adversely affect the market price of our Class A common stock. If our internal controls are not effective, we may not be able to accurately report our financial results or prevent fraud.

Risks Related to Our Reliance on Third Parties

- We rely and will continue to rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of, or commercialize, our therapeutic candidates.

- We rely on donors of healthy human full-term placentas to manufacture our therapeutic candidates, and if we do not obtain an adequate supply of such placentas from qualified donors, development of our placental-derived allogeneic cells may be adversely impacted.

- Cell-based therapies rely on the availability of specialty raw materials, which may not be available to us on acceptable terms or at all.

Risks Related to Government Regulation

- The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our future therapeutic candidates.

- Obtaining and maintaining regulatory approval of our therapeutic candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our therapeutic candidates in other jurisdictions.

- Our commercial biomaterials business may be impacted if The Centers for Medicare & Medicaid Services and Medicare Administrative Contractors do not reverse their LCD for skin substitute grafts and CTPs.

Risks Related to Our Intellectual Property

- If our efforts to protect the proprietary nature of the intellectual property related to our technologies is not adequate, we may not be able to compete effectively in our market. In addition, we may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.
- We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.
- We may not be able to protect our intellectual property rights throughout the world.

Risks Related to this Offering and Ownership of Our Class A Common Stock

- Our Class A common stock may be delisted from the Nasdaq and begin trading in the over-the-counter markets if we are not successful in retaining compliance with the Nasdaq's continued listing standards, which may negatively impact the price of our Class A common stock and our ability to access the capital markets.
- You may experience immediate and substantial dilution in the net tangible book value per share of the Class A common stock you purchase in the offering.
- The Pre-funded Warrants are speculative in nature. There is no established public trading market for the Pre-funded Warrants being offered in this offering, and we do not expect a market to develop for the Pre-funded Warrants.

Implications of Being a Smaller Reporting Company

As a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, we may take advantage of accommodations afforded to smaller reporting companies including: (i) not being required to comply with the auditor attestation requirements of Section 404(b) of the Sarbanes Oxley Act of 2002, so long as we also qualify as a "non-accelerated filer" as defined in the Exchange Act; (ii) scaled executive compensation disclosure requirements; and (iii) providing only two years of audited financial statements, instead of three years. We will qualify as a smaller reporting company: (i) until the fiscal year following the determination that the market value of our voting and non-voting common stock held by non-affiliates is more than $250 million measured on the last business day of our second fiscal quarter, or (ii) if our annual revenues are less than $100 million during the most recently completed fiscal year, until the fiscal year following the determination that the market value of our voting and non-voting common stock held by non-affiliates is more than $700 million measured on the last business day of our second fiscal quarter.

THE OFFERING

Shares of Class A common stock being offered	Up to 6,521,739 shares of Class A common stock at an assumed public offering price of $2.30 per share, the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025.
Pre-funded Warrants being offered	We are also offering up to 6,521,739 Pre-funded Warrants to 6,521,739 purchase up to shares of our Class A common stock, exercisable at an exercise price of $0.001 per share, to those purchasers whose purchase of Class A common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding Class A common stock immediately following the consummation of this offering. The purchase price of each Pre-funded Warrant is equal to the price per share of Class A common stock being sold to the public in this offering minus $0.001. The Pre-funded Warrants will be immediately exercisable and may be exercised at any time until exercised in full. This prospectus also relates to the offering of Class A common stock issuable upon exercise of the Pre-funded Warrants. For each Pre-funded Warrant we sell, the number of shares of Class A common stock that we are offering will be decreased on a one-for-one basis. For additional information regarding the terms of the Pre-funded Warrants, see "Description of Capital Stock and Securities We Are Offering."
Underwriters' over-allotment option	We have granted the underwriters a 45 day option from the date of this prospectus, exercisable one or more times in whole or in part, to purchase up to an additional 978,260 shares of Class A common stock and/or up to an additional 978,260 Pre-funded Warrants (15% of the total number of shares of Class A common stock and/or Pre-funded Warrants to be offered by us in the offering), solely to cover over-allotments, if any.
Number of shares of Class A common stock to be outstanding after this offering (1)	30,329,488 shares (or 31,307,748 shares if the underwriters exercise the option to purchase additional shares in full), assuming no sale of the Pre-funded Warrants.
Use of proceeds	We expect to receive net proceeds, after deducting underwriting discounts and estimated expenses offering payable by us, of approximately $13.3 million (or approximately $15.4 million if the underwriters exercise their option to purchase additional shares and/or Pre-funded Warrants in full), assuming a public offering price of $2.30 per share, the last reported sale price of our Class A common stock on The Nasdaq Capital Market on January 23, 2025, after deducting underwriting discounts and estimated offering expenses payable by us, and assuming no sale of any Pre-funded Warrants. We intend to use the net proceeds from this offering for working capital and general corporate purposes. See "Use of Proceeds" for a more complete description of the intended use of proceeds from this offering.
Lock Up Agreements	Our executive officers and directors have agreed with the underwriters not to sell, transfer or dispose of any shares or similar securities for a period of three months from the date of this prospectus. For additional information regarding our arrangement with the underwriters, please see "Underwriting."
Risk factors	Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page 14 of this prospectus, and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our securities.

Nasdaq Capital Market Symbol	"CELU". There is no established trading market for the Pre-funded Warrants, and we do not expect a trading market to develop. We do not intend to list the Pre-funded Warrants on any securities exchange or nationally recognized trading system.

(1) The number of shares of our Class A common stock to be outstanding after this offering is based on 23,807,749 shares of our Class A common stock outstanding as of January 24, 2025, and excludes:

- 10,033,302 shares of Class A common stock issuable upon exercise of warrants with a weighted average exercise price of $30.25;
- 3,985,086 shares of Class A common stock issuable upon exercise of options with a weighted average exercise price of $27.35;
- 646,896 shares of Class A common stock issuable upon vesting of outstanding restricted stock units;
- 28,665 shares of Class A common stock issuable upon vesting of market condition stock unit awards;
- 2,615,366 shares of Class A common stock reserved for future issuance under our existing stock incentive plan;
- 746,109 shares of Class A common stock issuable upon the conversion of a note in the outstanding principal amount of $2.1 million together with interest accrued thereon based upon a conversion price of $2.7546;
- 330,362 shares of Class A common stock issuable upon the conversion of a note in the outstanding principal amount of $750,000 together with interest accrued thereon based upon a conversion price of $2.30 (assuming a public offering price of $2.30 per share, the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025); and
- 326,086 shares of Class A common stock (or 374,999 shares if the representative exercises its over-allotment option in full) issuable upon exercise of warrants to be issued to the representative of the underwriters as part of this offering at an exercise price of $2.875 (assuming a public offering price of $2.30 per share, the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025).

Unless otherwise indicated, all information in this prospectus assumes:

- no exercise of the warrants or options described above; and
- no exercise by the underwriters of their option to purchase an additional 978,260 shares of Class A common stock and/or Pre-funded Warrants to cover over-allotments, if any.

Summary Financial Information

The following tables summarize our consolidated financial data for the periods and as of the dates indicated. We have derived the summary financial data from the years ended December 31, 2023 and 2022 from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The summary data for the nine months ended September 30, 2024 and 2023 is derived from our unaudited condensed consolidated financial statements appearing elsewhere in this prospectus. Our historical results are not necessarily indicative of results that may be expected in the future. You should read the following summary consolidated financial data together with our audited and unaudited consolidated financial statements and related notes, as well as the "Management's Discussion and Analysis of Financial Condition and Results of Operations," appearing elsewhere in this prospectus.

Consolidated Statements of Operations Data (In Thousands)

	Years Ended December 31,		Unaudited Nine Months Ended September 30,	
	2023	2022	2024	2023
Total revenues	$ 22,771	$ 17,975	$ 36,088	$ 10,659
Operating costs	215,058	43,575	65,166	216,261
Loss from operations	192,287	25,600	(29,078)	(205,602)
Total other income (expense), net	(3,998)	39,805	(15,521)	(240)
Net loss (income)	$ (196,295)	$ 14,192	$ (44,599)	$ (205,842)

Balance Sheet Data

	As of September 30, 2024 *Unaudited*		
	Actual (1)	Pro Forma (2)	Pro Forma as Adjusted (3)
Cash and cash equivalents	$ 133	$ 3,221	$ 16,552
Other current assets	14,369	14,369	14,369
Operating lease right-of-use assets, net	10,865	10,865	10,865
Property and equipment, net	63,208	63,208	63,208
Total other assets	40,265	40,265	40,265
Total assets	**$ 128,840**	**$ 131,928**	**$ 145,259**
Accounts payable	$ 15,400	$ 15,400	$ 15,400
Accrued expenses	10,559	10,559	10,559
Accrued payroll and payroll taxes	3,907	3,907	3,907
Deferred revenue	6,332	6,332	6,332
Operating lease liability	26,451	26,451	26,451
Short-term and Long-term debt	38,915	38,915	38,915
Convertible debt	3,695	3,126	3,126
Other liability	6,301	6,301	6,301
Total liabilities	**$ 111,560**	**$ 110,991**	$ 110,991
Common Stock	$ 2	$ 2	$ 3
Additional paid in capital	903,670	907,449	920,778
Accumulated other comprehensive income (loss)	(2)	(2)	(2)
Accumulated deficit	(886,390)	(886,512)	(886,512)
Treasury Stock, at cost	-	-	-
Non-controlling interest	-	-	-
Total stockholders' equity	17,280	20,937	34,268
Total liabilities and stockholders' equity	**$ 128,840**	**$ 131,928**	**$ 145,259**

(1) The actual consolidated balance sheet data includes the issued and outstanding shares of all classes of common stock as of September 30, 2024, being 21,984,614 shares of Class A common stock.

(2) The pro forma consolidated balance sheet data gives effect to the issued and outstanding shares of all classes as of September 30, 2024, being 21,984,614 shares of Class A common stock, and subsequent issuances of (i) $750,000 of unsecured senior convertible notes and warrants to purchase up to 717,179 shares of our Class A common stock pursuant to that certain securities purchase agreement dated November 25, 2024, (ii) conversion of approximately $1.3 million of convertible promissory notes into 478,881 shares of the Company's Class A common stock on various dates in November 2024 and (iii) the issuance of 1,188,255 shares of the Company's Class A common stock issued upon the exercise of a warrant on January 24, 2025. The Company has elected to carry its convertible debt and embedded derivatives at fair value on a recurring basis as permitted under ASC 825, Financial Instruments. These pro forma adjustments do not include changes in the fair value of the convertible debt instruments.

(3) The pro forma as adjusted consolidated balance sheet data gives effect to the pro forma adjustments and the sale of shares of our Class A common stock and Pre-funded Warrants in this offering at the public offering price of $2.30 per share (the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025), after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted consolidated balance sheet data discussed above is illustrative only and will depend on the actual public offering price and other terms of this offering determined at pricing.

RISK FACTORS

An investment in our securities involves a high degree of risk. Prior to making a decision about investing in our securities, you should carefully consider the risk factors described below together with all of the other information contained in this prospectus. Additional risks and uncertainties not presently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in this prospectus or any additional risks and uncertainties actually occur, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our Class A common stock could decline and you might lose all or part of your investment.

Risks Related to Business and Industry

We have incurred net losses in every period since our inception, have no cellular therapeutics approved for commercial sale and anticipate that we will incur substantial net losses in the future.

We are a clinical-stage biopharmaceutical company, have no cellular therapeutics approved for commercial sale, have not generated any revenue from cellular therapeutic sales to date, and will continue to incur research and development and other expenses related to our ongoing operations. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront expenditure and significant risk that any potential therapeutic candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, gain regulatory approval and become commercially viable. As a result, we are not profitable and have incurred net losses in each period since our inception. We reported a net loss of $44.6 million and $196.3 million and net income of $14.2 million for the nine months ended September 30, 2024 and the years ended December31, 2023 and 2022, respectively. We had an accumulated deficit of $886.4 million and $841.8 million and cash and cash equivalents of $0.1 million and $0.2 million at September 30, 2024 and December 31, 2023, respectively.

Even after significant reductions in headcount in 2023, our strategic review to refocus our pipeline, and capital raises in 2024, we expect to incur significant expenditures for the foreseeable future, and we expect these expenditures to increase as we continue production of our commercial products that have seen strong demand. We will continue to incur research and development and other expenditures to develop and market therapeutic candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue from our current and future biomaterial products. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

Our historical operating results indicate substantial doubt exists related to our ability to continue as a going concern.

We have incurred net losses and used significant cash in operating activities since inception, have no cellular therapeutic candidates approved for commercial sale and we anticipate that we will incur substantial net losses in the future. We had an accumulated deficit of $886.4 million and $841.8 million and cash and cash equivalents of $0.1 million and $0.2 million as of September 30, 2024 and December 31, 2023, respectively, and as of the date of this prospectus, had approximately $0.7 million of unrestricted cash and cash equivalents available to fund our operations and no available additional sources of outside capital to sustain our operations for a period of 12 months beyond the issuance date. Accordingly, there is substantial doubt about our ability to continue as a going concern, which may affect our ability to obtain future financing and may require us to further curtail our operations and our former independent registered public accounting firm included in its opinion for the years ended December 31, 2023 and 2022 an explanatory paragraph referring to our recurring losses, and net cash outflows from operations and outstanding debt and expressing substantial doubt in our ability to continue as a going concern without additional capital becoming available. For additional details, see the discussion under "*Management's Discussion and Analysis of Financial Condition and Results of Operations – Overview - Going Concern*." We will need to raise additional capital to support our operations. This additional funding may not be available on acceptable terms or at all. Failure to obtain this necessary capital or address our liquidity needs may force us to delay, limit or terminate our operations, make further reductions in our workforce, discontinue our commercialization efforts for our biomaterials products as well as other clinical trial programs, liquidate all or a portion of our assets or pursue other strategic alternatives, and/or seek protection under the provisions of the U.S. Bankruptcy Code.

We will need substantial additional financing to develop our therapeutics and implement our operating plans. If we fail to obtain additional financing, we may be unable to complete the development and commercialization of our therapeutic candidates.

We will need substantial additional financing to develop our therapeutics and implement our operating plans. Further, if approved, we will require significant additional amounts in order to launch and commercialize our therapeutic candidates.

As of September 30, 2024 and December 31, 2023, we had $8.8 million and $0.2 million in cash and cash equivalents, respectively. We will need to raise additional capital to implement our plans. Further, changing circumstances may cause us to consume capital significantly faster than we currently anticipate, and we may need to spend more money than currently expected because of circumstances beyond our control. We may also need to raise a large amount of capital sooner than currently anticipated if we choose to expand more rapidly than our present plans. In any event, we will require additional capital for the further development and commercialization of our therapeutic candidates, including funding our internal manufacturing capabilities and growth of our degenerative disease business.

We cannot be certain that additional funding will be available on acceptable terms, or at all. We have no committed source of additional capital and if we are unable to raise additional capital in sufficient amounts or on terms acceptable to us, we may have to significantly delay, scale back or discontinue the development or commercialization of our therapeutic candidates or other research and development initiatives. We could be required to seek collaborators for our

therapeutic candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available or relinquish or license on unfavorable terms our rights to our therapeutic candidates in markets where we otherwise would seek to pursue development or commercialization ourself. Any of the above events could significantly harm our business, prospects, financial condition and results of operations and cause the price of our securities to decline.

We may expend our limited resources to pursue product candidates that do not yield a successful product and fail to capitalize on development opportunities or therapeutic candidates that may be more profitable or for which there is a greater likelihood of success.

Due to the significant resources required for the development of our product candidates, we must focus on specific treatment pathways and decide which product candidates to pursue and the amount of resources to allocate to each such product candidate. Specifically, we are focused on the development of cellular therapeutic candidates, targeting indications across cancer, infectious and degenerative diseases. Our decisions concerning the allocation of research, development, collaboration, management and financial resources toward particular product candidates areas may not lead to the development of any viable product and may divert resources away from better opportunities. Similarly, any decision to delay, terminate or collaborate with third parties in respect of certain programs may subsequently also prove to be suboptimal and could cause us to miss valuable opportunities. If we make incorrect determinations regarding the viability or market potential of any of our programs or product candidates or misinterpret trends in the pharmaceutical, biopharmaceutical or biotechnology industry, our business, financial condition and results of operations could be materially adversely affected. As a result, we may fail to capitalize on viable commercial products or profitable market opportunities, be required to forego or delay pursuit of opportunities with other product candidates that may later prove to have greater commercial potential than those we choose to pursue, or relinquish valuable rights to such product candidates through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to invest additional resources to retain development and commercialization rights.

Our placental-derived cellular therapy candidates represent a novel approach to cancer, infectious and degenerative disease treatments that creates significant challenges.

We are developing a pipeline of allogeneic cellular therapeutic candidates that are derived from healthy, full-term, human donor placentas, and in certain cases, are genetically modified. Allogeneic cells are intended to be "off-the-shelf" for use in any patient. Advancing these novel therapeutic candidates creates significant challenges, including:

- manufacturing cellular therapeutic candidates to our and regulatory specifications and in a timely manner to support our clinical trials, and, if approved, commercialization;
- biosourcing placentas and other materials and supplies for the manufacture of our therapeutic candidates;
- any variability in placental-derived cells, or a higher-rejection rate, which could ultimately affect our ability to produce therapeutics in a reliable and consistent manner and treat certain patients;
- educating medical personnel regarding the potential advantages and potential disadvantages such as the side effect profile of our therapeutics, if approved, such as the potential adverse side effects related to graft-versus-host disease, or GvHD, cytokine release syndrome, or CRS, neurotoxicity, prolonged cytopenia and neutropenic sepsis;
- using medicines to manage adverse side effects of our therapeutic candidates that may not adequately control the side effects and/or may have a detrimental impact on the efficacy of the treatment;
- obtaining regulatory approval, as the FDA, and other regulatory authorities have limited experience with development of allogeneic cell therapies for cancer, infectious and degenerative diseases; and
- establishing sales and marketing capabilities for our therapeutic portfolio upon obtaining any regulatory approval to gain market acceptance of a novel therapy.

The gene-editing technology we use is relatively new, and if we are unable to use this technology in our intended therapeutic candidates, our revenue opportunities will be materially limited.

We use gene editing techniques to modify certain of the placental-derived cell types. We use these technologies to either reduce the risk of toxicity or improve the potential for efficacy. These technologies are relatively new, and may not be shown to be effective at achieving the expected effect in clinical studies, or may be associated with safety issues, either in our clinical development programs or those of others using these novel technologies. Any issues with the novel gene editing technologies, even if not experienced by us, could negatively affect our development programs. Genetic modifications may create unintended changes to the DNA of the edited cell, such as a non-target site gene-editing, a large deletion, or a DNA translocation, any of which could lead to unwanted side-effects. The gene-editing of our therapeutic candidates may also not be successful in limiting the risk of GvHD or thrombosis or in increasing affinity.

Some competitors in the allogeneic cell therapy space and more broadly in the gene therapy space have had clinical trials put on hold by the FDA. Based on findings in those clinical trials, the FDA may request additional testing, request different types of testing or even substantially revise the methodology used to evaluate clinical trials for other companies pursuing similar therapeutic avenues. We cannot control the actions of our competitors, cannot influence the results of their clinical trials and cannot know how FDA may react to a specific fact pattern arising in another clinical trial. Additional testing, different types of testing or a revised regulatory approach may delay our future clinical trials, increase costs in our future trials or otherwise preclude our trial from being given permission to proceed absent substantial time, effort and resources on our part.

The gene-editing industry is rapidly developing, and our competitors may introduce new technologies that render the technologies that we employ for our therapeutic candidates obsolete or less attractive. New technology could emerge at any point in the development cycle of our therapeutic candidates. As competitors use or develop new technologies, any failures of such technology could adversely impact our programs. We also may be placed at a competitive disadvantage, and competitive pressures may force us to implement new technologies at a substantial cost. In addition, our competitors may have greater financial, technical and personnel resources that allow them to enjoy technological advantages and may in the future allow them to implement new technologies before we can. We cannot be certain that we will be able to implement technologies on a timely basis or at an acceptable cost. If we are unable to maintain technological advancements consistent with industry standards, our operations and financial condition may be adversely affected.

We will rely on licensed gene editing technology for future cell therapy product candidates.

We are dependent on patents, know-how and proprietary technology, both our own and licensed from others.

While certain of these technologies are available from multiple commercial vendors, were any of these vendors to refuse to supply us, it could negatively impact our development of our modified NK cells and mesenchymal stem cell-like adherent stromal cells, or MLASCs, which depend on genetic modification to achieve the intended clinical benefits. Moreover, some gene editing technology that is currently available without license, could become patented or proprietary to a third party. If we are unable to obtain a license on commercially reasonable terms when needed, we could be forced to redesign our cellular therapeutics and or stop development. Any of these occurrences could have a material adverse effect on our business prospects.

Disputes may also arise between us and our current and future licensors regarding intellectual property subject to a license agreement, including those related to:

- the scope of rights granted under the license agreement and other interpretation-related issues;
- whether and the extent to which our technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement;
- our right to sublicense patent and other rights to third parties under collaborative development relationships;
- our diligence obligations with respect to the use of the licensed technology in relation to our development and commercialization of our therapeutic candidates, and what activities satisfy those diligence obligations; and
- the ownership of inventions and know-how resulting from the joint creation or use of intellectual property by our licensors and us and our partners.

If disputes over intellectual property that we have licensed, or may license in the future, prevent or impair our ability to maintain our licensing arrangements on acceptable terms, we may be unable to successfully develop and commercialize the affected therapeutic candidates.

We are generally also subject to all of the same risks with respect to protection of intellectual property that we license as for intellectual property that we own. If we or our current and future licensors fail to adequately protect this intellectual property, our ability to commercialize products could suffer.

Our therapeutic candidates are based on novel technologies, which makes it difficult to predict the time and cost of therapeutic candidate development and obtaining regulatory approval.

We will be concentrating our research, development and manufacturing efforts on our placental-derived allogeneic T cell, NK cell and MLASC therapeutic candidates. We have developed our Celularity IMPACT platform, which covers biosourcing through manufacturing of cryopacked cells, and continues to invest in optimizing and improving our technologies. There can be no assurance that any development problems we experience in the future will not cause significant delays or unanticipated costs, or that such development problems can be overcome. We may also experience delays in scaling our manufacturing process when appropriate for commercialization, which may prevent us from completing future clinical studies or commercializing our therapeutics on a timely or profitable basis, if at all. Finding a suitable dose for our cell therapeutic candidates may delay our anticipated clinical development timelines. In addition, our expectations with regard to our scalability and costs of manufacturing may vary significantly as we develop our therapeutic candidates and understand these critical factors.

The clinical study requirements of the FDA, European Medicines Agency, and other regulatory agencies and the criteria these regulators use to determine the safety and efficacy of a therapeutic candidate are determined according to the type, complexity, novelty and intended use and market of the potential therapeutics. The regulatory approval process for novel therapeutics candidates such as ours can be more complex and consequently more expensive and take longer than for other, better known or extensively studied pharmaceutical or other therapeutic candidates. In addition, under guidelines issued by the National Institutes of Health, or NIH, gene therapy clinical trials are also subject to review and oversight by an institutional biosafety committees, or IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. Before a clinical trial can begin at any institution, that institution's institutional review board, or IRB, and its IBC assesses the safety of the research and identifies any potential risk to public health or the environment. While the NIH guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH guidelines voluntarily follow them.

While we expect reduced variability in our allogeneic cell therapeutic candidates compared to autologous products, we do not have clinical data supporting any benefit of lower variability and the use of healthy donor full-term placentas, and related screening requirements, may create separate variability challenges. More generally, approvals by any regulatory agency may not be indicative of what any other regulatory agency may require for approval or what such regulatory agencies may require for approval in connection with new therapeutic candidates. Moreover, our therapeutic candidates may not perform successfully in clinical trials or may be associated with adverse events that distinguish

them from the autologous therapies that have previously been approved. For instance, allogeneic T cell therapeutic candidates may result in GvHD not experienced with autologous T cell products. Even if we collect promising initial clinical data of our therapeutic candidates, longer-term data may reveal new adverse events or responses that are not durable. Unexpected clinical outcomes would significantly impact our business.

Our therapeutic candidates may cause undesirable side effects or have other properties that could halt our clinical development, prevent our regulatory approval, limit our commercial potential or result in significant negative consequences.

Undesirable or unacceptable side effects caused by our therapeutic candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics. Autologous cell therapies that approved for, or under development by other companies, have shown frequent rates of CRS and neurotoxicity, and adverse events have resulted in the death of patients. Our potential future therapeutic candidates may undergo genetic engineering. As these are novel technologies, errors may occur or may not present until used in humans in the clinic, and could cause adverse events. While we believe that placental-derived cells have an inherent safety profile that may limit adverse events, there can be no assurance that this is the case as these are novel therapeutics.

As we continue to evolve our placental-derived therapeutic programs, we may need to halt or modify development of certain candidates as a result of adverse events. For example, in designing APPL-001, we made certain modifications and adjustments, including a genetic modification due to an increased risk of thrombosis observed in a Phase 1 clinical trial of a legacy placental-derived MLASC done at Celgene Cellular Therapeutics. The APPL-001 program has since been discontinued.

In any of our planned clinical trials, patients may experience severe adverse events related to our allogeneic cell therapeutic candidates, some of which may result in death. If unacceptable toxicities arise in the development of our therapeutic candidates, we could suspend or terminate our trials or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our therapeutic candidates for any or all targeted indications. The data safety monitoring board may also suspend or terminate a clinical trial at any time on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk, including risks inferred from other unrelated immunotherapy trials. Treatment-related side effects could also affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from cell therapy are not normally encountered in the general patient population and by medical personnel. Any of these occurrences may harm our business, financial condition and prospects significantly.

Planned future clinical trials for our product candidates may fail to demonstrate the safety and efficacy of any of our therapeutic candidates, which would prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of any cell therapeutic candidates, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that the therapeutic candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and our outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of any therapeutic candidates may not be predictive of the results of later-stage clinical trials, including in any post-approval studies.

There is typically an extremely high rate of attrition from the failure of therapeutic candidates proceeding through clinical trials. Therapeutic candidates in later stages of clinical trials may fail to show the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy, insufficient durability of efficacy or unacceptable safety issues, notwithstanding promising results in earlier trials. Most therapeutic candidates that commence clinical trials are never approved as therapeutics.

In addition, for any future trials that may be completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, including, for example, any re-analysis of legacy data that we perform, and more trials could be required before we submit our therapeutic candidates for approval. To the extent that the results of the trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of our therapeutic candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our therapeutic candidates.

Initial, interim and preliminary data from any clinical trials that we announce or publish from time to time may change as more patient data become available and are subject to audit and verification procedures that could result in material changes in the final data.

From time to time, we may publish initial, interim or preliminary data from our clinical studies. Interim data from clinical trials that we may complete are subject to the risk that one or more of the clinical outcomes may materially change as patient enrollment continues and more patient data become available. Preliminary data also remain subject to audit and verification procedures that may result in the final data being materially different from the preliminary data previously published. As a result, initial, interim and preliminary data should be viewed with caution until the final data are available. Adverse differences between preliminary or interim data and final data could significantly harm our business prospects.

We may not be able to submit INDs to commence clinical trials on the timelines we expect, and even if we are able to, the FDA may not permit such trials to proceed.

We plan to submit INDs for our therapeutic candidates in the future. We cannot be certain that submission of an IND or IND amendment will result in the FDA allowing testing and clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such clinical trials. The manufacturing of allogeneic cell therapies remains an emerging and evolving field. Accordingly, we expect chemistry, manufacturing and control related topics, including product specification, will be a focus of IND reviews, which may delay the clearance of INDs. Additionally, even if the FDA permits the initiation of the clinical trials set forth in an IND or clinical trial application, we cannot guarantee that the FDA will not change our requirements in the future.

Our HCT/P products are subject to extensive government regulation and our failure to comply with these requirements could cause our business to suffer.

We sell human tissue-derived products, which are referred to by the FDA as HCT/Ps. Certain HCT/Ps are regulated by the FDA solely under Section 361 of the Public Health Service Act and are referred to as "Section 361 HCT/Ps," while other HCT/Ps are subject to FDA's regulatory requirements applicable to medical devices or biologics. Section 361 HCT/Ps do not require 510(k) clearance, PMA approval, biologics license application, or BLA, or other premarket authorization from FDA before marketing. We believe our HCT/Ps are regulated solely under Section 361 of the PHSA, and therefore, we have not sought or obtained 510(k) clearance, PMA approval, or licensure through a BLA. While certain determinations by FDA have been provided regarding Interfyl and Biovance, the FDA could disagree with our determination that other of our human tissue products are Section 361 HCT/Ps and could determine that these products are biologics requiring a BLA or medical devices requiring 510(k) clearance or PMA approval, and could require that we cease marketing such products and/or recall them pending appropriate clearance, approval or license from the FDA.

We may encounter substantial delays in our planned clinical trials or may not be able to conduct our trials on the timelines we expect.

Clinical testing is expensive, time consuming and subject to uncertainty. We cannot guarantee that any clinical studies will be conducted as planned or completed on schedule, if at all. Even if our trials begin as planned, issues may arise that could cause us or relevant regulatory authorities to suspend or terminate such clinical trials. A failure of one or more clinical studies can occur at any stage of testing, and our future clinical studies may not be successful. Events that may prevent successful or timely completion of clinical development include:

- inability to generate sufficient preclinical, toxicology or other in vivo or in vitro data to support the initiation of clinical studies;
- delays in sufficiently developing, characterizing or controlling a manufacturing process suitable for clinical trials;
- difficulty sourcing healthy full-term donor placentas of sufficient quality and in sufficient quantity to meet our development needs;
- delays in developing suitable assays for screening patients for eligibility for trials with respect to certain therapeutic candidates;
- delays in reaching a consensus with regulatory agencies on study design;
- delays in reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical study sites;
- delays in obtaining required IRB approval at each clinical study site;
- imposition of a temporary or permanent clinical hold by regulatory agencies for a number of reasons;
- delays in patient recruitment, difficulty collaborating with patient groups and investigators, or other issues involving patients, such as completing participation or return for post-treatment follow-up, or dropping-out;
- failure by our CROs, other third parties or us to adhere to clinical study requirements;
- failure to perform in accordance with the FDA's good clinical practice, or GCP, requirements or applicable regulatory guidelines in other countries;
- issues with manufacturing of cellular therapeutics, including delays in manufacturing, testing, releasing, validating sufficient stable quantities of our therapeutic candidates for use in clinical studies or the inability to do any of the foregoing;
- occurrence of adverse events associated with the therapeutic candidate that are viewed to outweigh its potential benefits;
- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols;

- changes in the standard of care on which a clinical development plan was based, which may require new or additional trials;
- the cost of clinical studies of our therapeutic candidates being greater than we anticipate;

- negative or inconclusive results from clinical studies, which may result in us deciding, or regulators requiring us, to conduct additional clinical studies or abandon development programs; and

- delays or failure to secure supply agreements with suitable raw material suppliers, or any failures by suppliers to meet its quantity or quality requirements for necessary raw materials.

Future pandemics may increase the risk of certain of the events described above and delay our development timelines. For example, in early 2020 and again in mid-2021, we experienced delays in enrolling our Phase 1 clinical trial of CYNK-001 for acute myeloid leukemia, or AML, as a result of the COVID-19 pandemic. We have since discontinued development of CYNK-001 for AML Any inability to successfully complete preclinical and clinical development could result in additional costs to us or impair our ability to generate revenue. In addition, if we make manufacturing or formulation changes to our therapeutic candidates, we may be required to, or we may elect to conduct additional studies to bridge our modified candidates to earlier versions or may need to conduct additional studies on newly discovered candidates. Clinical study delays could also shorten any periods during which our therapeutics have patent protection and may allow our competitors to bring cell therapies to market before we do, which could impair our ability to successfully commercialize our therapeutic candidates and may harm our business and results of operations.

Our business could be materially adversely affected by the effects of health pandemics or epidemics in regions where we or third parties on which we rely have concentrations of clinical trial sites or other business operations.

Our business could be materially adversely affected by the effects of health pandemics or epidemics. Additionally, our ability to collect healthy, full-term donor placentas was limited during the height of the COVID-19 pandemic in New Jersey and the tri-state area as hospital resources were diverted. We are now also subject to risk of outbreaks at our facilities, and potential exposure to employee claims regarding workplace safety, and unanticipated shutdowns or quarantines could be imposed in the future, which would disrupt our operations. Policies and restrictions enacted to counter a future pandemic might negatively impact productivity, disrupt our business and delay clinical programs and timelines, the magnitude of which will depend, in part, on the length and severity of the restrictions and other limitations on our ability to conduct our business in the ordinary course, which could negatively impact our business, operating results and financial condition.

Monitoring and managing toxicities in patients receiving therapeutic candidates is challenging, which could adversely affect our ability to obtain regulatory approval and commercialize our therapeutic candidates.

We expect to contract with academic medical centers and hospitals experienced in the assessment and management of toxicities and adverse events arising during clinical trials. Even with appropriate procedures in place, these centers and hospitals may have difficulty observing patients and treating toxicities or any other adverse events, which could lead to more severe or prolonged toxicities or even patient deaths. If there are any serious issues with GvHD or any other unanticipated events, it could result in us or the FDA delaying, suspending or terminating one or more of our clinical trials, which could jeopardize regulatory approval of our therapeutic candidates. Moreover, to the extent our cellular therapies are used outside of hospitals or medical centers, and upon any approval if our therapies are made more widely available on a commercial basis, it may become even more difficult to observe and manage adverse events. Moreover, medicines used at centers to help manage adverse side effects of our therapeutic candidates, such as any GvHD, may not adequately control the side effects and/or may have a detrimental impact on the efficacy of the treatment.

Clinical trials are expensive, time-consuming and difficult to design and implement.

Human clinical trials are expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. Because our allogeneic placental-derived cell therapeutic candidates are based on new technologies and will require the creation of inventory of mass-produced, off-the-shelf therapeutics, we expect that they will require extensive research and development and have substantial manufacturing and processing costs. In addition, costs to treat patients with certain cancers or other targeted indications, including treating any potential side effects, could be significant. Accordingly, our clinical trial costs for our cellular therapeutic candidates are likely to be significantly higher than for more conventional therapeutic technologies or drug products.

If we fail to develop additional therapeutic candidates, our commercial opportunity will be limited.

We have a pipeline of potential commercial products in the biomaterials segment of our business. We have requested and received preliminary feedback from FDA regarding the appropriate regulatory pathway for those product candidates. Our current development assumptions and timelines reflect our expectation of the appropriate regulatory pathway. Issues arising from further product development may mean that a longer and more expensive pathway may eventually be required. This could limit our commercial opportunities or cause us to abandon those development candidates.

Our organizational changes and cost cutting measures may not be successful.

In November 2022 and January 2023, we implemented reductions-in-force that affected a majority of our workforce, and in the fourth quarter of 2023, we refocused our cellular therapeutics pipeline to align with the results of clinical trials and ongoing evaluations of our development plans. While these measures were intended to optimize resources and address our evolving operational needs, they have also resulted in significant organizational changes and could have unintended adverse consequences.

Notably, we have experienced attrition beyond the intended reductions-in-force, including the departure of key personnel in administrative functions such as finance and legal. This loss of critical expertise has created challenges in maintaining operational continuity, meeting regulatory and financial reporting requirements, and supporting our strategic objectives. Replacing these personnel with qualified individuals may be difficult and could require additional and unanticipated costs.

If we are unable to maintain the necessary operational and administrative infrastructure, we may face delays or difficulties in resuming suspended development activities, pursuing new initiatives, or fulfilling our ongoing obligations.

The departure of several executive officers and other key personnel has further compounded these risks, potentially impairing our ability to execute our business plan, comply with regulatory requirements, and manage our financial and operational risks effectively. Any of these consequences could materially and adversely affect our business, financial condition, and results of operations.

We operate our own manufacturing and storage facility, which requires significant resources; manufacturing or other failures could adversely affect our clinical trials and the commercial viability of our therapeutic candidates and our biobanking and degenerative diseases businesses.

We have a purpose-built facility located in Florham Park, New Jersey, where we process healthy full-term donor placentas for use in cell therapy and tissue products and operate our biobanking business. While we have experience managing the process for our research and early stage clinical trial needs, we may not be able to mass-produce off-the-shelf placental-derived allogeneic cellular therapeutics to satisfy demands for any of our therapeutic candidates as we expand into later stage clinical trials, or for commercial production post-approval. While we believe the manufacturing and processing approaches are appropriate to support our current needs and that we have a scalable process, we cannot be sure that our scaled process will result in allogeneic cells that will be safe and effective. Further, our manufacturing and storage facility, including for our biobanking and degenerative disease businesses, must comply with current good manufacturing practices, or cGMP, which includes, as applicable, the FDA's current good tissue practices, or GTPs, for the use of human cellular and tissue products. Accordingly, we are subject to ongoing periodic unannounced inspection by the FDA and other governmental agencies to ensure strict compliance with cGMP, including GTPs as applicable, and other government regulations.

The manufacture of biopharmaceutical products is complex and requires significant expertise, including the development of advanced manufacturing techniques and process controls. Manufacturers of cell therapy products often encounter difficulties in production, particularly in scaling out and validating initial production and ensuring the absence of contamination. These problems include difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. The application of new regulatory guidelines or parameters, such as those related to release testing, may also adversely affect our ability to manufacture our therapeutic candidates. Furthermore, if contaminants are discovered in our supply of therapeutic candidates or in the manufacturing facilities, such supply may have to be discarded and our manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure any stability or other issues relating to the manufacture of our therapeutic candidates will not occur in the future.

We or any other of our vendors may fail to manage the logistics of storing and shipping our raw materials, including donor placentas. Storage failures and shipment delays and problems caused by us, our vendors or other factors not in our control, such as weather, health pandemics or epidemics, could result in the inability to manufacture therapeutics, the loss of usable therapeutics or prevent or delay the delivery of therapeutic candidates to patients and clinical trial sites. We may also experience manufacturing difficulties due to resource constraints or as a result of labor disputes. If we were to encounter any of these difficulties, our ability to provide our therapeutic candidates to patients would be jeopardized.

We currently have no cellular therapeutics marketing sales force. If we are unable to establish future marketing and sales capabilities or enter into agreements with third parties to market and sell our therapeutic candidates once approved, we may not be able to generate cell therapy product revenue.

Our current sales force is limited to our degenerative disease and biobanking businesses. We may develop an in-house specialized marketing organization and sales force for our cellular therapeutic candidates, if such candidates receive regulatory approval, which will require significant expenditures, management resources and time. If we elect to develop an in-house sales force, we will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel. If we are unable or decide not to establish internal sales, marketing and distribution capabilities for our cellular therapeutics once approved, we will pursue collaborative arrangements regarding the sales and marketing of cellular therapeutics; however, there can be no assurance that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive from the sale of cellular therapeutics will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from therapeutic sales may be lower than if we had commercialized our therapeutic candidates directly, as we do for our degenerative disease products and biobanking business. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our therapeutic candidates. There can be no assurance that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any therapeutic that receives regulatory approval in the United States or in other markets.

A variety of risks associated with conducting research and clinical trials abroad and marketing our therapeutic candidates internationally could materially adversely affect our business.

We plan to globally develop our therapeutic candidates and market our degenerative disease products outside the United States. Accordingly, we expect that we will be subject to additional risks related to operating in foreign countries, including:

- differing regulatory requirements in foreign countries;

- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;

- differing standards for the conduct of clinical trials;

- increased difficulties in managing the logistics and transportation of storing and shipping therapeutic candidates or biomaterials produced in the United States and shipping the therapeutic candidate to the patient abroad, which may necessitate local or regional manufacture, including the need to source healthy full-term donor placentas outside the United States;

- import and export requirements and restrictions, including as they pertain to donor placentas and human tissue collection and manufacture;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- differing payor reimbursement regimes, governmental payors or patient self-pay systems, and price controls;
- potential liability under the Foreign Corrupt Practices Act, or FCPA, or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply, including obtaining sufficient donor placentas, and other issues with manufacturing abroad; and
- business interruptions resulting from natural or man-made disasters, including earthquakes, tsunamis, fires or other medical epidemics, or geo-political actions, including war and terrorism.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds, drugs or biomaterials that are able to achieve similar or better results. Our potential competitors for our cellular therapeutics and biomaterials include major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions. Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our therapeutic candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products.

Even if we obtain regulatory approval of our therapeutic candidates, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our therapeutic candidates. We may not be able to implement our business plan if the acceptance of our therapeutic candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our therapeutic candidates, or if physicians switch to other new drug or biologic products or choose to reserve our therapeutic candidates for use in limited circumstances. For additional information regarding our competition, see the section entitled "*Business - Competition*."

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel, including our Founder and Chief Executive Officer, Robert Hariri, M.D., Ph.D. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements could result in delays in product development and harm our business. We conduct substantially all of our operations at our facilities in New Jersey. This region is headquarters to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel in our market is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all. Despite efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave employment at any time, with or without notice. We do not maintain "key person" insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers as well as junior, mid-level and senior scientific and medical personnel.

We may experience difficulties in managing the growth of our business.

As our development and commercialization plans and strategies developed, and as we began operations as a public company, we expanded our employee base and expected to add managerial, operational, sales, research and development, marketing, financial and other personnel. However, in January 2023, we announced reprioritization of efforts, which resulted in a reduction of approximately 70 full-time employees and 20 non-employee leased workers in March 2023. Accordingly, as of December 31, 2024, we had 123 full-time employees and 16 non-employee leased workers. As we reposition our business and our personnel requirements evolve, we may be constrained in our ability to bring on the necessary personnel to expand operations when and as required given our recent reduction in force.

Moreover, current and future growth imposes significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical and FDA review process for our therapeutic candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize our therapeutic candidates will depend, in part, on our ability to effectively manage our growth, and our management may also have to divert a disproportionate amount of attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop, manufacture and commercialize our therapeutic candidates and, accordingly, may not achieve our research, development, manufacturing and commercialization goals.

We may form or seek strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We may form or seek strategic alliances, create joint ventures or collaborations or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our therapeutic candidates and any future therapeutic candidates that we may develop. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute stockholders or disrupt our management and business. We licensed certain intellectual property back to Celgene in connection with the Anthrogenesis acquisition. Given the broad scope of the license, Celgene could use our intellectual property to develop therapeutics that compete with us in the chimeric antigen receptor, or CAR, field. Additionally, we have potential obligations to Celgene under a contingent value rights agreement, or CVR Agreement, under which we may be required to make certain payments to Celgene with respect to certain of our future therapeutic candidates. Our payment obligations to Celgene under the CVR Agreement may limit our ability to partner such assets, were we choose to do so. See "*Business - Licensing Arrangements - Celgene Corporation."* for more information regarding the Celgene relationship.

In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our therapeutic candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our therapeutic candidates as having the requisite potential to demonstrate safety and efficacy. Any delays in entering into new strategic partnership agreements related to our therapeutic candidates could delay the development and commercialization of our therapeutic candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

We have in the past and in the future will continue to explore entering into new strategic alliances, collaborations, and licensing arrangements with third parties related to non-core areas. Such arrangements are entered into based on information available at the relevant time, and may not lead to long-term collaborations after initial research and development is conducted. We are party to certain agreements, and may in the future enter into new agreements, that contain non-competes or otherwise restrict our ability to operate in a particular field.

Further, disputes may arise under our current or future strategic alliances, collaborations, or other agreements or arrangements that include grants of intellectual property rights to or from us, or payments related thereto, including disagreements over scope of rights granted, proprietary rights, payment obligations, contract interpretation or the preferred course of research, development or commercialization. As a result of such disagreements, we may be required to pay additional amounts, there may be a reduction or delay in amounts payable to us, or there may be delays in research, development or commercialization activities, or termination of the arrangements, which could adversely impact our business and operations.

If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. We cannot be certain that, following a strategic transaction or license, we will achieve the results, revenue or specific net income that justifies such transaction.

We may not realize the benefits of acquired assets or other strategic transactions.

We actively evaluate various strategic transactions on an ongoing basis. We may acquire other businesses, products or technologies as well as pursue joint ventures or investments in complementary businesses. The success of our strategic transactions, including our license with Sorrento Therapeutics, Inc., or Sorrento, and any future strategic transactions depends on the risks and uncertainties involved, including:

- unanticipated liabilities related to acquired companies or joint ventures;
- difficulties integrating acquired personnel, technologies and operations into our existing business;
- retention of key employees;
- diversion of management time and focus from operating our business to management of strategic alliances or joint ventures or acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses;
- disruption in our relationships with collaborators or suppliers as a result of such a transaction; and
- possible write-offs or impairment charges relating to acquired businesses or joint ventures.

If any of these risks or uncertainties occur, we may not realize the anticipated benefit of any acquisition or strategic transaction. Additionally, foreign acquisitions and joint ventures are subject to additional risks, including those related to integration of operations across different cultures and languages, currency risks, potentially adverse tax consequences of overseas operations and the particular economic, political and regulatory risks associated with specific countries. Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition.

Our internal computer systems, or those used by our CROs, collaborators or other contractors or consultants, may fail or suffer security breaches.

Our internal computer systems and those of our CROs, collaborators, and other contractors or consultants are vulnerable to damage from computer viruses, unauthorized access, cybersecurity threats, and telecommunication and electrical failures. Cyber-attacks, denial-of-service attacks, ransomware attacks, business email compromises, computer malware, viruses, and social engineering (including phishing) continue to increase generally. Accordingly, if our cybersecurity measures or those of our service providers fail to protect against unauthorized access, attacks (which may include sophisticated cyberattacks), compromise or the mishandling of data by our employees or contractors, then our reputation, customer trust, business, results of operations and financial condition could be adversely affected. Cyber incidents have been increasing in sophistication and can include third parties gaining access to sensitive data using stolen or inferred credentials, computer malware, viruses, spamming, phishing attacks, ransomware, card skimming code, and other deliberate attacks and attempts to gain unauthorized access. The techniques used to sabotage or to obtain unauthorized access to our internal computer systems in which data is stored or through which data is transmitted change frequently, and we may be unable to implement adequate preventative measures or stop security breaches while they are occurring. Because the techniques used by threat actors who may attempt to penetrate and sabotage our computer systems change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques. While we have not experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach in our systems or infrastructure (including provided by third party vendors) were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our therapeutic candidates could be delayed. In addition, our increased reliance on personnel working from home could increase our cybersecurity risk, create data accessibility concerns, and make us more susceptible to communication disruptions, any of which could adversely impact our business. As an early-stage company without significant investments in data security protection, we may not be sufficiently protected against such occurrences, and may not have the resources to allocate to such efforts.

Changes in funding for the FDA and other government agencies could hinder their ability to hire and retain key leadership and other personnel, prevent new therapeutics and services from being developed or commercialized in a timely manner or otherwise prevent those agencies from performing normal functions on which the operation of our business may rely, which could negatively impact our business.

The ability of the FDA to review and approve new therapeutics can be affected by a variety of factors, including government budget and funding levels, ability to hire and retain key personnel and accept payment of user fees, statutory, regulatory and policy changes, and business disruptions, such as those that may be caused by pandemics. Average review times at the agency have fluctuated in recent years as a result. In addition, funding of government agencies on which our operations may rely, including those that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable. Disruptions at the FDA and other agencies may also slow the time necessary for new biologics to be reviewed and/or approved by necessary government agencies, which would adversely affect our business. Should the FDA determine that an inspection is necessary for approval and an inspection cannot be completed during the review cycle due to restrictions on travel, and the FDA does not determine a remote interactive evaluation to be adequate, the agency has stated that it generally intends to issue, depending on the circumstances, a complete response letter or defer action on the application until an inspection can be completed. During the COVID-19 public health emergency, a number of companies announced receipt of complete response letters due to the FDA's inability to complete required inspections for their applications. Regulatory authorities outside the U.S. may adopt similar restrictions or other policy measures and may experience delays in their regulatory activities. If a prolonged government shutdown or disruption occurs, it could significantly impact the ability of the FDA or other regulatory authorities to timely review and process our regulatory submissions, which could have a material adverse effect on our business. Further, future government shutdowns could impact our ability to access the public markets and obtain necessary capital in order to properly capitalize and continue our operations.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

In addition to the business disruptions and clinical trial delays caused by the pandemics as described above, our operations, and those of our CROs and other contractors and consultants, could be subject to other disruptions, including those caused by power shortages, telecommunications failures, water shortages, floods, hurricanes, tornadoes, fires, earthquakes, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. Our ability to manufacture our therapeutic candidates could be disrupted if our operations or those of our suppliers are affected by a man-made or natural disaster or other business interruption. Moreover, because our core operations are concentrated at our purpose-built facility in Florham Park, New Jersey, any disruptions at this site, if prolonged, could materially harm our business and prospects.

If we do not obtain and maintain federal and state licenses and registrations required for our current and future operations, our ability to generate revenue will be limited.

The health care industry is subject to stringent regulation by a wide range of authorities. Accordingly, our business requires us to maintain certain licenses, registrations, permits, authorizations, approvals, certifications, accreditations and other types of federal, state, and local governmental permissions and to comply with various regulations in every jurisdiction in which we operate. For example, we are required to maintain licenses and registrations in several states, and have obtained biologics, tissue bank and blood bank licenses, permits and registrations in states where such licensure is required for us to market and support our products and services. We also maintain an annual registration with the FDA as a tissue bank, and national accreditation by the American Association of Blood Banks. The failure to comply with such licensure requirements can result in enforcement actions, including the revocation or suspension of the licenses, registrations or accreditations, or subject us to plans of correction, monitoring, civil money penalties, civil injunctive action and/or criminal penalties. While we believe that, given our current and proposed business, we are not presently required to obtain additional licenses or registrations to market our products or services, we cannot predict whether additional regulatory approval will be required in the future and, if so, whether such approval will at such time be obtained, whether for the stem cells and/or any other services that we are developing or may attempt to develop. Our failure to obtain and maintain required federal and state licenses and registration will limit our ability to generate revenue.

Our relationships with customers, physicians, and third-party payors are subject to numerous laws and regulations. If we or our employees, independent contractors, consultants, commercial partners and vendors violate these laws, we could face substantial penalties.

We operate in a highly regulated industry, and our relationships with customers, physicians, and third-party payors are subject to numerous laws and regulations. See "Business - Government Regulation and Product Approval - Other U.S. Healthcare Laws and Compliance Requirements". Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any therapeutic candidates for which we obtain marketing approval. Our current and future arrangements with healthcare providers, third-party payors, customers, and others may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may impact, among other things, our clinical research and development programs, as well as our proposed and future sales, marketing and education programs for our cellular therapeutics, as well as the sales and marketing of our degenerative disease products and biobanking business. In particular, the promotion, sales and marketing of healthcare items and services is subject to extensive laws and regulations designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive and other business arrangements. We may also be subject to federal, state and foreign laws governing the privacy and security of identifiable patient information.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available, it is possible that some of our business activities, or our arrangements with physicians, some of whom may receive stock options as compensation for service on our scientific advisory board, could be subject to challenge under one or more of such laws. If we or our employees, independent contractors, consultants, commercial partners and vendors violate these laws, we may be subject to investigations, enforcement actions or significant penalties. We have adopted a code of business conduct and ethics, but it is not always possible to identify and deter employee misconduct or business noncompliance, and the precautions we take to detect and prevent inappropriate conduct may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. Efforts to ensure that our business arrangements will comply with applicable healthcare laws may involve substantial costs. It is possible that governmental and enforcement authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If any such actions are instituted against us, and we are not successful in defending ourself or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant penalties and corrective measures, any of which could adversely affect our ability to operate our business and our results of operations. In addition, the approval and commercialization of any of our therapeutic candidates or our degenerative disease products outside the United States will also likely subject us to an additional overlay of foreign equivalents of the healthcare laws, among other foreign laws.

The scope and enforcement of each of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state enforcement bodies often scrutinize interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Ensuring business arrangements comply with applicable healthcare laws, as well as responding to possible investigations by government authorities, can be time- and resource-consuming and can divert a company's attention from the business.

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

Our collection, use, processing, and cross-border transfer of personal information, including individually identifiable health information, is governed by restrictive regulations.

Our business is broadly regulated by U.S. and foreign regulatory authorities, and we must comply with all applicable rules and regulations concerning our use, processing, handling, maintenance, and protection of personal information. In the U.S., the Health Insurance Portability and Accountability Act, or HIPAA, imposes requirements at the federal level relating to the privacy, security and transmission of individually identifiable health information, while individual states, such as California and Virginia, have adopted privacy regulations restricting the use of personal information and providing individuals certain rights with respect to the collection and use of their data. See "Business - Government Regulation and Product Approval - Other U.S. Healthcare Laws and Compliance Requirements" for more information regarding U.S. privacy and data protection laws. Further, the collection and use of personal information in Europe is governed by the European Union's, or EU's, General Data Protection Regulation and the United Kingdom's implementation of the same, or the GDPR. Failure to comply with the requirements of the GDPR and other applicable data protection laws of the EU member states and the United Kingdom, or other applicable privacy rules and regulations in other countries, may result in significant fines and other administrative penalties. We may be required to put in place additional mechanisms to comply with current and future privacy and data protection regulations applicable to our business. This may interrupt or delay our development activities and/or require us to change our business practices, which could adversely affect our business, financial condition, results of operations and prospects.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our therapeutic candidates.

We face an inherent risk of product liability as a result of the clinical testing of our therapeutic candidates and will face an even greater risk if we commercialize any cellular therapeutics, in addition to the risks from the sale of our degenerative disease products. For example, we may be sued if our therapeutic candidates or degenerative disease products cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the therapeutic or product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our therapeutic candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in a number of adverse effects, any of which could materially harm our financial condition and results of operations.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of therapeutics we develop, alone or with corporate collaborators, or negatively impact our degenerative disease business. Our insurance policies may also have various exclusions, and we may be subject to a product liability claim for which we have no coverage. While we have obtained and expect to obtain clinical trial insurance for our clinical trials, we may have to pay amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Our ability to utilize our net operating loss carryforwards and certain other tax attributes may be limited.

Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, or the Code, and corresponding provisions of state law, if a corporation undergoes an "ownership change" (generally defined as a greater than 50 percentage point change (by value) in the equity ownership of certain stockholders over a rolling three-year period), our ability to use our pre-change federal net operating loss, or NOL, carryforwards and other pre-change tax attributes to offset our post-change income and taxes may be limited. We may experience ownership changes in the future as a result of subsequent shifts in our stock ownership. As of December31, 2023, we had approximately $109.5 million of NOL carryforwards, and these NOL carryforwards could expire unused and be unavailable to offset future income tax liabilities, which could adversely affect our profitability. We anticipate incurring significant additional net losses for the foreseeable future, and our ability to utilize NOL carryforwards associated with any such losses to offset future taxable income may be limited to the extent we incur future ownership changes. In addition, at the state level, there may be periods during which the use of NOL carryforwards is suspended or otherwise limited, which could accelerate or permanently increase state taxes owed. As a result, we may be unable to use all or a material portion of our NOL carryforwards and other tax attributes, which could adversely affect our future cash flows.

Changes in tax law could adversely affect our business and financial condition.

The rules dealing with U.S. federal, state, and local income taxation are constantly under review by persons involved in the legislative process and by the U.S. Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect us or holders of our securities. In recent years, many such changes have been made and changes are likely to continue to occur in the future. Future changes in tax laws could have a material adverse effect on our business, cash flow, financial condition or results of operations. For example, the Inflation Reduction Act of 2022, or IRA, includes a 15% corporate alternative minimum tax and a 1% excise tax on share repurchases. We urge investors to consult with their legal and tax advisers regarding the implications of changes in tax laws on an investment in our securities.

Fluctuations in the cost and availability of raw materials, equipment, labor, and transportation could cause manufacturing delays or increase our costs.

The price and availability of key components used to manufacture our products has been increasing and may continue to fluctuate significantly. In addition, the cost of labor could increase significantly due to regulation or inflationary pressures. Additionally, the cost of logistics and transportation fluctuates in large part due to the price of oil, and availability can be limited due to political and economic issues. Any fluctuations in the cost and availability of any of our raw materials, packaging, or other sourcing or transportation costs could harm our gross margins. If we are unable to successfully mitigate a significant portion of these product cost increases or fluctuations, our results of operations could be harmed.

Failure to maintain effective internal controls could cause our investors to lose confidence in us and adversely affect the market price of our Class A common stock. If our internal controls are not effective, we may not be able to accurately report our financial results or prevent fraud.

Effective internal control over financial reporting is necessary for us to provide reliable financial reports in a timely manner. A material weakness is a significant deficiency, or a combination of significant deficiencies, in internal controls over financial reporting such that it is reasonably possible that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis. We have identified the following material weaknesses in our internal control over financial reporting: (i) we failed to demonstrate a commitment to attract, develop and retain competent and sufficient qualified resources with an appropriate level of knowledge, experience, and training in certain areas around our financial reporting process; (ii) we failed to design and implement certain risk assessment activities related to identifying and analyzing risks to achieve objectives and identifying and assessing changes in the business that could impact our system of internal controls; (iii) we failed to design and implement certain control activities that address relevant risks and retain sufficient evidence of the performance of control activities; (iv) we failed to design and implement certain information and communication activities related to obtaining or generating and using relevant quality information to support the functioning of internal control; and (v) we failed to design and implement certain monitoring activities to ascertain whether the components of internal control are present and functioning. While we intend to take steps to remediate the material weakness in our internal control over financial reporting by (i) hiring additional accounting personnel to ensure timely reporting of significant matters; (ii) designing and implementing controls to formalize roles and review responsibilities to align with our team's skills and experience and designing and implementing formalized controls to operate at a level of precision to identify all potentially material errors; (iii) designing and implementing procedures to identify and evaluate changes in our business and the impact on our internal controls in order to plan and perform more timely and thorough monitoring activities and risk assessment analyses; (iv) designing and implementing formal processes, policies and procedures supporting our financial close process; and (v) engaging an outside firm to assist with the documentation, design and implementation of our internal control environment, we may not be successful in remediating such weaknesses in a timely manner, if at all, which may undermine our ability to provide accurate, timely and reliable reports on our financial and operating results. Furthermore, if we remediate our current material weakness but identify new material weaknesses in our internal control over financial reporting in the future, investors may lose confidence in the accuracy and completeness of our financial reports and the market price of our Class A common stock may be negatively affected. As a result of such failures, we could also become subject to investigations by Nasdaq, the SEC, or other regulatory authorities, and become subject to litigation from investors and stockholders, which could harm our reputation, financial condition or divert financial and management resources from our business.

We have substantial indebtedness, which is secured by all of our assets. Payments on our outstanding debt and debt maturities could impact our liquidity, require us to modify our operations to meet any payment obligations and could force us to seek protection under the provisions of the U.S. Bankruptcy Code.

As of December 31, 2024, we have outstanding debt in the principal amount of $36.4 million that is secured by all of our assets. Payments on our outstanding debt and debt maturities could impact our liquidity, require us to modify our operations to meet any payment obligations and could force us to seek protection under the provisions of the U.S. Bankruptcy Code.

Risks Related to Our Reliance on Third Parties

We rely and will continue to rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of, or commercialize, our therapeutic candidates.

We depend and will continue to depend upon independent investigators and collaborators, such as universities, medical institutions, CROs and strategic partners to conduct our preclinical and clinical trials. We negotiate budgets and contracts with CROs and study sites, which may result in delays to our development timelines and increased costs. We will rely heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with GCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for therapeutic candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the GCP regulations. In addition, our clinical trials must be conducted with biological product produced under cGMP and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials are not and will not be our employees and, except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical studies or other drug development activities, which could affect their performance. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our therapeutic candidates. As a result, our financial results and the commercial prospects for our therapeutic candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

If any of our relationships with trial sites, or any CRO that we may use in the future, terminates, we may not be able to enter into arrangements with alternative trial sites or CROs or do so on commercially reasonable terms. Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines.

We rely on donors of healthy human full-term placentas to manufacture our therapeutic candidates, and if we do not obtain an adequate supply of such placentas from qualified donors, development of our placental-derived allogeneic cells may be adversely impacted.

We are reliant on biosourcing healthy donor placentas to manufacture our therapeutic candidates, and on hospital personnel to obtain the necessary donor consent. Healthy donor placentas vary in type and quality, and this variation makes producing standardized therapeutic candidates more difficult and makes the development and commercialization pathway of our therapeutic candidates more uncertain. We have developed a process designed to enhance the quality and consistency of the placental-derived cells used in the manufacture of our three allogeneic cell types (CAR-T cells, NK cells and mesenchymal-like stromal cells), but our process may fail to identify suitable donors or detect all issues, and we may discover failures with the material after production. We may also have to update our specifications for new risks that may emerge, such as to screen for new viruses.

We have strict specifications for donor material, which include specifications required by regulatory authorities and rely on informed donor consent. If we are unable to identify and obtain donor material that satisfy specifications, agree with regulatory authorities on appropriate specifications, incentivize hospital personnel to solicit consent to donation or address variability in donor placentas, there may be inconsistencies in the therapeutic candidates we produce or we may be unable to initiate or continue ongoing clinical trials on the timelines we expect, or scale up our manufacturing process for later-stage clinical trials or commercialization, which could harm our reputation and adversely impact our business and prospects.

Cell-based therapies rely on the availability of specialty raw materials, which may not be available to us on acceptable terms or at all.

Our therapeutic candidates require many specialty raw materials, including viral vectors that deliver the CAR sequence and other raw materials, some of which are manufactured by small companies with limited resources and experience to support a commercial therapeutic, or to deliver raw materials to our specifications. We generally do not have dedicated supply contracts with many of our suppliers, and we may not be able to contract with them on acceptable terms, or at all. Some of our suppliers may not be able to scale-up as we move to later-stage clinical trials or commercialization. Accordingly, we may experience delays in receiving, or fail to secure entirely, key raw materials to support clinical or commercial manufacturing. Certain raw materials also require third-party testing, and some of the testing service companies may not have capacity or be able to conduct the testing that we request.

We also face competition for supplies from other cell therapy companies. Such competition may make it difficult for us to secure raw materials or the testing of such materials on commercially reasonable terms or in a timely manner.

Some raw materials, including the post-partum human placenta obtained through informed consent, are currently available from a small number of suppliers. We cannot be sure that these suppliers will remain in business or that they will not be purchased by one of our competitors or another company that is not interested in continuing to produce these materials for our intended purpose. In addition, the lead time needed to establish a relationship with a new supplier can be lengthy, and we may experience delays in meeting demand in the event we must switch to a new supplier. The time and effort to qualify a new supplier, including to meet any regulatory requirements for such qualification, could result in additional costs, diversion of resources or reduced manufacturing yields, any of which would negatively impact our operating results. Further, we may be unable to enter into agreements with a new supplier on commercially reasonable terms, which could have a material adverse impact on our business.

If we or third party suppliers acting on our behalf use hazardous, non-hazardous, biological or other materials in a manner that causes injury or violates applicable law, we may be liable for damages.

Our research and development and manufacturing activities involve the controlled use of potentially hazardous substances, including chemical and biological materials. We are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage, handling and disposal of medical and hazardous materials. Although we believe our procedures, as well as the procedures of our third party suppliers for using, handling, storing and disposing of these materials comply with legally prescribed standards, neither we nor our third party suppliers can completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Risks Related to Government Regulation

The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our future therapeutic candidates.

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing, and distribution of drug products, including biologics, are subject to extensive regulation by the FDA and other regulatory authorities in the United States. We are not permitted to market any biological drug product in the United States until we receive approval of a biologics license application, or BLA, from the FDA. We have not previously submitted a BLA to the FDA, or similar approval filings to comparable foreign authorities. A BLA must include extensive preclinical and clinical data and supporting information to establish the therapeutic candidate's safety and effectiveness for each desired indication. The BLA must also include significant information regarding the chemistry, manufacturing and controls for the product.

We expect the novel nature of our potential future therapeutic candidates to create further challenges in obtaining regulatory approval. For example, the FDA has limited experience with commercial development of allogeneic cell therapies. The FDA may also require a panel of experts, referred to as an Advisory Committee, to deliberate on the adequacy of the safety and efficacy data to support licensure. The opinion of the Advisory Committee, although not binding, may have a significant impact on our ability to obtain licensure of the therapeutic candidates based on the completed clinical trials, as the FDA often adheres to the Advisory Committee's recommendations. Accordingly, the regulatory approval pathway for our therapeutic candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

We may also experience delays in completing planned clinical trials for a variety of reasons, including if physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our therapeutic candidates in lieu of prescribing existing treatments that have established safety and efficacy profiles. Further, a clinical trial may be suspended or terminated by us, the IRBs for the institutions in which such trials are being conducted or by the FDA or other regulatory authorities due to a number of factors. The FDA's review of our data for future clinical trials may, depending on the data, also result in the delay, suspension or termination of one or more of our potential clinical trials, which would also delay or prevent the initiation of our other planned clinical trials. If we experience termination of, or delays in the completion of, any clinical trial of our therapeutic candidates, the commercial prospects for our therapeutic candidates will be harmed, and our ability to generate revenue will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our development and approval process and jeopardize our ability to commence therapeutic sales and generate revenue. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may ultimately lead to the denial of regulatory approval of our therapeutic candidates.

To the extent a regulatory authority determines that any of our currently-marketed advanced biomaterials products do not qualify for regulation as human cells, tissues, and cellular and tissue based products, or HCT/P, solely under Section 361 of the Public Health Service Act, or PHSA, this could result in removal of these products from the market.

Our Advanced Biomaterials products are marketed without a specific FDA approval, but rather are marketed based on our belief that these products are exempt from prior FDA approval pursuant to Section 361 of the PHSA. In 2004 and 2005 FDA issued determinations that the product now marketed as Interfyl, and the Biovance product, qualified to be regulated solely under section 361, subject to limitations on claims that could be made for such products' intended uses. In November 2017, the FDA released a guidance document entitled "Regulatory Considerations for Human Cells, Tissues, and Cellular and Tissue-Based Products: Minimal Manipulation and Homologous Use - Guidance for Industry and Food and Drug Administration Staff" ("Guidance"), which it revised and reissued in July 2020. The document confirmed the FDA's stance that sheet forms of amniotic tissue are appropriately regulated as solely Section 361 HCT/Ps when manufactured in accordance with 21 CFR Part 1271 and intended for use as a barrier or covering. However, wound healing is not a homologous use of amniotic tissue, and to the extent we make claims for Biovance, Interfyl, CentaFlex and Rebound that extend beyond homologous use, we may be subject to the requirement for prior FDA approval and to FDA enforcement action. The Guidance stated that the FDA intended to exercise enforcement discretion under limited conditions with respect to the IND application and pre-market approval requirements for certain HCT/Ps for a period that expired on May 31, 2021. The FDA's approach is risk-based, and the Guidance clarified that high-risk products and uses could be subject to immediate enforcement action. New York has interpreted the Guidance such that it has restricted the marketing of such products without BLA approval, notwithstanding the current exception in the Guidance, and other states may make similar determination, which would limit the market for such products until a BLA is approved.

Amniotic tissue is generally eligible for regulation solely as a HCT/P under Section 361 of the PHSA depending on whether the specific product at issue and the claims made for it are consistent with the applicable FDA criteria for minimal manipulation and homologous use. HCT/Ps that do not meet these minimal manipulation and homologous use criteria are subject to more extensive regulation as drugs, medical devices, biological products, or combination products. Such HCT/Ps must comply with both the FDA's requirements for HCT/Ps and the requirements applicable to biologics, devices or drugs, including pre-market clearance or approval from the FDA.

We may need to either modify our claims or cease selling our Biovance, Interfyl, CentaFlex and Rebound products until the FDA approves a BLA, and then we will only be able to market such products for indications that have been approved in a BLA. The loss of our ability to market and sell these products would have an adverse impact on our revenues, business, financial condition and results of operations. In addition, we expect the cost to manufacture our products will increase due to the costs to comply with the requirements that apply to Section 361 biological products, such as current cGMP and ongoing product testing costs. Increased costs relating to regulatory compliance could have an adverse impact on our business, financial condition and results of operations.

In addition, the FDA might, at some future point, modify its position on which current or future products qualify as Section 361 HCT/Ps. Any regulatory changes could have adverse consequences for us and make it more difficult or expensive for us to conduct our business by requiring pre-market clearance or approval and compliance with additional post-market regulatory requirements with respect to those products. It is also possible that the FDA could require us to recall our Biovance, Interfyl, CentaFlex and Rebound products.

We expect the cell therapy therapeutic candidates we may develop will be regulated as biological products, or biologics, and they may be subject to competition sooner than anticipated.

The Biologics Price Competition and Innovation Act, or BPCIA, was enacted as part of the Affordable Care Act to establish an abbreviated pathway for the approval of biosimilar and interchangeable biological products. The regulatory pathway establishes legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an approved biologic. Under the BPCIA, an application for a biosimilar product cannot filed with FDA until four years after the reference product was be approved by the FDA, and cannot be approved until 12 years after the reference product was approved under a BLA. The law is complex and is still being interpreted and implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement the BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We believe that any of the therapeutic candidates we develop that are approved in the United States as a biological product under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider the subject therapeutic candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. Moreover, the extent to which a biosimilar, once approved, will be substituted for any one of the reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

The regulatory landscape that will govern our therapeutic candidates is uncertain; regulations relating to more established cellular therapy products are still developing, and changes in regulatory requirements could result in delays or discontinuation of development of our therapeutic candidates or unexpected costs in obtaining regulatory approval.

Because we are developing novel cellular therapeutic candidates that are unique biological entities, the regulatory requirements that we will be subject to are not entirely clear. Regulatory requirements governing gene therapy products and cell therapy products have changed frequently and may continue to change in the future. Moreover, there is substantial, and sometimes uncoordinated, overlap in those responsible for regulation of existing gene therapy products and cell

therapy products. Although the FDA decides whether individual therapy protocols may proceed, review process and determinations of other reviewing bodies can impede or delay the initiation of a clinical study, even if the FDA has reviewed the study and approved its initiation. Conversely, the FDA can place an IND application on clinical hold even if such other entities have provided a favorable review. Furthermore, each clinical trial must be reviewed and approved by an independent IRB at or servicing each institution at which a clinical trial will be conducted. In addition, adverse developments in clinical trials of gene or cell therapy products conducted by others may cause the FDA or other regulatory bodies to change the requirements for approval of any of our therapeutic candidates. Complex regulatory environments exist in other jurisdictions in which we might consider seeking regulatory approvals for our therapeutic candidates, further complicating the regulatory landscape.

The various committees and advisory groups involved in regulatory review, and new or revised guidelines that they promulgate from time to time may lengthen the regulatory review process, require us to perform additional studies, increase our development costs, lead to changes in regulatory positions and interpretations, delay or prevent approval and commercialization of our therapeutic candidates or lead to significant post-approval limitations or restrictions. Because the regulatory landscape for our placental-derived cell therapeutic candidates is new, we may face even more cumbersome and complex regulations than those for more traditional pharmaceutical or biological products. Furthermore, even if our therapeutic candidates obtain required regulatory approvals, such approvals may later be withdrawn as a result of changes in regulations or the interpretation of regulations by applicable regulatory agencies. Delay or failure to obtain, or unexpected costs in obtaining, the regulatory approval necessary to bring a potential therapeutic to market could decrease our ability to generate sufficient revenue to maintain our business.

The FDA may disagree with our future regulatory plans and we may fail to obtain regulatory approval of our cell therapeutic candidates.

The general approach for FDA approval of a new biologic or drug is for the sponsor to provide dispositive data from two well-controlled, Phase 3 clinical studies of the relevant biologic or drug in the relevant patient population. Phase 3 clinical studies typically involve hundreds of patients, have significant costs and take years to complete. The FDA may require that we conduct a comparative trial against an approved therapy including potentially an approved autologous cell therapy, which would significantly delay our development timelines and require substantially more resources. In addition, the FDA may only allow us to evaluate patients that have failed or who are ineligible for autologous therapy, which are extremely difficult patients to treat and patients with advanced and aggressive cancer, and our future therapeutic candidates may fail to improve outcomes for such patients.

Our potential future clinical trial results may also not support approval. In addition, our therapeutic candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that our therapeutic candidates are safe and effective for any of their proposed indications;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval, including due to the heterogeneity of patient populations;
- we may be unable to demonstrate that our therapeutic candidates' clinical and other benefits outweigh their safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our therapeutic candidates may not be sufficient to the satisfaction of the FDA or comparable foreign regulatory authorities to support the submission of a BLA or other comparable submission in foreign jurisdictions or to obtain regulatory approval in the United States or elsewhere;

- the FDA or comparable foreign regulatory authorities will review our manufacturing process and inspect our commercial manufacturing facility and may not approve our manufacturing process or facility; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

We plan to seek orphan drug designation for some or all of our therapeutic candidates across various indications, but we may be unable to obtain such designations or to maintain the benefits associated with orphan drug designation, including market exclusivity, which may cause our revenue, if any, to be reduced.

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages, and user-fee waivers. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process, but if a product that has orphan drug designation subsequently receives the first FDA approval of that particular product for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a BLA, to market the same biologic (meaning, a product with the same principal molecular structural features) for the same indication for seven years, except in limited circumstances. If a competing company also obtains ODD for a product that is deemed the "same drug" as ours for the same orphan indication, and obtains FDA approval before we do, that company would qualify for Orphan Exclusivity which would block approval of our product for seven years. See "Business - Government Regulation and Product Approval" for more information regarding orphan drug designation. Even if the FDA grants orphan drug designation to one or more of our investigational cell therapies, the FDA can still approve other biologics that do not have the same principal molecular structural features for use in treating the same indication or disease or the same biologic for a different indication or disease during the exclusivity period. Furthermore, the FDA can waive orphan exclusivity if we are unable to manufacture sufficient supply of our therapeutic or if a subsequent applicant demonstrates clinical superiority over our product.

We plan to seek orphan drug designation for some or all of our therapeutic candidates in specific orphan indications in which there is a medically plausible basis for the use of these therapeutics. Even if we obtain orphan drug designation, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan designated indication and may be lost if the FDA later determines that the request for designation was materially defective or if we are unable to assure sufficient quantities of the therapeutic to meet the needs of patients with the rare disease or condition, or if a subsequent applicant demonstrates clinical superiority over our therapeutics, if approved.

We may not elect or be able to take advantage of any expedited development or regulatory review and approval processes available to therapeutic candidates granted breakthrough therapy or fast track designation by the FDA.

We intend to evaluate and engage in discussions with the FDA on regulatory strategies that could enable us to take advantage of expedited development pathways for certain of our therapeutic candidates, although we cannot be certain that our therapeutic candidates will qualify for any expedited development pathways or that regulatory authorities will grant, or allow us to maintain, the relevant qualifying designations. Potential expedited development pathways that we could pursue include breakthrough therapy and fast track designation.

Breakthrough therapy designation is intended to expedite the development and review of therapeutic candidates that are designed to treat serious or life-threatening diseases when "preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development." The designation of a therapeutic candidate as a breakthrough therapy provides potential benefits that include more frequent meetings with the FDA to discuss the development plan for the therapeutic candidate and ensure collection of appropriate data needed to support approval; more frequent written correspondence from the FDA about such things as the design of the proposed clinical trials and use of biomarkers; intensive guidance on an efficient drug development program, beginning as early as Phase 1; organizational commitment involving senior managers; and eligibility for rolling review and priority review. Fast track designation is designed for therapeutic candidates intended for the treatment of a serious or life-threatening disease or condition, where nonclinical or clinical data demonstrate the potential to address an unmet medical need for this disease or condition.

Although we have previously received fast track designation for certain of our cell therapy candidates, we may elect not to pursue either of breakthrough therapy or fast track designation for our other therapeutic candidates, and the FDA has broad discretion whether or not to grant these designations.

Accordingly, even if we believe that a particular therapeutic candidate is eligible for breakthrough therapy or fast track designation, we cannot assure you that the FDA would decide to grant such designation. Breakthrough therapy designation and fast track designation do not change the standards for product approval, and there is no assurance that such designation or eligibility will result in expedited review or approval or that the approved indication will not be narrower than the indication covered by the breakthrough therapy designation or fast track designation. Thus, even if we do receive breakthrough therapy or fast track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw breakthrough therapy or fast track designation if it believes that the product no longer meets the qualifying criteria. Our business may be harmed if we are unable to avail ourself of these or any other expedited development and regulatory pathways.

Obtaining and maintaining regulatory approval of our therapeutic candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our therapeutic candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our therapeutic candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a therapeutic candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the therapeutic candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical studies conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a therapeutic candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of therapeutic candidates with which we must comply prior to marketing in those jurisdictions.

Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for it and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our therapeutic candidates will be harmed.

Even if we receive regulatory approval of our therapeutic candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our therapeutic candidates.

Any regulatory approvals that we receive for our therapeutic candidates will require surveillance to monitor the safety and efficacy of the therapeutic candidate. The FDA may also require a Risk Evaluation and Mitigation Strategy, or REMS, in order to approve our therapeutic candidates, which could entail requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our therapeutic candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our therapeutic candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMP and current GCPs for any clinical trials that we conduct post-approval, and compliance with applicable product tracking and tracing requirements. As such,

we will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any BLA, other marketing application and previous responses to inspectional observations. Accordingly, we and others with whom we work with must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control. In addition, the FDA could require us to conduct another study to obtain additional safety or biomarker information. Further, we will be required to comply with FDA promotion and advertising rules, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in patient populations that are not described in the product's approved uses (known as "off-label use"), limitations on industry-sponsored scientific and educational activities and requirements for promotional activities involving the internet and social media. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly promoted off-label uses may be subject to significant liability. However, physicians may, in their independent medical judgment, prescribe legally available products for off-label uses. The FDA does not regulate the behavior of physicians in their choice of treatments, but the FDA does restrict manufacturer's communications on the subject of off-label use of their products.

Later discovery of previously unknown problems with our therapeutic candidates, including adverse events of unanticipated severity or frequency, or with our third-party suppliers, or our manufacturing processes, or failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information, imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of our therapeutic candidates, withdrawal of the therapeutic from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of our therapeutic candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our therapeutic candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative or executive action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

Negative public opinion and increased regulatory scrutiny of genetic research and therapies involving gene editing or modified cells may damage public perception of our therapeutic candidates or adversely affect our ability to conduct our business or obtain regulatory approvals for our therapeutic candidates.

The gene-editing technologies that we use are novel. Public perception may be influenced by claims that gene editing is unsafe, and products incorporating gene editing may not gain the acceptance of the public or the medical community. In particular, our success will depend upon physicians specializing in our targeted diseases prescribing our therapeutic candidates as treatments in lieu of, or in addition to, existing, more familiar, treatments for which greater clinical data may be available. Any increase in negative perceptions of gene editing may result in fewer physicians prescribing our treatments or may reduce the willingness of patients to utilize our treatments or participate in clinical trials for our therapeutic candidates. In addition, given the novel nature of gene-editing and cell therapy technologies, governments may place import, export or other restrictions in order to retain control or limit the use of the technologies. Increased negative public opinion or more restrictive government regulations either in the United States or internationally, would have a negative effect on our business or financial condition and may delay or impair the development and commercialization of our therapeutic candidates or demand for such therapeutic candidates.

Even if we obtain regulatory approval of our therapeutic candidates, the cell therapies may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers and others in the medical community.

The use of engineered placental-derived cells as a potential treatment is a recent development and may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers and others in the medical community. We may not be able to educate these persons on the benefits of using our therapeutic candidates for many reasons. For example, certain of the therapeutic candidates that we will be developing target a cell surface marker that may be present on cancer cells as well as non-cancerous cells. It is possible that our therapeutic candidates may kill these non-cancerous cells, which may result in unacceptable side effects, including death. Additional factors will influence whether our therapeutic candidates are accepted in the market, including:

- the clinical indications for which our therapeutic candidates are approved;
- physicians, hospitals, cancer treatment centers and patients considering our therapeutic candidates as a safe and effective treatment;
- the potential and perceived advantages of our therapeutic candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA;
- the timing of market introduction of our therapeutic candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the availability of coverage and adequate reimbursement by third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of coverage and adequate reimbursement by third-party payors and government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- the effectiveness of our sales and marketing efforts.

If our therapeutic candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue. Even if our cell therapies achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our therapeutics, are more cost effective or render our therapeutics obsolete.

Coverage and reimbursement may be limited or unavailable in certain market segments for our therapeutic candidates, which could make it difficult for us to sell our cell therapies, if approved, profitably.

Successful sales of our therapeutic candidates, if approved, depend on the availability of coverage and adequate reimbursement from third-party payors including governmental healthcare programs, such as Medicare and Medicaid, managed care organizations and commercial payors, among others. Significant uncertainty exists as to the coverage and reimbursement status of any therapeutic candidates for which we obtain regulatory approval. In addition, because our therapeutic candidates represent new approaches to the treatment of cancer, infectious and degenerative diseases, we cannot accurately estimate the potential revenue from our therapeutic candidates. For more information on coverage and reimbursement requirements see "Business - Government Regulation and Product Approval - Coverage, Pricing and Reimbursement."

Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Obtaining coverage and adequate reimbursement from third-party payors is critical to new product acceptance.

Third-party payors decide which drugs and treatments they will cover and the amount of reimbursement. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party payor's determination that use of a therapeutic is:

- a covered benefit under our health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining coverage and reimbursement of a therapeutic from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our therapeutics. Even if we obtain coverage for a given therapeutic, if the resulting reimbursement rates are insufficient, hospitals may not approve our therapeutic for use in their facility or third-party payors may require co-payments that patients find unacceptably high. Patients are unlikely to use our therapeutic candidates unless coverage is provided, and reimbursement is adequate to cover a significant portion of the cost of our therapeutic candidates. Separate reimbursement for the therapeutic itself may or may not be available. Instead, the hospital or administering physician may be reimbursed only for providing the treatment or procedure in which our therapeutic is used. Further, from time to time, Center for Medicare & Medicaid Services, or CMS, revises the reimbursement systems used to reimburse health care providers, including the Medicare Physician Fee Schedule and Outpatient Prospective Payment System, which may result in reduced Medicare payments. In some cases, private third-party payors rely on all or portions of Medicare payment systems to determine payment rates. Furthermore, in November 2024, the CMS and Medicare Administrative Contractors, or MACs, simultaneously finalized nearly identical Local Coverage Determinations, or LCDs, that will deny coverage for virtually all amniotic tissue products that are used to cover and treat chronic wounds.

While, as of the date of this prospectus, these LCD determinations will become effective as of February 12, 2025, the Trump administration may suspend such determinations; however, no assurance can be provided that such suspension will occur, or if it does occur that it will occur in a timely manner, if at all. If the Trump administration does not suspend the LCD determinations by February 12, 2025, the sales of our amniotic tissue products may be affected. Changes to government healthcare programs that reduce payments under these programs may negatively impact payments from private third-party payors and reduce the willingness of physicians to use our therapeutic candidates.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

We intend to seek approval to market our therapeutic candidates in both the United States and in selected foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions for our therapeutic candidates, we will be subject to rules and regulations in those jurisdictions. In some foreign countries, particularly those in Europe, the pricing of biologics is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after obtaining marketing approval of a therapeutic candidate. Some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular therapeutic candidate to currently available therapies. Other EU member states allow companies to fix their own prices for medicines but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any therapeutic candidates for which we receive regulatory approval for commercial sale may suffer if government and other third-party payors fail to provide coverage and adequate reimbursement. We expect downward pressure on pharmaceutical pricing to continue. Further, coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more therapeutics for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

The advancement of healthcare reform may negatively impact our ability to sell our therapeutic candidates, if approved, profitably.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our therapeutic candidates, if approved, profitably. Further legislation or regulation could be passed that could harm our business, financial condition and results of operations. See "Business - Government Regulation and Product Approval - Healthcare Reform" for a discussion of these laws and regulations. There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our therapeutics. Such reforms could have an adverse effect on anticipated revenue from therapeutic candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop therapeutic candidates.

In addition, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. congressional inquiries and federal and state legislative activity designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient assistance programs, and reform government program reimbursement methodologies for drugs. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

We cannot predict the initiatives that may be adopted in the future. Additionally, the continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our therapeutic candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our therapeutics;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Risks Related to Our Intellectual Property

If our efforts to protect the proprietary nature of the intellectual property related to our technologies is not adequate, we may not be able to compete effectively in our market.

As is the case with other biopharmaceutical companies, our success depends in large part on our ability to obtain and maintain protection of intellectual property. We rely upon a combination of patents, trade secret protection and license agreements to protect the intellectual property related to our technologies. Any disclosure to or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, thus eroding our competitive position in our market. We have filed additional patent applications, and we anticipate additional patent applications will be filed in the future, both in the United States and in other countries, as appropriate. However, we cannot predict:

- if and when patents will issue;
- the degree and range of protection any issued patents will afford us against competitors, including whether third parties will find ways to invalidate or otherwise circumvent our patents;
- whether or not others will obtain patents claiming aspects similar to those covered by our patents and patent applications; or
- whether we will need to initiate litigation or administrative proceedings, which may be costly whether we win or lose.

Obtaining and enforcing biopharmaceutical patents is costly, time consuming and complex, and we may not be able to file and prosecute all necessary or desirable patent applications, or maintain, enforce and license any patents that may issue from such patent applications, at a reasonable cost or in a timely manner. It is also possible that we may fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. We may not have the right to control the preparation, filing and prosecution of patent applications licensed from third parties, or to maintain the rights to patents licensed to third parties. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business.

We cannot be certain that the claims in our pending patent applications will be considered patentable by the United States Patent and Trademark Office, or USPTO, or by patent offices in foreign countries, or that the claims in any of our issued patents will be considered valid and enforceable by courts in the United States or foreign countries. The strength of patents in the biotechnology and pharmaceutical field involves complex legal and scientific questions and can be uncertain. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our therapeutic candidates or uses thereof in the United States or in other foreign countries. Even if the patents do successfully issue, third parties may challenge the patentability, validity, enforceability or scope thereof, which may result in such patents being canceled, narrowed, invalidated or held unenforceable. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing their products to avoid being covered by our claims. If the breadth or strength of protection provided by the patents and patent applications we hold with respect to our therapeutic candidates is threatened, it could dissuade companies from collaborating with us to develop, and threaten our ability to commercialize, our therapeutic candidates. Further, if we encounter delays in our clinical trials, the period of time during which we could market our therapeutic candidates under patent protection would be reduced. Further, changes in U.S. patent law could diminish the value of patents in general, thereby impairing our ability to protect our products.

Depending on decisions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our ability to obtain new patents or to enforce our existing patents and patents that we might obtain in the future.

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to the protection afforded by patents, we seek to rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable, processes for which patents are difficult to enforce and any other elements of our product discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. We take steps to protect our intellectual property and proprietary technology by entering into agreements, including confidentiality agreements, non-disclosure agreements and intellectual property assignment agreements, with our employees, consultants, corporate partners and, when needed, advisers. Trade secrets, however, may be difficult to protect.

Monitoring unauthorized disclosure and detection of unauthorized disclosure is difficult, and we do not know whether the steps we have taken to prevent such disclosure are, or will be, adequate. If we were to enforce a claim that a third party had illegally obtained and was using our trade secrets, it would be expensive and time-consuming, and the outcome would be unpredictable.

Although we require all of our employees to assign their inventions to us, and requires all of our employees and key consultants who have access to our proprietary know-how, information, or technology to enter into confidentiality agreements, we cannot be certain that our trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques. Furthermore, the laws of some foreign countries do not protect proprietary rights to the same extent or in the same manner as the laws of the United States. As a result, we may encounter significant problems in protecting and defending our intellectual property both in the United States and abroad. If we are unable to prevent unauthorized material disclosure of our confidential information or intellectual property to third parties, we will not be able to establish or maintain a competitive advantage in our market, which could materially adversely affect our business, operating results and financial condition.

We may be subject to claims that our employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

We have received confidential and proprietary information from third parties. In addition, we employ individuals who were previously employed at other biotechnology or pharmaceutical companies. Although we try to ensure that our

employees, consultants, advisors and independent contractors do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or our employees, consultants or independent contractors have inadvertently or otherwise used or disclosed intellectual property, including trade secrets or other proprietary or confidential information of these third parties or our employees' former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights and face increased competition to business. A loss of key research personnel work product could hamper or prevent our ability to commercialize potential technologies and solutions, which could harm our business. Even if we are successful in defending against these claims, litigation could result in substantial cost and be a distraction to our management team and employees.

In addition, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who, in fact, conceives or develops intellectual property that we regard as our own. The assignment of intellectual property rights may not be self-executing, or the assignment agreements may be breached, and we may be forced to bring claims against third parties, or defend claims that they may bring against us, to determine the ownership of what we regard as our intellectual property. Any of the foregoing could harm our business, financial condition, results of operations and prospects.

Third-party claims of intellectual property infringement may prevent or delay our product discovery and development efforts and our ability to commercialize our therapeutic candidates.

Our commercial success depends in part on us avoiding infringement of the patents and proprietary rights of third parties. There is a substantial amount of litigation involving patents and other intellectual property rights in the biotechnology and pharmaceutical industries. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which we are developing our therapeutic candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our therapeutic candidates may give rise to claims of infringement of the patent rights of others.

Third parties may assert that we infringe their patents or are otherwise employing their proprietary technology without authorization and may sue. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that our therapeutic candidates may be alleged to infringe. In addition, third parties may obtain patents in the future and claim that use of our technologies infringes upon these patents. If any third-party patents were held by a court of competent jurisdiction to cover the manufacturing process of our therapeutic candidates, constructs or molecules used in or formed during the manufacturing process, or any final therapeutic itself, the holders of any such patents may be able to block our ability to commercialize the therapeutic candidate unless we obtain a license under the applicable patents, or until such patents expire or they are finally determined to be held not infringed, unpatentable, invalid or unenforceable. Similarly, if any third-party patent were held by a court of competent jurisdiction to cover aspects of our formulations, processes for manufacture or methods of use, including combination therapy or patient selection methods, the holders of any such patent may be able to block our ability to develop and commercialize the therapeutic candidate unless we obtain a license or until such patent expires or is finally determined to be held not infringed, unpatentable, invalid or unenforceable. In either case, such a license may not be available on commercially reasonable terms or at all. If we are unable to obtain a necessary license to a third-party patent on commercially reasonable terms, or at all, our ability to commercialize our therapeutic candidates may be impaired or delayed, which could in turn significantly harm our business.

Parties making claims against us may seek and obtain injunctive or other equitable relief, which could effectively block our ability to further develop and commercialize our therapeutic candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business and may impact our reputation. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure. We cannot predict whether any such license would be available at all or whether it would be available on commercially reasonable terms. Furthermore, even in the absence of litigation, we may need to obtain licenses from third parties to advance our research or allow commercialization of our therapeutic candidates. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, if at all. In that event, we would be unable to further develop and commercialize our therapeutic candidates, which could harm our business significantly.

We may not be successful in obtaining or maintaining necessary rights to product components and processes for our development pipeline through acquisitions and in-licenses.

Presently, we have rights to the intellectual property, through licenses from third parties and under patent applications that we own or will own, that we believe will facilitate the development of our therapeutic candidates. In the future, we may identify third party intellectual property and technology that we may need to acquire or license in order to engage in our business, including to develop or commercialize new technologies or services, and the growth of our business may depend in part on our ability to acquire, in-license or use this technology.

We may be unable to acquire or in-license any third-party intellectual property rights from third parties that we identify. We may fail to obtain any of these licenses at a reasonable cost or on reasonable terms, which would harm our business. Even if we are able to obtain a license, we may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. In that event, we may be required to expend significant time and resources to develop or license replacement technology. We may need to cease use of the compositions or methods covered by such third-party intellectual property rights to the extent we are unable to maintain our license with any such third-party licensors.

The licensing and acquisition of third-party intellectual property rights is a competitive area, and companies, which may be more established, or have greater resources than we do, may also be pursuing strategies to license or acquire third-party intellectual property rights that we may consider necessary or attractive in order to commercialize our therapeutic candidates. More established companies may have a competitive advantage over us due to their size, cash resources and greater clinical development and commercialization capabilities.

In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us. If such licenses are available, we may be required to pay the licensor in return for the use of such licensor's technology, lump-sum payments, payments based on certain milestones such as sales volumes, or royalties based on sales. In addition, our licenses may also place restrictions on our future business opportunities.

In spite of our best efforts, our licensors might conclude that we have materially breached our license agreements and might therefore terminate the license agreements, thereby removing our ability to develop and commercialize technology covered by these license agreements. If these licenses are terminated, or if the underlying intellectual property fails to provide the intended exclusivity, competitors would have the freedom to seek regulatory approval of, and to market products that use technologies identical to those licensed to us. This could have a material adverse effect on our competitive position, business, financial condition, results of operations and prospects. Additionally, termination of these agreements or reduction or elimination of our rights under these agreements, or restrictions on our ability to freely assign or sublicense our rights under such agreements when it is in the interest of our business to do so, may result in us having to negotiate new or reinstated agreements with less favorable terms, or cause us to lose our rights under these agreements, including our rights to important intellectual property or technology or impede, or delay or prohibit the further development or commercialization of one or more technologies that rely on such agreements.

In addition to the above risks, intellectual property rights that may be licensed now or in the future could include sublicenses under intellectual property owned by third parties, in some cases through multiple tiers. The actions of our licensors may therefore affect our rights to use sublicensed intellectual property, even if we are in compliance with all of the obligations under our license agreements. Should our licensors or any of the upstream licensors fail to comply with their obligations under the agreements pursuant to which they obtain the rights that are sublicensed to us, or should such agreements be terminated or amended, our ability to develop and commercialize therapeutic candidates may be materially harmed.

Further, we may not have the right to control the prosecution, maintenance and enforcement of all of our licensed and sublicensed intellectual property, and even when we do have such rights, we may require the cooperation of our licensors and upstream licensors, which may not be forthcoming. Our business could be adversely affected if we or our licensors are unable to prosecute, maintain and enforce licensed and sublicensed intellectual property effectively.

Our licensors may have relied on third-party consultants or collaborators or on funds from third parties such that our licensors are not the sole and exclusive owners of the patents and patent applications in-licensed. If other third parties have ownership rights to patents or patent applications in-licensed by us, they may be able to license such patents to our competitors, and our competitors could market competing products and technology. This could have a material adverse effect on our competitive position, business, financial conditions, results of operations and prospects.

Our business, financial condition, results of operations and prospects could be materially and adversely affected if we are unable to enter into necessary agreements on acceptable terms or at all, if any necessary licenses are subsequently terminated, if the licensors fail to abide by the terms of the licenses or fail to prevent infringement by third parties, or if the acquired or licensed patents or other rights are found to be invalid or unenforceable. Moreover, we could encounter delays in the introduction of services while we attempt to develop alternatives. Further, defense of any lawsuit or failure to obtain any of these licenses on favorable terms could prevent us from commercializing products, which could harm our business, financial condition, or results of operations and prospects.

We may be involved in lawsuits or other legal proceedings to protect or enforce our patents or the patents of our licensors, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors or misappropriate or otherwise violate our intellectual property rights or the intellectual property rights of our licensors. In the future, we or our licensors may initiate legal proceedings to enforce or defend our intellectual property rights or the intellectual property rights of our licensors, to protect our trade secrets or the trade secrets of our licensors, or to determine the validity or scope of intellectual property rights we own or control.

To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. Third parties may also initiate legal proceedings against us or our licensors to challenge the validity or scope of intellectual property rights we own, control or to which we have rights. In an infringement proceeding, a court may decide that one or more of our patents are not valid or are unenforceable or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly and could put one or more of our pending patent applications at risk of not issuing. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. Additionally, many of our adversaries or adversaries of our licensors in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we can. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, obtain one or more licenses from third parties, pay royalties or redesign our infringing products, which may be impossible or require substantial time and monetary expenditure.

Third-party pre-issuance submission of prior art to the USPTO, or opposition, derivation, revocation, reexamination, inter partes review or interference proceedings, or other pre-issuance or post-grant proceedings or other patent office proceedings or litigation in the United States or other jurisdictions provoked by third parties or brought by us or our licensors, may challenge or be necessary to determine the inventorship, priority, patentability or validity of inventions with respect to us or our licensor's patents or patent applications. An unfavorable outcome could leave our technology or therapeutic candidates without patent protection, allow third parties to commercialize our technology or therapeutic candidates and compete directly with us, without payment to us, or could require us or our licensors to cease using the related technology or to obtain license rights from the prevailing party in order to be able to manufacture or commercialize our therapeutic candidates without infringing third-party patent rights.

Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms. Litigation or other legal proceedings may result in a decision adverse to our interests and, even if we are successful, may result in substantial costs and distract our management and other employees. We may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a

substantial adverse effect on the price of our Class A common stock. If the breadth or strength of protection provided by us or our licensor's patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize therapeutic candidates. Moreover, the uncertainties associated with litigation could have a material adverse effect on our ability to raise the funds necessary to continue clinical trials, continue research programs, license necessary technology from third parties, or enter into collaborations.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO, and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. In such an event, our competitors might be able to enter the market, which would have a material adverse effect on our business.

The lives of our patents may not be sufficient to effectively protect our products and business.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years after its first effective filing date. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering our therapeutic candidates are obtained, once the patent life has expired for a product, we may be open to competition from biosimilar or generic medications. In addition, although upon issuance in the United States a patent's life can be increased based on certain delays caused by the USPTO, this increase can be reduced or eliminated based on certain delays caused by the patent applicant during patent prosecution. If our technologies require extended development and/or regulatory review, patents protecting our technologies might expire before or shortly after we are able to successfully commercialize them. If we do not have sufficient patent life to protect our products, our business and results of operations will be adversely affected.

We or our licensors may be subject to claims challenging the inventorship of our patents and other intellectual property.

We or our licensors may in the future be subject to claims that former employees, collaborators, or other third parties have an interest in our patents or other intellectual property as an inventor or co-inventor. For example, we may have inventorship disputes arise from conflicting obligations of consultants or others who are involved in developing our therapeutic candidates. Litigation may be necessary to defend against these and other claims challenging inventorship. If we or our licensors fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on our business. Even if we or our licensors are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

We may not be able to protect our intellectual property rights throughout the world.

We may not be able to protect our intellectual property rights outside the United States. Filing, prosecuting and defending patents on therapeutic candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States, and even where such protection is nominally available, judicial and governmental enforcement of such intellectual property rights may be lacking. Whether filed in the United States or abroad, our patents and patent applications may be challenged or may fail to result in issued patents. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using its inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing. In addition, certain countries have compulsory licensing laws under which a patent owner may be compelled to grant licenses to other parties. Furthermore, many countries limit the enforceability of patents against other parties, including government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of any patents.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of many other countries do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biotechnology, which could make it difficult for us to stop the misappropriation or other violations of our intellectual property rights including infringement of our patents in such countries. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing, and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate, or that are initiated against us, and the damages or other remedies awarded, if any, may not be commercially meaningful. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain adequate protection for our technologies and the enforcement of intellectual property. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Changes in patent law, including recent patent reform legislation, could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

Changes in either the patent laws or in interpretations of patent laws in the United States or other countries or regions may diminish the value of our intellectual property. We cannot predict the breadth of claims that may be allowed or enforced in our patents or in third party patents. We may not develop additional proprietary technologies that are patentable.

Assuming that other requirements for patentability are met, prior to March 16, 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. On or after March 16, 2013, under the Leahy-Smith America Invents Act, or the America Invents Act, enacted on September 16, 2011, the United States transitioned to a first inventor to file system in which, assuming that other requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the claimed invention. A third party that files a patent application in the USPTO on or after March 16, 2013, but before us, could therefore be awarded a patent covering an invention of ours, even if we have made the invention before it was made by such third party. This will require us to be cognizant of the time from invention to filing of a patent application. Because patent applications in the United States and most other countries are confidential for a period of time after filing or until issuance, we cannot be certain that we or our licensors were the first to either (i) file any patent application related to our technology or (ii) invent any of the inventions claimed in us or our licensor's patents or patent applications.

The America Invents Act also includes a number of significant changes that affect the way patent applications will be prosecuted and also may affect patent litigation. These include allowing third party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent by USPTO administered post-grant proceedings, including post-grant review, inter partes review and derivation proceedings. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in United States federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action. Accordingly, a third party may attempt to use the USPTO procedures to invalidate our patent claims that would not have been invalidated if first challenged by the third party as a defendant in a district court action. Therefore, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our owned or in-licensed patent applications and the enforcement or defense of our owned or in-licensed issued patents, all of which could have a material adverse effect on our business, financial condition, results of operations and prospects.

In addition, the patent position of companies in the biotechnology field is particularly uncertain. Various courts, including the United States Supreme Court have rendered decisions that affect the scope of patentability of certain inventions or discoveries relating to biotechnology. These decisions state, among other things, that a patent claim that recites an abstract idea, natural phenomenon or law of nature (for example, the relationship between particular genetic variants and cancer) are not themselves patentable. Precisely what constitutes a law of nature or abstract idea is uncertain, and it is possible that certain aspects of our technology could be considered natural laws. Accordingly, the evolving case law in the United States, and abroad, may adversely affect us and our licensor's ability to obtain new patents or to enforce existing patents and may facilitate third party challenges to any owned or licensed patents.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations and may not adequately protect our business or permit us to maintain any competitive advantage. For example:

- others may be able to make products that are similar to any therapeutic candidates we may develop or utilize similar technology that are not covered by the claims of the patents that we license or may own in the future;

- we, or our, current or future collaborators, might not have been the first to make the inventions covered by the issued patents and pending patent applications that we license or may own in the future;
- we, or our, current or future collaborators, might not have been the first to file patent applications covering certain of our intellectual property or our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our owned or licensed intellectual property rights;
- it is possible that our pending patent applications or those that we may own in the future will not lead to issued patents;
- issued patents that we hold rights to may be held invalid or unenforceable, including as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive therapeutics for sale in our major commercial markets;
- we cannot ensure that any patents issued to us or our licensors will provide a basis for an exclusive market for our commercially viable therapeutic candidates or will provide us with any competitive advantages;
- we cannot ensure that our commercial activities or therapeutic candidates will not infringe upon the patents of others;
- we cannot ensure that we will be able to successfully commercialize our therapeutic candidates on a substantial scale, if approved, before the relevant patents that we own or licenses expire;
- we cannot ensure that any of our patents, or any of our pending patent applications, if issued, or those of our licensors, will include claims having a scope sufficient to protect our therapeutic candidates;

- we may not develop additional proprietary technologies that are patentable;
- the patents or intellectual property rights of others may harm our business; and
- we may choose not to file a patent application in order to maintain certain trade secrets or know-how, and a third party may subsequently file a patent covering such intellectual property.

Should any of these events occur, they could have a material adverse effect on our business, financial condition, results of operations and prospects.

Risks Related to this Offering and Ownership of Our Securities

There may not be an active trading market for our securities, which may make it difficult to sell shares of Class A common stock.

It is possible that an active trading market for our securities will not develop or, if developed, that any market will not be sustained. This would make it difficult for us to sell our securities at an attractive price or at all.

The market price of our securities may be volatile, which could cause the value of an investment to decline.

The price of our securities may fluctuate significantly due to general market and economic conditions. An active trading market for our securities may not develop or, if developed, it may not be sustained. In addition, fluctuations in the price of our securities could contribute to the loss of all or part of the investment in us. Even if an active market for our securities develops and continues, the trading price of our securities could be volatile and subject to wide fluctuations in response to various factors, some of which are beyond our control. Any of the factors listed below could have a material adverse effect on your investment in our securities and our securities may trade at prices significantly below the price you paid for them. In such circumstances, the trading price of our securities may not recover and may experience a further decline.

Factors affecting the trading price of our securities may include:

- the realization of any of the risk factors presented in this prospectus;
- actual or anticipated fluctuations in our quarterly financial results or the quarterly financial results of companies perceived to be similar to us;
- changes in the market's expectations about our operating results;
- our operating results failing to meet the expectation of securities analysts of investors in a particular period;
- operating and share price performance of other companies that investors deem comparable to us;
- the volume of shares of Class A common stock available for public sale;
- future issuances, sales, resales or repurchases or anticipated issuances, sales, resales or repurchases of our securities;
- the commencement, enrollment or results of our ongoing and planned clinical trials of our therapeutic candidates or any future clinical trials we may conduct, or changes in the development status of our therapeutic candidates;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse results or delays in clinical trials;
- any delay in our regulatory filings for our therapeutic candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;
- our failure to commercialize our therapeutic candidates;
- adverse regulatory decisions, including failure to receive regulatory approval of our therapeutic candidates;
- changes in laws or regulations applicable to our therapeutic candidates, including, but not limited to, clinical trial requirements for approvals;
- adverse developments concerning manufacturers or suppliers;
- our inability to manufacture or obtain adequate supply for any approved therapeutic or inability to do so at acceptable prices;

- our inability to establish collaborations if needed;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to cellular therapies;
- introduction of new therapeutics or services offered by our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage growth;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or cellular therapy in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the structure of healthcare payment systems;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- speculation in the press or investment community;
- sales of Class A common stock by us or our stockholders in the future;
- the trading volume of our Class A common stock;
- changes in accounting practices;
- the ineffectiveness of our internal control over financial reporting;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain or maintain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions, including health pandemics; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and Nasdaq and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our Class A common stock, regardless of its actual operating performance. In the past, securities class action litigation has often been

instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

We do not intend to pay cash dividends for the foreseeable future.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings to finance the operation and expansion of our business, and we do not expect to declare or pay any cash dividends in the foreseeable future. As a result, you may only receive a return on your investment in our Class A common stock if the trading price of your shares increases.

Our Class A common stock is currently listed on Nasdaq. If we are unable to maintain listing of our Class A common stock on Nasdaq or any stock exchange, our stock price could be adversely affected and the liquidity of our stock and our ability to obtain financing could be impaired and it may be more difficult for our stockholders to sell their securities.

Although our Class A common stock is currently listed on Nasdaq, we may not be able to continue to meet the exchange's minimum listing requirements or those of any other national exchange. The Listing Rules of Nasdaq require listing issuers to comply with certain standards in order to remain listed on its exchange. If, for any reason, we should fail to maintain compliance with these listing standards and Nasdaq should delist our securities from trading on its exchange and we are unable to obtain listing on another national securities exchange, we anticipate that our securities would begin trading on the over-the-counter market. Delisting from Nasdaq and trading on the over-the-counter market could adversely affect the liquidity of our securities. Securities traded on the over-the-counter market generally have limited trading volume and exhibit a wider spread between the bid/ask quotation, as compared to securities listed on a national securities exchange. Consequently, you may not be able to liquidate your investment in the event of an emergency or for any other reason.

If Nasdaq delists our securities from trading on its exchange for failure to meet the listing standards, we and our stockholders could face significant negative consequences including:

- limited availability of market quotations for our securities;
- a determination that our Class A common stock is a "penny stock" which will require brokers trading in our Class A common stock to adhere to more stringent rules;
- a potential reduction in the level of trading activity in the secondary trading market for shares of our Class A common stock;
- a limited amount of analyst coverage; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

Future sales and issuances of our Class A common stock or rights to purchase Class A common stock, including pursuant to our equity plans, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including, commercialization efforts, expanded research and development activities, conducting clinical trials and costs associated with operating as a public company. To raise capital, we may sell shares of our Class A common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. We may also sell our Class A common stock as part of entering into strategic alliances, creating joint ventures or collaborations or entering into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts. If we sell shares of our Class A common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our Class A common stock.

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control, which could limit the market price of our Class A common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our second amended and restated certificate of incorporation, as amended ("certificate of incorporation"), and our amended and restated bylaws ("bylaws") contain provisions that could delay or prevent a change of control of our Company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of our board of directors will be elected at one time;
- a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the chairman of our board of directors, the chief executive officer, or by a majority of the total number of authorized directors;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;
- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation; and
- the authority of our board of directors to issue preferred stock on terms determined by the directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of Class A common stock.

In addition, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our charter and bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our Company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our Class A common stock to decline.

Our certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

Our certificate of incorporation provides that the Court of Chancery of the State of Delaware (or, if and only if the Court of Chancery of the State of Delaware lacks subject matter jurisdiction, any state court located within the State of Delaware or, if and only if all such state courts lack subject matter jurisdiction, the federal district court for the District of Delaware) will be the exclusive forum for the following types of actions or proceedings under Delaware statutory or common law:

- any derivative claim or cause of action brought on our behalf;

- any claim or cause of action for breach of a fiduciary duty owed by any of our current or former directors, officers or other employees to us or our stockholders;
- any claim or cause of action against us or any of our current or former directors, officers or other employees, arising out of or pursuant to any provision of the DGCL, our certificate of incorporation or our bylaws;
- any claim or cause of action seeking to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws;
- any claim or cause of action as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and
- any claim or cause of action against us or any of our directors, officers or other employees governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants.

This provision would not apply to suits brought to enforce a duty or liability created by the Exchange Act or any other claim for which the U.S. federal courts have exclusive jurisdiction.

Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all such Securities Act actions. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our charter provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act. While the Delaware courts have determined that such choice of forum provisions are facially valid, a stockholder may nevertheless seek to bring a claim in a venue other than those designated in the exclusive forum provisions. In such instance, we would expect to vigorously assert the validity and enforceability of the exclusive forum provisions of our charter. This may require significant additional costs associated with resolving such action in other jurisdictions and there can be no assurance that the provisions will be enforced by a court in those other jurisdictions.

These exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with our Company or our directors, officers, or other employees, which may discourage lawsuits against us and our directors, officers and other employees. If a court were to find either exclusive-forum provision in our charter to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving the dispute in other jurisdictions, which could seriously harm our business.

Management will have broad discretion as to the use of the net proceeds from this offering, and we may not use the proceeds effectively.

Our management will have broad discretion as to the application of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use the net proceeds for corporate purposes that may not positively impact our results of operations or increase the market value of our Class A common stock. Our failure to apply these funds effectively could have a material adverse effect on our business, delay the development of our products and/or cause the price of our Class A common stock to decline.

You may experience immediate and substantial dilution in the net tangible book value per share of the Class A common stock you purchase in the offering.

The offering price per share in this offering may exceed the net tangible book value per share of our Class A common stock outstanding prior to this offering. After giving effect to (i) the sale of $750,000 of November Notes and November Warrants to purchase up to 578,812 shares of our Class A common stock pursuant to that certain securities purchase agreement dated November 25, 2024, (ii) conversion of approximately $1.3 million of convertible promissory notes into 478,881 shares of the Company's Class A common stock on various dates in November 2024, (iii) the issuance of 1,188,255 shares of the Company's Class A common stock issued upon the exercise of a warrant on January23, 2025 and (iv) shares of our Class A common stock and Pre-funded Warrants in this offering at an assumed public offering price of $2.30 per share, the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025, after deducting commissions and estimated offering expenses payable by us, and assuming no sale of any Pre-funded Warrants, you will experience immediate dilution of $1.73 per share, representing the difference between our net tangible book value per share as of September 30, 2024 after giving effect to this offering and the offering price. The exercise of outstanding warrants and stock options and the vesting of outstanding restricted stock units may also result in further dilution of your investment. See the section entitled "Dilution" on page 59 below for a more detailed illustration of the dilution you may incur if you participate in this offering.

Sales of a substantial number of our shares of Class A common stock in the public market could cause our stock price to fall.

We may issue and sell additional shares of Class A common stock in the public markets. Sales of a substantial number of shares of our Class A common stock in the public markets or the perception that such sales could occur could depress the market price of our c Class A common stock and impair our ability to raise capital through the sale of additional equity securities.

The exercise of our outstanding options and warrants and the vesting of outstanding restricted stock units will dilute stockholders and could decrease our stock price.

The exercise of our outstanding options and warrants and the vesting of outstanding restricted stock units may adversely affect our stock price due to sales of a large number of shares or the perception that such sales could occur. These factors also could make it more difficult to raise funds through future offerings of our securities, and could adversely impact the terms under which we could obtain additional equity capital. Exercise of outstanding options and warrants or any future issuance of additional shares of Class A common stock or other equity securities, including, but not limited to, options, warrants, restricted stock units or other derivative securities convertible into our Class A common stock, may result in significant dilution to our stockholders and may decrease our stock price.

There is no established public trading market for the Pre-funded Warrants being offered in this offering, and we do not expect a market to develop for the Pre-funded Warrants.

There is no established public trading market for the Pre-funded Warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Pre-funded Warrants on any national securities exchange or other nationally recognized trading system. Without an active market, the liquidity of the Pre-funded Warrants will be limited. Further, the existence of the Pre-funded Warrants may act to reduce both the trading volume and the trading price of our Class A common stock.

The Pre-funded Warrants are speculative in nature.

Except as otherwise provided in the Pre-funded Warrants, until holders of Pre-funded Warrants acquire our Class A common stock upon exercise of the Pre-funded Warrants, holders of Pre-funded Warrants will have no rights with respect to our Class A common stock underlying such Pre-funded Warrants. Upon exercise of the Pre-funded Warrants, the holders will be entitled to exercise the rights of a stockholder of our Class A common stock only as to matters for which the record date occurs after the exercise date.

Moreover, following this offering, the market value of the Pre-funded Warrants is uncertain. There can be no assurance that the market price of our Class A common stock will ever equal or exceed the price of the Pre-funded Warrants, and, consequently, whether it will ever be profitable for investors to exercise their Pre-funded Warrants.

General Risk Factors

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

The global credit and financial markets have experienced extreme volatility and disruptions in the past including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, inflationary pressure and interest rate changes, increases in unemployment rates and uncertainty about economic stability. The financial markets and the global economy may also be adversely affected by the current or anticipated impact of military conflict, including the conflict between Russia and Ukraine, terrorism or other geopolitical events. Sanctions imposed by the United States and other countries in response to such conflicts, including the one in Ukraine, may also adversely impact the financial markets and the global economy, and any economic countermeasures by the affected countries or others could exacerbate market and economic instability. Furthermore, the closures of Silicon Valley Bank and Signature Bank and their placement into receivership with the Federal Deposit Insurance Corporation ("FDIC") created bank-specific and broader financial institution liquidity risk and concerns. Although the Department of the Treasury, the Federal Reserve, and the FDIC jointly confirmed that depositors at SVB and Signature Bank would continue to have access to their funds, even those in excess of the standard FDIC insurance limits, under a systemic risk exception, future adverse developments with respect to specific financial institutions or the broader financial services industry may lead to market-wide liquidity shortages, impair the ability of companies to access near-term working capital needs, and create additional market and economic uncertainty. There can be no assurance that future credit and financial market instability and a deterioration in confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, liquidity shortages, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or if adverse developments are experienced by financial institutions, it may cause short-term liquidity risk and also may make any necessary debt or equity financing more difficult, more costly and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our operations, growth strategy, financial performance and stock price and could require it to delay or abandon clinical development plans. In addition, there is a risk that one or more of our current service providers may not survive an economic downturn, which could directly affect our ability to attain our operating goals on schedule and on budget.

If securities or industry analysts do not publish research or reports, or publish unfavorable research or reports about our business, our stock price and trading volume may decline.

The trading market for our Class A common stock relies in part on the research and reports that industry or financial analysts publish about us, our business, our markets and our competitors. We do not control these analysts. If securities analysts do not cover our Class A common stock, the lack of research coverage may adversely affect the market price of our Class A common stock. Furthermore, if one or more of the analysts who do cover us downgrade our stock or if those analysts issue other unfavorable commentary about us or our business, our stock price would likely decline. If one or more of these analysts cease coverage of us or fails to regularly publish reports on us, we could lose visibility in the market and interest in our stock could decrease, which in turn could cause our stock price or trading volume to decline and may also impair our ability to grow our business.

We could be subject to securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology and pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

Financial reporting obligations of being a public company in the U.S. are expensive and time-consuming, and our management will be required to devote substantial time to compliance matters.

As a publicly traded company we incur significant additional legal, accounting and other expenses. The obligations of being a public company in the U.S. require significant expenditures and place significant demands on our management and other personnel, including costs resulting from public company reporting obligations under the Exchange Act and the rules and regulations regarding corporate governance practices, including those under the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act, and The Nasdaq Capital Market. These rules require the establishment and maintenance of effective disclosure and financial controls and procedures, internal control over financial reporting and changes in corporate governance practices, among many other complex rules that are often difficult to implement, monitor and maintain compliance with. Moreover, despite recent reforms made possible by the JOBS Act, the reporting requirements, rules, and regulations will make some activities more time-consuming and costly, particularly after we are no longer a "smaller reporting company." Our management and other personnel will need to devote a substantial amount of time to ensure that we comply with all of these requirements and to keep pace with new regulations, otherwise we may fall out of compliance and risk becoming subject to litigation or being delisted, among other potential problems.

USE OF PROCEEDS

We estimate that the net proceeds from our issuance and sale of shares of our Class A common stock and Pre-funded Warrants in this offering will be approximately $13.3 million, or approximately $15.4 million if the underwriters exercise their option to purchase additional securities in full, based on an assumed public offering price of $2.30 per share, which was the closing price of our Class A common stock on The Nasdaq Capital Market on January 23, 2025, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us assuming no sale of the Pre-funded Warrants.

We intend to use the net proceeds from this offering for working capital and general corporate purposes.

A $0.50 increase or decrease in the assumed public offering price of $2.30 per share would increase or decrease the net proceeds from this offering by approximately $3.0 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions. An increase (decrease) of 500,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds from this offering by approximately $1.1 million, assuming no change in the assumed public offering price per share and after deducting estimated underwriting discounts and commissions.

Although we have identified some potential uses of the net proceeds to be received from this offering, we cannot specify these uses with certainty. Our management will have broad discretion in the application of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Our stockholders may not agree with the manner in which our management chooses to allocate and spend the net proceeds. Moreover, our management may use the net proceeds for corporate purposes that may not positively impact our results of operations or increase the market value of our Class A common stock.

Pending any use, as described above, we plan to deposit the net proceeds in money market accounts with our primary bank or otherwise invest the net proceeds in high-quality, short-term, interest-bearing securities.

DILUTION

If you invest in our Class A common stock in this offering, your ownership interest will be diluted to the extent of the difference between the offering price per share of our Class A common stock and the pro forma as adjusted net tangible book value per share of our Class A common stock immediately after the offering. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of our Class A common stock outstanding.

The historical net tangible book value of our Class A common stock as of September 30, 2024 was approximately $0.3 million or $0.01 per share based on 21,984,614 shares of Class A common stock outstanding on such date. Historical net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities, divided by the total number of shares of Class A common stock outstanding.

After giving effect to (i) the sale of $750,000 of November Notes and November Warrants to purchase up to 578,812 shares of our Class A common stock pursuant to that certain securities purchase agreement dated November 25, 2024, (ii) conversion of approximately $1.3 million of convertible promissory notes into 478,881 shares of the Company's Class A common stock on various dates in November 2024 and (iii) the issuance of 1,188,255 shares of the Company's Class A common stock issued upon the exercise of a warrant on January 23, 2025, our pro forma net tangible book value at September 30, 2024 would have been $4.0 million, or $0.17 per share of Class A common stock.

After giving further effect to the sale of shares of our Class A common stock and Pre-funded Warrants in this offering at an assumed public offering price of $2.30 per share, which was the closing price of our Class A common stock on The Nasdaq Capital Market on January 23, 2025 and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us and assuming no sale of the Pre-funded Warrants, our pro forma as adjusted net tangible book value at September 30, 2024 would have been $17.3 million, or $0.57 per share of Class A common stock. This represents an immediate increase in pro forma as adjusted net tangible book value of $0.40. per share to existing stockholders and immediate dilution of $1.73 per share to new investors purchasing shares of our Class A common stock in this offering.

The following table illustrates this dilution on a per share basis:

Assumed public offering price per share	$	2.30
Pro forma net tangible book value per share as of September 30, 2024	$	0.17
Pro forma increase in net tangible book value per share attributable to new investors in this offering		0.40
Pro forma as adjusted net tangible book value per share immediately after this offering		0.57
Dilution per share to new investors in this offering	$	1.73

A $0.50 increase (decrease) in the assumed public offering price of $2.30 per share, which was the closing price of our Class A common stock on The Nasdaq Capital Market on January 23, 2025, would increase (decrease) our pro forma as adjusted net tangible book value after this offering by $0.10 per share and the dilution to new investors purchasing shares of our Class A common stock in this offering by $0.10 per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions. An increase (decrease) of 500,000 shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase our pro forma as adjusted net tangible book value after this offering by $0.02 per share and decrease the dilution to new investors purchasing shares of our Class A common stock in this offering by $0.08 per share, assuming no change in the assumed public offering price per share and after deducting estimated underwriting discounts and commissions.

If the underwriters exercise their option to purchase additional shares and/or Pre-funded Warrants in full, the pro forma as adjusted net tangible book value per share after giving effect to the offering would be $0.62 per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $0.45 per share to existing stockholders and immediate dilution of $1.68 per share to new investors purchasing shares of our Class A common stock in this offering.

To the extent that stock options or warrants are exercised, new stock options are issued under our equity incentive plan, or we issue additional Class A common stock in the future, there will be further dilution to investors participating in this offering. In addition, we may choose to raise additional capital because of market conditions or strategic considerations, even if we believe that we have sufficient funds for our current or future operating plans. If we raise additional capital through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

The number of shares of our Class A common stock to be outstanding after this offering is based on 21,984,614 shares of our Class A common stock outstanding as of September 30, 2024, assumes no exercise by the underwriters of their over-allotment option or the sale of Pre-funded Warrants and excludes:

- 10,905,901 shares of Class A common stock issuable upon exercise of warrants with a weighted average exercise price of $28.23;
- 3,455,049 shares of Class A common stock issuable upon exercise of options with a weighted average exercise price of $31.49;
- 327,359 shares of Class A common stock issuable upon vesting of outstanding restricted stock units;
- 28,667 shares of Class A common stock issuable upon vesting of market condition stock unit awards;
- 2,634,648 shares of Class A common stock reserved for future issuance under our existing stock incentive plan;
- 1,194,171 shares of Class A common stock issuable upon the conversion of a note in the outstanding principal amount of $3.2 million together with interest accrued thereon based upon a conversion price of $2.7546; and
- 326,086 shares of Class A common stock (or 374,999shares if the representative exercises its over-allotment option in full) issuable upon exercise of warrants to be issued to the representative of the underwriters as part of this offering at an exercise price of $2.875 (assuming a public offering price of $2.30 per share, the last reported sale price of our Class A common stock as reported on The Nasdaq Capital Market on January 23, 2025).

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and the related notes included elsewhere in this prospectus. In addition to historical information, this discussion and analysis contains forward-looking statements that are based on our current expectations, estimates and projections about our business and operations and that involve risks, uncertainties and assumptions. Our actual results may differ materially from those currently anticipated and expressed in such forward-looking statements as a result of a number of factors, including those which we discuss under "Risk Factors" and elsewhere in this prospectus. See "Information Regarding Forward-Looking Statements." All amounts in this prospectus are in U.S. dollars, unless otherwise noted.

Overview

We are a regenerative and cellular medicines company focused on addressing aging related diseases including cancer and degenerative diseases. Our goal is to ensure all individuals have the opportunity to live healthier longer. We develop and market off-the-shelf placental-derived allogeneic advanced biomaterial products including allografts and connective tissue matrices for soft tissue repair and reconstructive procedures in the treatment of degenerative disorders and diseases including those associated with aging. When we are sufficiently capitalized, we plan to resume development of a pipeline of off-the-shelf placental-derived allogeneic cell therapy product candidates including T cells engineered with a CAR or NK cells, MLASCs, and exosomes. These therapeutic candidates may potentially target indications across cancer, infectious and degenerative diseases. We believe that by harnessing the placenta's unique biology and ready availability, we will be able to develop therapeutic solutions that address a significant unmet global need for effective, accessible and affordable therapeutics. Our advanced biomaterials business today is comprised primarily of the sale of our Biovance 3L products, directly or through our distribution network. Biovance 3L is a tri-layer decellularized, dehydrated human amniotic membrane derived from the placenta of a healthy, full-term pregnancy. It is an intact, natural extracellular matrix that provides a foundation for the wound regeneration process and acts as a scaffold for restoration of functional tissue. We are developing new placental biomaterial products to deepen the biomaterials commercial pipeline. We also plan to leverage our core expertise in cellular therapeutic development and manufacturing to generate revenues by providing contract manufacturing and development services to third parties. The initial focus of this new service offering will be to assist development stage cell therapy companies with the development and manufacturing of their therapeutic candidates for clinical trials.

Our Celularity IMPACT platform capitalizes on the benefits of placenta-derived cells to target multiple diseases, and provides seamless integration, from bio sourcing through manufacturing cryopreserved and packaged allogeneic cells, in our purpose-built U.S.- based 147,215 square foot facility. We believe the use of placental-derived cells, sourced from the placentas of full-term healthy informed consent donors, has potential inherent advantages, from a scientific and an economic perspective. First, relative to adult-derived cells, placental-derived cells demonstrate greater stemness, meaning the ability to expand and persist. Second, placental-derived cells are immunologically naïve, meaning the cells have never been exposed to a specific antigen, and suggesting the potential for less toxicity and for low or no graft-versus-host disease, or GvHD, in transplant. Third, our placental-derived cells are allogeneic, meaning they are intended for use in any patient, as compared to autologous cells, which are derived from an individual patient for that patient's sole use. We believe this is a key difference that will enable readily available off-the-shelf treatments that can be delivered faster, more reliably, at greater scale and to more patients.

From a single source material, the postpartum human placenta, we derive four allogeneic cell or extracellular vesicle types: T cells, NK cells, MLASCs and exosomes, which have the potential to support multiple therapeutic programs. In 2022, we had active and approved clinical trials under development utilizing CYNK-001, a placental derived unmodified NK cell, for the treatment of AML, a blood cancer, and for glioblastoma multiforme, or GBM, a solid tumor cancer. We also had an active clinical trial utilizing CYNK-101, a genetically modified NK cell, for the treatment of HER2+ gastric cancer. Due to a need to prioritize corporate resources, in January 2023 we announced our intention to cease recruitment in the GBM and the HER2+ gastric trials. In addition, in April 2023, we announced based on the preliminary results of the Phase 1 trial data of CYNK-001, the AML trial would be closed to further enrollment and completed follow up. We are not actively investigating CYNK-001 for any indication. During the second quarter of 2023, we fully impaired the in-process research and development, or IPR&D, assets associated with CYNK-001. In the first quarter of 2022, we submitted an IND to investigate CYCART-19, a placental-derived CAR-T cell therapy targeting the cluster of differentiation 19, for the treatment of B-cell malignancies. In late May 2022, we received formal written communication from FDA requesting additional information before we could proceed with the Phase 1/2 clinical trial. After assessing the status of the IND to determine an optimal path forward for the CYCART-19 program, we elected to terminate development of CYCART-19 for B-cell malignancies during the third quarter of 2023. We may continue pre-clinical development of other T-cell candidates. MLASC is in development for the treatment of Crohn's disease, and other degenerative diseases. Due to an internal alignment of corporate resources, we paused development in exosomes to focus on other priorities.

Our Celularity IMPACT manufacturing process is a seamless, fully integrated process designed to optimize speed and scalability from the sourcing of placentas from full-term healthy informed consent donors through the use of proprietary processing methods, cell selection, product-specific chemistry, manufacturing and controls, or CMC, advanced cell manufacturing and cryopreservation. The result is a suite of allogeneic inventory-ready, on demand placental-derived cell therapy products. We also operate and manage a commercial biobanking business that includes the collection, processing and cryogenic storage of certain birth byproducts for third-parties.

Our current science is the product of the cumulative background and effort over two decades of our seasoned and experienced management team. We have our roots in Anthrogenesis Corporation, or Anthrogenesis, a company founded

under the name Lifebank in 1998 by Robert J. Hariri, M.D., Ph.D., our founder and Chief Executive Officer, and acquired in 2002 by Celgene Corporation, or Celgene. The team continued to hone their expertise in the field of placental-derived technology at Celgene through August 2017, when we acquired Anthrogenesis. We have a robust global intellectual property portfolio comprised of over 350 patents and patent applications protecting our Celularity IMPACT platform, our processes, technologies and current key cell therapy programs. We believe this know-how, expertise and intellectual property will drive the rapid development and, if approved, commercialization of these potentially lifesaving therapies for patients with unmet medical needs.

Recent Developments

Private Placement

On January 12, 2024, we entered into a securities purchase agreement with an existing investor, Dragasac Limited, or Dragasac, providing for the private placement of (i) 2,141,098 shares of our Class A common stock and (ii) accompanying warrants to purchase up to 535,274 shares of our Class A common stock, or the January 2024 PIPE Warrant, for $2.4898 per share and $1.25 per accompanying January 2024 PIPE Warrant, for an aggregate purchase price of approximately $6.0 million. The closing of the private placement occurred on January 16, 2024. The securities were issued pursuant to an exemption from registration provided for under Section 4(a)(2) of the Securities Act, and Regulation D promulgated thereunder. Each January 2024 PIPE Warrant has an exercise price of $2.4898 per share, is immediately exercisable, will expire on January 16, 2029 (five years from the date of issuance), and is subject to customary adjustments for certain transactions affecting our capitalization.

Pursuant to the terms of the securities purchase agreement, we applied the net proceeds to the payment due to YA II PN, Ltd., or Yorkville, pursuant to the Pre-Paid Advance Agreement dated September 15, 2022, or PPA.

In connection with the execution of the securities purchase agreement, we also entered into an investor rights agreement with Dragasac dated as of January 12, 2024. The investor rights agreement provides Dragasac certain information and audit rights, as well as registration rights with respect to the shares (and shares underlying the January 2024 PIPE Warrant), including both the undertaking to file a registration statement within 45 days of filing of the 2023 Form 10-K, "piggyback" registration rights, as well as the right to request up to three demand rights for underwritten offerings per year; in each case subject to customary "underwriter cutback" language as well as any objections raised by the SEC to inclusion of securities. If the initial registration statement is not filed on or prior to May 15, 2024, the investor rights agreement provides for partial liquidating damages equal to 1% of the subscription amount each month, up to a maximum of 6%, plus interest thereon accruing daily at a rate of 18% per annum. We began to accrue partial liquidating damages and interest as of May 22, 2024. As a condition to closing, we entered into an amendment to an amended and restated distribution and manufacturing agreement with an affiliate of Dragasac to add cell therapy products in clinical development, investigational stage and/or in near-term commercial use to the list of products under the scope of the exclusive distribution and manufacturing licenses (including unmodified natural killer cells (such as CYNK-001) for aging and other non-oncology indications, PSC-100, PDA-001, PDA-002, pEXO and APPL-001 for regenerative indications).

2024 Warrant Modifications

On January 12, 2024, in connection with the execution of the securities purchase agreement described above, we agreed to reprice legacy warrants to acquire 652,981 shares of our Class A common stock held by Dragasac that expire upon the earliest to occur of (i) March 16, 2025 or (ii) consummation of a change in control of our Company, with a previous exercise price of $67.70 to a new exercise price of $2.4898. On March 13, 2024, in connection with the RWI Forbearance Agreement described below, we agreed to issue RWI (as defined below) a warrant to acquire up to 300,000 shares of Class A common stock, which expires June 20, 2028 and has an exercise price of $5.895 per share. Additionally, on March 13, 2024, in connection with the Starr Forbearance Agreement described below, we agreed to amend the exercise price of the 75,000 March 2023 Loan Warrants expiring March 17, 2028 from $7.10 per share to $5.895 per share (the "Minimum Price" as determined pursuant to Nasdaq 5635(d) on March 13, 2024) and the 50,000 June 2023 Warrants expiring June 20, 2028 from $8.10 per share to $5.895 per share, each of which are held by C.V. Starr.

Senior Secured Bridge Loan

On January 12, 2024, we entered into a second amended and restated senior secured loan agreement, or the RWI Second Amended Bridge Loan, with Resorts World Inc Pte Ltd, or RWI, to amend and restate the previously announced senior secured loan agreement with RWI dated as of May 16, 2023, as amended on June 20, 2023, in its entirety. The RWI Second Amended Bridge Loan provided for an additional loan in the aggregate principal amount of $15.0 million net of an original issue discount of $3.75 million, which bears interest at a rate of 12.5% per year, with the first year of interest being paid in kind on the last day of each month, and matures July 16, 2025. In addition, the RWI Second Amended Bridge Loan provides for the issuance of a 5-year immediately exercisable warrant to acquire up to 1,650,000 shares of our Class A common stock, or the Tranche #1 Warrant, and a warrant to acquire up to 1,350,000 shares of our Class A common stock, which will only be exercisable upon the later of (x) stockholder approval for Nasdaq purposes of its exercise price, (y) CFIUS clearance and (z) six months from issuance date, or the Tranche #2 Warrant, and will expire 5 years after it becomes exercisable. The Tranche #1 Warrant and Tranche #2 Warrant were each issued on January 16, 2024, and the Tranche #1 Warrant has an exercise price of $2.4898 per share. The Company closed the RWI Second Amended Bridge Loan and the sale of the Tranche #1 Warrant and Tranche #2 Warrant on January 16, 2024. The Tranche #2 Warrant became exercisable on July 15, 2024 (i.e., six months from the issuance date) and has an exercise price of $2.988.

Pursuant to the terms of the RWI Second Amended Bridge Loan, we were required to apply the proceeds of the additional loan (i) to the payment in full of all outstanding amounts owed to Yorkville under the PPA, (ii) to the payment of invoices of certain critical vendors, (iii) to the first settlement payment owed to Palantir Technologies, Inc., and (iv) for working capital and other purposes pre-approved by RWI. Pursuant to the terms of the RWI Second Amended Bridge Loan, we agreed to customary negative covenants restricting its ability to pay dividends to stockholders, repay or incur other indebtedness other than as permitted, or grant or suffer to exist a security interest in any of our assets, other than as permitted. In addition, we agreed to apply net revenues received through the sale of our products/provision of services in connection with or related to our distribution and manufacturing agreement with Genting Innovation Pte Ltd, a related party, as a prepayment towards the loan. The RWI Second Amended Bridge Loan includes customary events of default.

We also entered into an investor rights agreement with RWI dated as of January 12, 2024. The investor rights agreement provides RWI certain information and audit rights, as well as registration rights with respect to the shares underlying the Tranche #1 Warrant and Tranche #2 Warrant, including both the undertaking to file a registration statement within 45 days of filing of the 2023 Form 10-K, "piggyback" registration rights, as well as the right to request up to three demand rights for underwritten offerings per year; in each case subject to customary "underwriter cutback" language as well as any objections raised by the SEC to inclusion of securities. If the initial registration statement is not filed on or prior to May 15, 2024, the investor rights agreement provides for partial liquidating damages equal to 1% of the purchase price of the Tranche #1 and Tranche #2 Warrants amount each month, up to a maximum of 6%, plus interest thereon accruing daily at a rate of 18% per annum.

Standby Equity Purchase Agreement

On March 13, 2024, we entered into a Standby Equity Purchase Agreement, or the SEPA, with Yorkville. Under the SEPA, we have the right to sell to Yorkville up to $10.0 million of our Class A common stock, subject to certain limitations and conditions set forth in the SEPA, from time to time, over a 36-month period. Sales of our Class A common stock to Yorkville under the SEPA, and the timing of any such sales, are at our option, and we are under no obligation to sell any shares of our Class A common stock to Yorkville under the SEPA except in connection with notices that may be submitted by Yorkville, in certain circumstances as described below. Upon the satisfaction of the conditions precedent in the SEPA, which include having a resale shelf for shares of our Class A common stock issued to Yorkville declared effective, we have the right to direct Yorkville to purchase a specified number of shares of our Class A common stock by delivering written notice. Such purchase is referred to as an "Advance." An Advance may not exceed 100% of the average of the daily trading volume of our Class A common stock on The Nasdaq Capital Market during the five consecutive trading days immediately preceding the written notice. Yorkville will generally purchase shares of our Class A common stock pursuant to an Advance at a price per share equal to 97% of the lowest daily volume weighted average price, or VWAP, on Nasdaq during the three consecutive trading days commencing on the date of the delivery of the written notice (unless we specify a minimum acceptable price or there is no VWAP on the subject trading day).

Upon entry into the SEPA, we issued Yorkville a $3.15 million convertible promissory note for $2.99 million in cash (after a 5% original issue discount), or the Initial Advance. The note bears interest at an annual rate equal to 8% (increased to 18% in the event of default as provided in the note), and matures March 13, 2025. Yorkville may convert the note into shares of our Class A common stock at a price per share equal to $6.3171, provided however, on the earlier of (a) the fifth trading day following the effective date of the resale shelf, or (b) September 13, 2024, the conversion price will be the average VWAP of our Class A common stock on Nasdaq during the five consecutive trading days immediately prior to the conversion price reset date, subject to a floor price of $2.4898 per share. Upon the occurrence and during the continuation of an event of default (as defined in the note), the note (including accrued interest) will become immediately due and payable. The issuance of our Class A common stock upon conversion of the note and otherwise under the SEPA is capped at 19.99% of our outstanding Class A common stock as of March 13, 2024 in order to comply with applicable Nasdaq rules. Further, the note and SEPA include a beneficial ownership blocker for Yorkville such that Yorkville may not be deemed the beneficial owner of more than 4.99% of our Class A common stock.

The SEPA will automatically terminate on the earliest to occur of (i) the first day of the month next following the 36-month anniversary of the date of the SEPA or (ii) the date on which Yorkville shall have made payment for shares of our Class A common stock equal to $10.0 million. We have the right to terminate the SEPA at no cost or penalty upon five trading days' prior written notice to Yorkville, provided that there are no outstanding advances for which shares of our Class A common stock need to be issued and the convertible note (Initial Advance) has been paid in full. We and Yorkville may also agree to terminate the SEPA by mutual written consent. As consideration for Yorkville's commitment to purchase the shares of our Class A common stock pursuant to the SEPA, we paid Yorkville a $25 thousand cash due diligence fee and a commitment fee equal to 16,964 shares of our Class A common stock.

In connection with the entry into the SEPA, on March 13, 2024, we entered into a registration rights agreement with Yorkville, pursuant to which we agreed to file with the SEC no later than May 3, 2024, a registration statement for the resale by Yorkville of the shares of our Class A common stock issued under the SEPA (including the commitment fee shares). We agreed to use commercially reasonable efforts to have such registration statement declared effective within 45 days of such filing and to maintain the effectiveness of such registration statement during the 36-month commitment period. We will not have the ability to request any Advances under the SEPA (nor may Yorkville convert the Initial Advance into our Class A common stock) until such resale registration statement is declared effective by the SEC. As of the filing date of this prospectus, we have not filed a registration statement with the SEC. As a result of our failure to file our Annual Report on Form 10-K for the year ended December 31, 2023, by April 30, 2024 (i.e., a deemed Event of Default under the convertible promissory note), we began accruing interest at the default rate of 18% as of May 1, 2024. A further event of default occurred as a result of our failure to file a registration statement with the SEC for the resale by Yorkville of the shares of Class A common stock issuable under the SEPA by May 3, 2024. Because we have not yet filed a registration statement no shares can currently be issued under the SEPA.

Forbearance Agreements

On March 13, 2024, we entered into a second forbearance agreement with RWI, or RWI 2nd Forbearance Agreement. Under the RWI 2nd Forbearance Agreement, (i) RWI agreed not to exercise its rights and remedies upon the occurrence of any default under the RWI Second Bridge Loan until our obligations in respect of the Yorkville convertible promissory note have been indefeasibly paid in full or March 13, 2025, whichever occurs first, (ii) RWI consented to our incurrence of indebtedness under the Yorkville convertible promissory note, (iii) RWI consented to cash payments required to be made under the SEPA and the Yorkville convertible promissory note, (iv) we agreed to increase the interest rate on the loan outstanding under the RWI Loan Agreement by 100 basis points, or from 12.5% to 13.5% per annum, and (v) we agreed to issue RWI a warrant to acquire up to 300,000 shares of Class A common stock, which expires June 20, 2028 and has an exercise price of $5.895 per share. Due to our failure to make certain interest payments when due, we began accruing interest on the loan at the default rate of 16.5% as of August 5, 2024.

On March 13, 2024, we entered into a forbearance agreement with C.V. Starr, or Starr Forbearance Agreement, with respect to the Starr Bridge Loan. Under the Starr Forbearance Agreement, (i) C.V. Starr agreed not to exercise its rights and remedies upon the occurrence of any default under the Starr Bridge Loan until our obligations in respect of the Yorkville convertible promissory note have been indefeasibly paid in full, (ii) C.V. Starr consented to our incurrence of indebtedness under the Yorkville convertible promissory note, (iii) C.V. Starr consented to cash payments required to be made under the SEPA and the Yorkville convertible promissory note, (iv) we agreed to increase the interest rate on the loan outstanding under the Starr Bridge Loan by 100 basis points and (v) we agreed to amend the exercise price of (x) that certain warrant to acquire 75,000 shares of our Class A common stock for $7.10 per share, expiring March 17, 2028, and (y) that certain warrant to acquire 50,000 shares of Class A common stock for $8.10 per share expiring June 20, 2028, each of which are held by C.V. Starr, such that the exercise price of each such warrant in (x) and (y) is $5.895 per share. In addition, the interest rate of the Starr Bridge Loan was increased to 13% per annum. Due to our failure to make certain interest payments when due, we began accruing interest on the Starr Bridge Loan at the default rate of 16% as of April 5, 2024.

Short-Term Debt - Other and CEO Promissory Note

The maturity date of the August 21, 2023, loan agreement with Dr. Robert Hariri, our CEO and two unaffiliated lenders, was extended to December 31, 2024. Additionally, on September 30, 2024, Dr. Robert Hariri assumed the full loan in exchange for repayment of the other lenders' respective principal loan amount, plus accrued interest.

Failure to comply with Nasdaq Listing Rule 5250(c)(1)

As a result of our failure to timely file our quarterly reports on Form 10-Q for the periods ended March 31, 2024 and June 30, 2024, were not in compliance with the continued listing requirements under the timely filing criteria outlined in Nasdaq Listing Rule 5250(c)(1). We had regained compliance with the Nasdaq listing requirements upon filing our Form 10-Q for the period ended June 30, 2024 on November 7, 2024; however, on November 21, 2024, Nasdaq provided formal notice to us that as a result of our failure to timely file our quarterly report on Form 10-Q for the period ended September 30, 2024, we were not in compliance with the continued listing requirements under Nasdaq Listing Rule 5250(c)(1). On December 9, 2024, Nasdaq notified us that we regained compliance with the Nasdaq listing standards.

Going Concern

In accordance with Accounting Standards Update ASU No. 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern (Subtopic 205-40)* , or ASU 205-40, we evaluated whether there are certain conditions and events, considered in the aggregate, that raise substantial doubt about our ability to continue as a going concern within one year after the date that the unaudited condensed consolidated financial statements are issued.

As an emerging clinical-stage biotechnology company, we are subject to certain inherent risks and uncertainties associated with the development of an enterprise. In this regard, since our inception, substantially all of management's efforts have been devoted to making investments in research and development including basic scientific research into placentally-derived allogeneic cells, pre-clinical studies to support our current and future clinical programs in cellular therapeutics, and clinical development of our cell programs as well as facilities and selling, general and administrative expenses that support our core business operations (collectively the "investments"), all at the expense of our short-term profitability. We have historically funded these investments through limited revenues generated from our biobanking and degenerative disease businesses and issuances of equity and debt securities to public and private investors (these issuances are collectively referred to as "outside capital"). Notwithstanding these efforts, management can provide no assurance that our research and development and commercialization efforts will be successfully completed, or that adequate protection of our intellectual property will be adequately maintained. Even if these efforts are successful, it is uncertain when, if ever, we will generate significant sales or operate in a profitable manner to sustain our operations without needing to continue to rely on outside capital. Continued decline in our share price could result in impairment of goodwill or long-lived assets in a future period.

As of the date the accompanying unaudited condensed consolidated financial statements were issued, or the issuance date, management evaluated the significance of the following adverse conditions and events in accordance with ASU 205-40:

- Since inception, we have incurred significant operating losses and cash used in operating activities. For the nine months ended September 30, 2024, we incurred a net operating loss of $29.1 million and net cash used in operating activities of $8.0 million. As of September 30, 2024, we had an accumulated deficit of $886.4 million. We expect to continue to incur significant operating losses and use net cash in operations for the foreseeable future.

- We expect to incur substantial expenditures to fund our investments for the foreseeable future. In order to fund these investments, we will need to secure additional sources of outside capital. While we are actively seeking to secure additional outside capital (and have historically been able to successfully secure such capital), as of the issuance date, additional outside capital sufficient to fund operations for the next 12 months has not been secured or was deemed probable of being secured. In addition, management can provide no assurance that we will be able to secure additional outside capital in the future or on terms that are acceptable to us. Absent an ability to secure additional outside capital in the very near term, we will be unable to meet our obligations as they become due over the next 12 months beyond the issuance date.

- As of the issuance date, we had approximately $46.1 million of debt outstanding, all of which is currently due or due within one year of the issuance date. As disclosed in Note 7 to the accompanying unaudited condensed consolidated financial statements, a substantial portion of our debt is subject to forbearance agreements. In the event the terms of the forbearance agreements are not met and/or the outstanding borrowings are not repaid, the lenders may, at their discretion, exercise all of their rights and remedies under the loan agreements which may include, among other things, seizing our assets and/or forcing us into liquidation.

- As a result of our failure to timely file our quarterly reports on Form 10-Q for the periods ended March 31, 2024 and June 30, 2024, we no longer complied with the continued listing requirements under the timely filing criteria outlined in Nasdaq Listing Rule 5250(c)(1). We had regained compliance with the Nasdaq listing requirements upon filing our Form 10-Q for the period ended June 30, 2024 on November 7, 2024. On November 21, 2024, Nasdaq provided formal notice to us that as a result of our failure to timely file our quarterly report on Form 10-Q for the period ended September 30, 2024, we were not in compliance with the continued listing requirements under Nasdaq Listing Rule 5250(c)(1). We have 60 days to submit a plan to Nasdaq to regain compliance with the continued listing requirements. If Nasdaq accepts our plan, it may grant an exception of up to 180 days from the filing's due date, or May 13, 2025, to regain compliance. There can be no assurance that Nasdaq will grant us an extension or that we will maintain compliance with the Nasdaq listing requirements. If we are unable to regain compliance, our securities will be delisted from the Nasdaq, which such delisting could have a materially adverse effect on our ability to continue as a going concern.

- In the event we are unable to secure additional outside capital to fund our obligations when they become due, including repayment of our outstanding debt, over the next 12 months beyond the issuance date, management will be required to seek other strategic alternatives, which may include, among others, a significant curtailment of our operations, a sale of certain of our assets, a sale of our entire Company to strategic or financial investors, and/or allowing us to become insolvent by filing for bankruptcy protection under the provisions of the U.S. Bankruptcy Code.

These uncertainties raise substantial doubt about our ability to continue as a going concern. The accompanying unaudited condensed consolidated financial statements have been prepared on the basis that we will continue to operate as a going concern, which contemplates that we will be able to realize assets and settle liabilities and commitments in the normal course of business for the foreseeable future. Accordingly, the accompanying unaudited condensed consolidated financial statements do not include any adjustments that may result from the outcome of these uncertainties.

Business Segments

We manage our operations through an evaluation of three distinct business segments: Cell Therapy, Degenerative Disease, and BioBanking. The reportable segments were determined based on the distinct nature of the activities performed by each segment. Cell Therapy broadly refers to cellular therapies we are researching and developing, which are unproven and in various phases of development. All of the cell therapy programs fall into the Cell Therapy segment. We have no approved cell therapy product and have not generated revenue from the sale of cellular therapies to date. Degenerative Disease produces, sells and licenses products used in surgical and wound care markets, such as Biovance, Biovance 3L, Interfyl and CentaFlex. We sell products in this segment using independent sales representatives as well as distributors. We are developing additional tissue-based products for the Degenerative Disease segment. BioBanking collects stem cells from umbilical cords and placentas and provides storage of such cells on behalf of individuals for future use. We operate in the biobanking business primarily under the LifebankUSA brand. For more information about our reportable business segments refer to Note 14, "Segment Information" of our accompanying unaudited condensed consolidated financial statements included elsewhere in this prospectus.

Acquisitions and Divestitures

Our current operations reflect the following strategic acquisitions that we have made since formation.

In May 2017, we acquired HLI Cellular Therapeutics, LLC, or HLI CT, from Human Longevity Inc. HLI CT operated LifebankUSA, a private umbilical cord blood stem cell and cord tissue bank that offers parents the option to collect, process and cryogenically preserve newborn umbilical cord blood stem cells and cord tissue units. The HLI CT acquisition also provided us with rights to a portfolio of biomaterial assets, including Biovance and Interfyl. At the time of the HLI CT acquisition, Biovance and Interfyl were subject to an exclusive distribution arrangement with Alliqua Biomedical, Inc., or Alliqua. In May 2018, we acquired certain assets from Alliqua, including Alliqua's biologic wound care business, which included the marketing and distribution rights to Biovance and Interfyl.

In August 2017, we acquired Anthrogenesis, a wholly-owned subsidiary of Celgene. The Anthrogenesis acquisition included a portfolio of pre-clinical and clinical stage assets, including key cellular therapeutic assets that we continue to develop. The Anthrogenesis acquisition gives us access to Anthrogenesis' proprietary technologies and processes for the recovery of large quantities of high-potential stem cells and cellular therapeutic products derived from postpartum human placentas, each an Anthrogenesis Product. As part of the Anthrogenesis acquisition, some of the inventors of the Anthrogenesis Products and other key members of the Anthrogenesis Product development team joined us.

Licensing Agreements

In the ordinary course of business, we license intellectual property and other rights from third parties and have also out-licensed our intellectual property and other rights, including in connection with our acquisitions and divestitures, described above. Additional details regarding our licensing agreements can be found in Note 13, "License and Distribution Agreements" to our unaudited condensed consolidated financial statements included elsewhere in this prospectus.

In August 2017, in connection with the Anthrogenesis acquisition, we entered into a license agreement, or the Celgene License, with Celgene, which has since been acquired by Bristol Meyers Squibb. Pursuant to the Celgene License, we granted Celgene a worldwide, royalty-free, fully-paid up, non-exclusive license, without the right to grant sublicenses (other than to its affiliates), under Anthrogenesis' intellectual property in existence as of the date of the Celgene License or as developed by Celgene in connection with any transition services activities related to the merger for non-commercial pre-clinical research purposes, as well as to develop, manufacture, commercialize and fully exploit products and services that relate to the construction of any CAR, the modification of any T-cell or NK cell to express such a CAR, and/or the use of such CARs or T-cells or NK cells for any purpose, which commercial license is sublicensable. Either party may terminate the Celgene License upon an uncured material breach of the agreement by the other party or insolvency of the other party.

In August 2017, Legacy Celularity also issued shares of its Series X Preferred Stock to Celgene as merger consideration and entered into a contingent value rights agreement, or the CVR Agreement, with Celgene pursuant to which Legacy Celularity issued one contingent value right or CVR, in respect of each share of Legacy Celularity Series X Preferred Stock issued to Celgene in connection with the Anthrogenesis acquisition. The CVR Agreement entitles the holders of the CVRs to an aggregate amount, on a per program basis, of $50.0 million in regulatory milestones and an aggregate $125.0 million in commercial milestone payments with respect to certain of our investigational therapeutic programs. In addition, with respect to each such program and calendar year, the CVR holders will be entitled to receive a royalty equal to a mid-teen percentage of the annual net sales for such program's therapeutics from the date of the first commercial sale of such program's therapeutic in a particular country until the latest to occur of the expiration of the last to expire of any valid patent claim covering such program therapeutic in such country, the expiration of marketing exclusivity with respect to such therapeutic in such country, and August 2027 (i.e., the tenth anniversary of the closing of the acquisition of Anthrogenesis). No payments under the CVR Agreement have been made to date. We estimate the liability associated with the CVR quarterly. Changes to that liability include but are not limited to changes in our clinical programs, assumptions about the commercial value of those programs and the time value of money.

On December 11, 2023, we entered into a license agreement with BioCellgraft, Inc. whereby we granted an exclusive license to BioCellgraft, with the right to sublicense, to develop and commercialize certain licensed products to the dental market in the United States over an initial four year term, which license agreement will automatically renew for an additional two years unless either party provides written notice of termination. BioCellgraft agreed to pay us total license fees of $5.0 million over a two year period. Upon execution of the agreement, we received an initial $0.3 million payment towards the first year of the two year period.

Components of Operating Results

Net revenues

Net revenues include: (i) sales of biomaterial products, including Biovance, Biovance 3L, Rebound™, Interfyl, and CentaFlex of which our direct sales are included in Product Sales while sales through our network of distribution partners are included in License, royalty and other; and (ii) the collection, processing and storage of umbilical cord and placental blood and tissue after full-term pregnancies, collectively, Services.

Cost of revenues

Cost of revenues consists of labor, material and overhead costs associated with our two existing commercial business segments, biobanking and degenerative disease. Biobanking costs include the cost of storage and transportation kits for newly banked materials as well as tank and facility overhead costs for cord blood and other units in storage. Degenerative disease costs include costs associated with procuring placentas, qualifying the placental material and processing the placental tissue into a marketable product. Costs in the degenerative disease segment include labor and overhead costs associated with the production of the Biovance, Biovance 3L, Interfyl and CentaFlex product lines. Cost of revenues associated with direct sales are part of Product Sales while cost of revenues associated with sales through our network of distribution partners are included in License, royalty and other.

Research and development expense

Our research and development expenses primarily relate to basic scientific research into placentally derived allogeneic cells, pre-clinical studies to support our current and future clinical programs in cellular medicine, clinical development of our NK cell programs and facilities, depreciation and other direct and allocated expenses incurred as a result of research and development activities. We incur expenses for personnel expenses for research scientists, specialized chemicals and reagents used to conduct biologic research, expense for third party testing and validation and various overhead expenses including rent and facility maintenance expense. Basic research, research collaborations involving partners and research designed to enable successful regulatory submissions is critical to our current and future success in cell therapy. The amount of our research and development expenditures will depend on numerous factors, including the timing of clinical trials, preliminary evidence of efficacy in clinical trials and the number of indications that we choose to pursue.

General and administrative expense

Selling, general and administrative expense consists primarily of personnel costs including salaries, bonuses, stock compensation and benefits for specialized staff that support our core business operations. Executive management, finance, legal, human resources and information technology are key components of selling, general and administrative expense and those expenses are recognized when incurred. We expect that as a result of our reprioritization efforts, we will see a decrease in our selling, general and administrative costs in the near term. The magnitude and timing of our selling, general and administrative costs will depend on the progress of clinical trials, commercialization efforts for any approved therapies including the release of new products within the degenerative disease portfolio, changes in the regulatory environment or staffing needs to support our business strategy.

Change in fair value of contingent consideration liability

Because the acquisitions of Anthrogenesis from Celgene and HLI CT were accounted for as business combinations, we recognized acquisition-related contingent consideration on the balance sheets in accordance with the acquisition method of accounting. See Note 9, "Contingent Consideration Related to Business Combinations" for more information. The fair value of contingent consideration liability is determined based on a probability-weighted income approach derived from revenue estimates and a probability assessment with respect to the likelihood of achieving regulatory and commercial milestone obligations and royalty obligations. The fair value of acquisition related contingent consideration is remeasured each reporting period with changes in fair value recorded in the condensed consolidated statements of operations. Changes in contingent consideration fair value estimates result in an increase or decrease in our contingent consideration obligation and a corresponding charge or reduction to operating results. Key elements of the contingent consideration are regulatory milestone payments, sales milestone payments and royalty payments. Regulatory payments are due on regulatory approval of certain cell types in the United States and the European Union. Regulatory milestone payments are one time but are due prior to any potential commercial success of a cell type in a specific indication. Royalty payments are a percentage of net sales. Sales milestone payments are due when certain aggregate sales thresholds have been met. Management must use substantial judgment in evaluating the value of the contingent consideration. Estimates used by management include but are not limited to: (i) the number and type of clinical programs that we are likely to pursue based on the quality of our preclinical data, (ii) the time required to conduct clinical trials, (iii) the odds of regulatory success in those trials, (iv) the potential number of patients treatable for the indications in which we are successful and (v) the pricing of treatments that achieve commercial status. All of these areas involve substantial judgment on the part of management and are inherently uncertain.

Results of Operations

Comparison of Year Ended December 31, 2023 to December 31, 2022

(in thousands)	Year Ended December 31, 2023	Year Ended December 31, 2022	Increase (Decrease)	Percent Increase (Decrease)
Net revenues:				
Product sales	$ 13,149	$ 3,749	$ 9,400	250.7%
Services	5,441	5,512	(71)	(1.3)%
License, royalty and other	4,181	8,714	(4,533)	(52.0)%
Total revenues	22,771	17,975	4,796	26.7%
Operating expenses:				
Cost of revenues (excluding amortization of acquired intangible assets)				
Product sales	8,628	2,353	6,275	266.7%
Services	1,650	3,536	(1,886)	(53.3)%
License, royalty and other	5,738	13,776	(8,038)	(58.3)%
Research and development	30,465	78,363	(47,898)	(61.1)%
Selling, general and administrative	50,576	66,021	(15,445)	(23.4)%
Change in fair value of contingent consideration liability	(104,339)	(126,277)	21,938	(17.4)%
Goodwill impairment	112,347	3,610	108,737	3,012.1%
IPR&D impairment	107,800	—	107,800	100.0%
Amortization of acquired intangible assets	2,193	2,193	—	—%
Total operating expense	215,058	43,575	171,483	393.5%
Loss from operations	$ (192,287)	$ (25,600)	$ (166,687)	651.1%

Net Revenues and Cost of Revenues

Net revenues for the year ended December 31, 2023 was $22.8 million, an increase of $4.8 million, or 26.7%, compared to the prior year period. The increase was primarily due to the $9.4 million increase in product sales driven by increased demand for Biovance 3L.

Cost of revenues for the year ended December 31, 2023 was $16.0 million, a decrease of $3.6 million, or 18.6%, compared to the prior year period. The decrease was primarily the result of a $4.6 million decrease in production and material variances, offset by inventory impairment of $5.4 million for the year ended December 31, 2023 due to lower of cost or market adjustments of approximately $2.1 million for finished goods and $3.3 million for work in progress. During the year ended December 31, 2022, there were charges for production and material variances driven by increased spend in anticipation of degenerative disease sales that did not materialize, in addition to an increase in cost of revenues driven by the increase in product sales to distribution partners.

Research and Development Expenses

Research and development expenses for the year ended December 31, 2023 were $30.5 million, a decrease of $47.9 million, or 61.1%, compared to the prior year period. The decrease was primarily due to lower personnel costs resulting from our March 2023 reduction in force, lower clinical trial costs and lab supplies as we determined to discontinue certain clinical trials of our cell therapy candidates, as well as lower allocated costs as compared to the prior period.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the year ended December 31, 2023 were $50.6 million, a decrease of $15.4 million, or 23.4%, compared to the prior year period. The decrease was primarily due to lower personnel costs and lower consulting expenses resulting from our March 2023 reduction in force.

Impairments

Goodwill impairment for the year ended December 31, 2023 was $112.3 million compared to $3.6 million in the prior year period. The goodwill impairment was due to the decline in future revenue projections in the Cell Therapy business driven by discontinuation of clinical trials and changes in our strategy and pipeline.

IPR&D impairment for the year ended December 31, 2023 was $107.8 million compared to no impairment in the prior year period due to the decline in future revenue projections in the Cell Therapy business driven by discontinuation of clinical trials and changes in our strategy and pipeline.

Change in Fair Value of Contingent Consideration Liability

The change in fair value of contingent consideration liability for the year ended December 31, 2023 was $104.3 million, an increase of $21.9 million, or 17.4%. The increase resulted from changes in market-based assumptions and underlying projections as we discontinued our Cell Therapy clinical trials during 2023 which caused a decrease in the contingent consideration liability (for more information about changes in the fair value of contingent consideration liability refer to

Note 3, "Fair Value of Financial Assets and Liabilities" of our audited consolidated financial statements included elsewhere in this prospectus).

Other Income (Expense)

(in thousands)	Year Ended December 31, 2023	2022	Increase (Decrease)	Percent Increase (Decrease)
Interest income	$ 320	$ 365	$ (45)	(12.3)%
Interest expense	(3,015)	—	(3,015)	100.0%
Change in fair value of warrant liabilities	6,164	42,109	(35,945)	(85.4)%
Change in fair value of debt	(1,177)	(2,522)	1,345	(53.3)%
Other income (expense), net	(6,290)	(147)	(6,143)	4178.9%
Total other income (expense)	$ (3,998)	$ 39,805	$ (43,803)	(110.0)%

For the year ended December 31, 2023, total other income (expense), decreased by $43.8 million compared to the prior year period. The decrease was primarily due to a change in the fair value of the warrant liabilities due to the decrease in the price of our Class A common stock (see Note 3, "Fair Value of Financial Assets and Liabilities" of our audited consolidated financial statements included elsewhere in this prospectus). For the year ended December 31, 2023, other income (expense), net includes $1.1 million of expense related to an accrual for liquidated damages resulting from our failure to satisfy certain public information conditions pursuant to the securities purchase agreement dated May 18, 2022.

Comparison of Three Months Ended September 30, 2024 to September 30, 2023

	Three Months Ended September 30, 2024	2023	Increase (Decrease)	Percent Increase (Decrease)
Revenues:				
Product sales, net	$ 3,393	$ 1,684	$ 1,709	101.5%
Services	1,292	1,427	(135)	(9.5)%
License, royalty and other	4,611	675	3,936	583.1%
Total net revenues	9,296	3,786	5,510	145.5%
Operating expenses:				
Cost of revenues (excluding amortization of acquired intangible assets)				
Product sales	547	557	(10)	(1.8)%
Services	238	398	(160)	(40.2)%
License, royalty and other	3,098	2,647	451	17.0%
Research and development	3,915	5,182	(1,267)	(24.5)%
Software cease-use costs	—	243	(243)	(100.0)%
Selling, general and administrative	12,650	10,748	1,902	17.7%
Goodwill impairment	—	82,714	(82,714)	(100.0)%
Amortization of acquired intangible assets	375	553	(178)	(32.2)%
Total operating expenses	20,823	103,042	(82,219)	(79.8)%
Loss from operations	$ (11,527)	$ (99,256)	$ (87,729)	(88.4)%

Net Revenues and Cost of Revenues

Net revenues for the three months ended September 30, 2024 were $9.3 million, an increase of $5.5 million, or 145.5% compared to the prior year period. The increase was primarily due to a $3.9 million increase in license, royalty and other driven mainly by Rebound distributor sales and a $1.7 million increase in product sales driven by higher sales of Biovance 3L and Rebound direct to customer sales. We acquired Rebound on October 9, 2024 through an asset purchase agreement with Sequence LifeScience, Inc. ("Sequence"). Prior to consummating the asset purchase agreement, on August 23, 2024, we entered into an exclusive distribution agreement with Sequence intended to allow the parties to cooperatively market Rebound while finalizing the asset purchase agreement. For more information about the Rebound asset purchase agreement see Note 16, "Subsequent Events" in our unaudited condensed consolidated financial statements included elsewhere in this prospectus.

Cost of revenues for the three months ended September 30, 2024 was $3.9 million, an increase of $0.3 million, or 7.8% compared to the prior year period. The increase was primarily due to a $0.5 million increase in license, royalty and other costs driven by costs for Rebound distributor sales partially offset by a reserve for obsolescence recorded during the three months ended September 30, 2023. As a percentage of revenues, cost of revenues decreased to 42% for the three months ended September 30, 2024, compared to 95% in the prior year period. Included in the prior year period within cost for license, royalty and other was a provision for obsolescence of $2.0 million. Excluding this charge, cost of revenues was 43% for the three months ended September 30, 2023.

Research and Development Expenses

Research and development expenses for the three months ended September 30, 2024 were $3.9 million, a decrease of $1.3 million, or 24.5% compared to the prior year period. The decrease was mainly due to lower personnel costs and other outside services resulting from discontinuing certain clinical trials of our cell therapy candidates.

Software Cease-Use Costs

Software cease-use costs were $0.2 million for the three months ended September 30, 2023, which reflected the recognition of the remaining contract value associated with the Palantir platform that we terminated. We subsequently reached a settlement with Palantir and as a result, no software cease-use costs were incurred in the current year period. See Note 9, "Commitments and Contingencies" to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for additional information related to the Palantir agreement.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the three months ended September 30, 2024 were $12.7 million, an increase of $1.9 million, or 17.7% compared to the prior year period. The increase was primarily due to higher selling expenses driven by an increase in biomaterial sales.

Goodwill Impairment

There were no goodwill impairments for the three months ended September 30, 2024, compared to a charge of $82.7 million in the prior year period resulting from a decline in future revenue projections in the Cell Therapy business driven by discontinuation of clinical trials and changes in our strategy and pipeline.

Other Income (Expense)

	Three Months Ended September 30, 2024	2023	Change	Percent Change
Interest income	$ 77	$ 23	$ 54	234.8%
Interest expense	(1,752)	(971)	(781)	80.4%
Change in fair value of warrant liabilities	714	5,187	(4,473)	(86.2)%
Change in fair value of debt	(708)	2,003	(2,711)	(135.3)%
Other expense, net	(2,902)	(862)	(2,040)	236.7%
Total other (expense) income	$ (4,571)	$ 5,380	$ (9,951)	(185.0)%

For the three months ended September 30, 2024, total other expense was $4.6 million compared to total other income of $5.4 million in the prior year period. The change of $10.0 million was primarily related to changes in the fair value of warrant liabilities of $4.5 million, change in the fair value of debt of $2.7 million and an increase in other expenses, net of $2.0 million. The change in fair value of warrant liability for the three months ended September 30, 2023, was $5.2 million of income mainly due to decreases in the price of our Class A common stock during the quarter ended September 30, 2023 (see Note 3, "Fair Value of Financial Assets and Liabilities" in our unaudited condensed consolidated financial statements included elsewhere in this prospectus). The change in fair value of debt for the three months ended September 30, 2023, was $2.0 million of income and reflects changes in fair value of the September 15, 2022 Yorkville Pre-Paid Advance Agreement, or Yorkville PPA, which we elected to account for at fair value. The Yorkville PPA was subsequently repaid in full on January 17, 2024. Other expense, net for the three months ended September 30, 2024, was $2.9 million and included a loss of $2.5 million related to an accrual for liquidated damages resulting from our failure to satisfy certain public information conditions pursuant to the securities purchase agreement dated May 18, 2022.

Comparison of Nine Months Ended September 30, 2024 to September 30, 2023

	Nine Months Ended September 30, 2024	2023	Increase (Decrease)	Percent Increase (Decrease)
Revenues:				
Product sales, net	$ 26,199	$ 3,633	$ 22,566	621.1%
Services	3,857	4,062	(205)	(5.0)%
	6,032	2,964	3,068	

License, royalty and other				103.5%
Total net revenues	36,088	10,659	25,429	238.6%
Operating expenses:				
Cost of revenues (excluding amortization of acquired intangible assets)				
Product sales	2,888	1,486	1,402	94.3%
Services	952	1,355	(403)	(29.7)%
License, royalty and other	3,806	3,566	240	6.7%
Research and development	13,558	30,737	(17,179)	(55.9)%
Software cease-use costs	—	24,161	(24,161)	(100.0)%
Selling, general and administrative	42,585	37,508	5,077	13.5%
Change in fair value of contingent consideration liability	—	(104,339)	104,339	100.0%
Goodwill impairment	—	112,347	(112,347)	(100.0)%
IPR&D impairment	—	107,800	(107,800)	(100.0)%
Amortization of acquired intangible assets	1,377	1,640	(263)	(16.0)%
Total operating expenses	65,166	216,261	(151,095)	(69.9)%
Loss from operations	$ (29,078)	$ (205,602)	$ (176,524)	(85.9)%

Net Revenues and Cost of Revenues

Net revenues for the nine months ended September 30, 2024 were $36.1 million, an increase of $25.4 million, or 238.6% compared to the prior year period. The increase was primarily due to a $22.6 million increase in product sales driven mainly by increased sales of Biovance 3L and a $3.1 million increase in license, royalty and other driven by Rebound distributor sales, which we started selling in the third quarter of 2024 through an exclusive distribution agreement with Sequence. On October 9, 2024, we acquired Rebound in an asset purchase agreement with Sequence. For more information about the Rebound asset purchase agreement, see Note 16, "Subsequent Events" in our unaudited condensed consolidated financial statements included elsewhere in this prospectus.

Cost of revenues for the nine months ended September 30, 2024 was $7.6 million, an increase of $1.2 million, or 19.3% compared to the prior year period. The increase was primarily due to a $1.4 million increase in product sales costs driven by higher Biovance 3L direct to customer sales. As a percentage of revenues, cost of revenues decreased to 21% for the nine months ended September 30, 2024 compared to 60% in the prior year period due to an increase in Biovance 3L sales, which has a higher gross profit margin than other biomaterial products.

Research and Development Expenses

Research and development expenses for the nine months ended September 30, 2024 were $13.6 million, a decrease of $17.2 million, or 55.9% compared to the prior year period. The decrease was primarily due to $3.4 million lower personnel costs resulting from our March 2023 reduction in force, $9.1 million lower outside services driven by lower clinical trial costs as a result of discontinuing certain clinical trials of our cell therapy candidates and $3.8 million of lower technical operation allocated costs.

Software Cease-Use Costs

Software cease-use costs were $24.2 million for the nine months ended September 30, 2023, which reflected the recognition of the remaining contract value associated with the Palantir platform that we terminated. We subsequently reached a settlement with Palantir and as a result, no software cease-use costs were incurred in the current period. See Note 9, "Commitments and Contingencies" to our unaudited condensed consolidated financial statements included elsewhere in this prospectus for additional information related to the Palantir agreement.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the nine months ended September 30, 2024 were $42.6 million, an increase of $5.1 million, or 13.5%, compared to the prior year period. The increase was primarily due to higher selling expenses driven by an increase in biomaterial sales.

Change in Fair Value of Contingent Consideration Liability

In 2023, we discontinued our Cell Therapy clinical trials and as a result, during the nine months ended September 30, 2023, we recorded a decrease in the fair value of the contingent consideration liability of $104.3 million driven by changes in market-based assumptions and underlying projections. Changes in the contingent consideration liability market-based assumptions and underlying projections were de minimums in the current year period. Consequently, there was no change in the fair value of contingent consideration liability for the nine months ended September 30, 2024. For more information about changes in the fair value of contingent consideration liability refer to Note 3, "Fair Value of Financial Assets and Liabilities" in our unaudited condensed consolidated financial statements included elsewhere in this prospectus.

Goodwill and IPR&D Impairments

There were no impairment charges for the nine months ended September 30, 2024. Goodwill and IPR&D impairment charges for the nine months ended September 30, 2023 were $112.3 million and $107.8 million, respectively, due to the decline in future revenue projections in the Cell Therapy business driven by discontinuation of clinical trials and changes in our strategy and pipeline.

Other Income (Expense)

	Nine Months Ended September 30,			Percent
	2024	2023	Change	Change
Interest income	$ 254	$ 205	$ 49	23.9%
Interest expense	(4,452)	(2,352)	(2,100)	89.3%
Change in fair value of warrant liabilities	(1,156)	6,788	(7,944)	(117.0)%
Change in fair value of debt	(694)	(354)	(340)	96.0%
Loss on debt extinguishment	(3,908)	—	(3,908)	100.0%
Other expense, net	(5,565)	(4,527)	(1,038)	22.9%
Total other expense	$ (15,521)	$ (240)	$ (15,281)	6367.1%

For the nine months ended September 30, 2024, total other expense was $15.5 million compared to $0.2 million in the prior year period. The increase was primarily related to changes in the fair value of warrant liabilities of $7.9 million, loss on debt extinguishment of $3.9 million, an increase in interest expense of $2.1 million and an increase in other expense, net of $1.0 million. Change in fair value of warrant liability for the nine months ended September 30, 2023, was $6.8 million of income mainly due to decreases in the price of our Class A common stock during the prior year period (see Note 3, "Fair Value of Financial Assets and Liabilities" in our unaudited condensed consolidated financial statements included elsewhere in this prospectus). Included in the nine months ended September 30, 2024 was a $3.9 million loss on debt extinguishment recorded in connection with the January 12, 2024 RWI Second Amended Bridge Loan (for more information about the RWI Second Amended Bridge Loan refer to Note 7, "Debt" in our unaudited condensed consolidated financial statements included elsewhere in this prospectus). The $2.1 million increase in interest expense was primarily driven by interest on the January 12, 2024, RWI Second Amended Bridge Loan.

Liquidity and Capital Resources

As of September 30, 2024, we had $0.1 million of unrestricted cash and cash equivalents and an accumulated deficit of $886.4 million. As of December 31, 2023, we had $0.2 million of cash and cash equivalents and an accumulated deficit of $841.8 million. Our primary use of our capital resources is funding our operating expenses, which consist primarily of funding selling, general and administrative expenses, and to a lesser extent, the research and development of our cellular therapeutic candidates.

On January 12, 2024, we entered into a securities purchase agreement with Dragasac, providing for the private placement of (i) 2,141,098 shares of our Class A common stock for $2.4898 per share and (ii) accompanying warrants to purchase up to 535,274 shares of Class A common stock for $1.25 per warrant. Total proceeds from the financing were approximately $6.0 million. Additionally, on January 12, 2024, we entered into the RWI Second Amended Bridge Loan, which provided for an additional loan in the aggregate principal amount of $15.0 million net of an original issue discount of $3.75 million.

Pursuant to the terms of the January 12, 2024 security purchase agreement with Dragasac and the RWI Second Amended Bridge Loan, we were required to apply the aggregate proceeds to: (i) payment in full of all outstanding amounts owed Yorkville under the September 15, 2022 PPA, (ii) payment of invoices of certain critical vendors, (iii) the first settlement payment owed to Palantir, and (iv) for working capital and other purposes pre-approved by RWI.

On March 13, 2024, we entered into the SEPA with Yorkville. Upon entry into the SEPA, we issued Yorkville a $3.15 million convertible promissory note for $2.99 million in cash (after a 5% original issue discount). See *Standby Equity Purchase Agreement* section above for further details. Proceeds from the note were used for working capital purposes, including payment of invoices of certain critical vendors.

As of the issuance date, we had insufficient unrestricted cash and cash equivalents available to fund our operations and no available additional sources of outside capital to sustain our operations for a period of 12 months beyond the issuance date. These uncertainties raise substantial doubt about our ability to continue as a going concern. See *Going Concern* section above for further details.

To date, we have not had any cellular therapeutics approved for sale and have not generated any revenues from the sale of our cellular therapeutics and we are not actively developing any cellular therapeutics in our pipeline given our liquidity. We do not expect to generate any revenues from cellular therapeutic product sales unless and until we successfully complete development and obtain regulatory approval for one or more of our therapeutic candidates, which we expect will take a number of years. If we obtain regulatory approval for any of our therapeutic candidates, we expect to incur significant commercialization expenses related to therapeutic sales, marketing, manufacturing and distribution as our current commercialization efforts are limited to our biobanking and degenerative disease businesses. As a result, until such time, if ever, as we can generate sufficient revenues to fund operations, we expect to finance our cash needs through equity offerings, debt financings or other capital sources, including commercial sales of our biomaterials products, as well as potentially collaborations, licenses and other similar arrangements for our cellular therapeutic candidates. We continue to explore licensing and collaboration arrangements for our cellular therapeutics as well as distribution arrangements for our degenerative disease business. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Any failure to raise capital as and when needed could have a negative impact on our financial condition and on our ability to pursue our business plans and strategies. Failure to obtain this necessary capital or address our liquidity needs may force us to delay, limit or terminate our operations, make further reductions in our workforce, discontinue our commercialization efforts for our biomaterials products as well as other clinical trial programs, liquidate all or a portion of our assets or pursue other strategic alternatives, and/or seek protection under the provisions of the U.S. Bankruptcy Code.

We expect to incur substantial expenses in the foreseeable future for the expansion of our degenerative disease business and ongoing internal research and development programs. We will require substantial additional funding in the future to build the sales, marketing and distribution infrastructure that will be necessary to commercialize our biomaterials products.

To date, inflation has not had a significant impact on our business. However, any significant increase in inflation and interest rates could have a significant effect on the economy in general and, thereby, could affect our future operating results.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

(in thousands)	Year Ended December 31,		
	2023	2022	Change
Cash (used in)/provided by			
Operating activities	$ (38,685)	$ (137,876)	$ 99,191
Investing activities	(4,048)	(5,236)	1,188
Financing activities	24,094	119,838	(95,744)
Net change in cash, cash equivalents and restricted cash	$ (18,639)	$ (23,274)	$ 4,635

Operating Activities

We used $38.7 million of net cash in operations for the year ended December 31, 2023 compared to $137.9 million for the year ended December 31, 2022. The decrease was primarily due to lower operating expenses and lower working capital, resulting mainly from an increase in accounts payable and accrued expenses.

Investing Activities

We used $4.0 million and $5.2 million of net cash in investing activities during the years ended December 31, 2023 and 2022, respectively, which consisted of capital expenditures in each period as well as the purchase of acquired IPR&D assets of $3.0 million in the current year period.

Financing Activities

We generated $24.1 million of net cash from financing activities for the year ended December 31, 2023, which included: $11.6 million aggregate net cash proceeds from senior secured bridge loan and warrant agreements entered into with Resorts World Inc Pte Ltd, in May 2023 and June 2023; $12.8 million in cash proceeds from PIPE financings, consisting of a $9.0 million PIPE entered into in March 2023 and a $3.8 million PIPE entered into in May 2023; $5.0 million in proceeds from the issuance of a senior secured bridge loan and warrants to C.V. Starr in March 2023; $8.2 million net proceeds from registered direct offerings, consisting of net proceeds of $5.5 million from a registered direct offering in April 2023 and $2.7 million registered direct offering in July 2023; and $3.0 million in proceeds from loan agreements entered into in August 2023, including a $1.0 million loan agreement with Dr. Robert Hariri, our Chairman and Chief Executive Officer. Partially offsetting these sources was $16.8 million principal repayments of the PPA. We generated $119.8 million of net cash from financing activities for the year ended December 31, 2022, which consisted primarily of $46.5 million in cash proceeds from the exercise of warrants to acquire 1,328,139 shares of Class A common stock, $27.4 million in cash proceeds from a May 2022 private placement, $39.2 million in cash proceeds from the PPA, and $6.0 million in cash proceeds from the sale of Class A common stock in the ATM Program.

The following table summarizes our cash flows for the nine months ended September 30, 2024 and 2023:

	Nine Months Ended September 30,		
	2024	2023	Change
Cash (used in)/provided by			
Operating activities	$ (7,995)	$ (34,344)	$ 26,349
Investing activities	2,070	(3,468)	5,538
Financing activities	6,058	24,108	(18,050)
Net change in cash, cash equivalents and restricted cash	$ 133	$ (13,704)	$ 13,837

Operating Activities

Net cash used in operations for the nine months ended September 30, 2024 was $26.3 million lower than the prior year period, primarily due to higher net revenues, partially offset by an increase in accounts receivable, lower operating expenses mainly due to our March 2023 reduction in force and lower clinical trial costs from discontinuation of certain clinical trials of our cell therapy candidates and increases in accounts payable and accrued expenses.

Investing Activities

We received $2.1 million and used $3.5 million of net cash in investing activities for the nine months ended September 30, 2024 and 2023, respectively. Net cash provided by investing activities for the nine months ended September 30, 2024 included the $2.2 million settlement of the convertible note receivable from Sanuwave, offset by $0.1 million of capital expenditures. Net cash used in investing activities for the nine months ended September 30, 2023, included $0.5 million of capital expenditures and $3.0 million used to acquire in-process research and development.

Financing Activities

Net cash provided by financing activities was $6.1 million for the nine months ended September 30, 2024, which consisted of $15.0 million from the RWI Second Amended Bridge Loan entered into on January 12, 2024, $6.0 million from the January 2024 private placement with Dragasac and $3.0 million, net from the March 13, 2024 convertible promissory note issued to Yorkville, partially offset by $17.4 million for the payment in full of the Yorkville PPA. For the nine months ended September 30, 2023, we generated $24.1 million of net cash from financing activities which consisted primarily of $12.8 million from the March 2023 and May 2023 private placements, $5.0 million of proceeds from the Starr Bridge Loan, $12.4 million of proceeds from the RWI Loans, $3.0 million of other short-term debt proceeds, $9.0 million from the April and July 2023 registered direct offerings, offset by principal repayments on the Yorkville PPA of $16.8 million and $1.5 million of issuance costs.

Critical Accounting Estimates

Our significant accounting policies are summarized in Note 2, "Summary of Significant Accounting Policies," included in our consolidated financial statements included elsewhere in this prospectus.

The preparation of our consolidated financial statements in conformity with accounting principles generally accepted in the United States, or GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of expenses during the reporting period. Significant estimates and assumptions reflected in these consolidated financial statements include, but are not limited to, assumptions related to goodwill and intangible impairment assessment, the valuation of inventory, contingent consideration, short-term debt, and contingent stock consideration, determination of incremental borrowing rates, accrual of research and development expenses, and the valuations of stock options and preferred stock warrants. We based our estimates on historical experience, known trends and other market-specific or other relevant factors that we believe to be reasonable under the circumstances. On an ongoing basis, management evaluates these estimates when there are changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates.

Revenue Recognition

We recognize revenue when control of the products and services is transferred to our customers in an amount that reflects the consideration we expect to receive from our customers in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when the performance obligations have been satisfied.

A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. We consider a performance obligation satisfied once it has transferred control of a good or service to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. Transaction prices of products or services are typically based on contracted rates with customers and to the extent that the transaction price includes variable consideration, we estimate the amount of variable consideration that should be included in the transaction price utilizing the expected value method or the most likely amount, depending on the circumstances, to which we expect to be entitled.

Products within our Degenerative Disease segment generally do not contain multiple elements. We allow for a right of return for those products but to date returns have been minimal.

Valuation of Goodwill and Intangible Assets

We have acquired and may continue to acquire significant intangible assets in connection with business combinations, which we record at fair value. The determination of fair value requires the use of forecasts, estimates and assumptions, which requires significant judgment by management. Each of these factors are subject to uncertainty and can significantly affect the value of the intangible asset.

Goodwill and indefinite-lived intangible assets are reviewed for impairment annually or when an event occurs that could result in an impairment. The impairment analysis requires the exercise of significant judgment by management and can involve both the assessment of qualitative factors (which are subject to uncertainty and can change significantly from period to period), as well as a quantitative. For our quantitative impairment tests, we use an estimated future cash flow

approach that requires significant judgment with respect to future volume, revenue and expense growth rates, the selection of an appropriate discount rate, asset groupings and other assumptions and estimates. The estimates and assumptions used are subject to uncertainty. The use of alternative estimates and assumptions could increase or decrease the estimated fair value of the assets and could potentially impact our results of operations. Actual results may differ from our estimates. For the year ended December 31, 2023, we recognized goodwill impairment charges of $112.3 million and indefinite-lived intangible asset impairment charges associated with IPR&D of $107.8 million. There were no goodwill impairments for the three months ended September 30, 2024. For more information about the trigger events leading to the impairments refer to Note 2, "Summary of Significant Accounting Policies" and "Goodwill and Intangible Assets, Net" of our consolidated financial statements included elsewhere in this prospectus).

Valuation of Inventory

We have disclosed our inventory valuation policy in Note 2, "Summary of Significant Accounting Policies" of our consolidated financial statements included elsewhere in this prospectus. We periodically analyze the inventory levels to determine whether there is any obsolete, expired, or excess inventory. If any inventory is (i) expected to expire prior to being sold, (ii) has a cost basis in excess of its net realizable value, (iii) is in excess of expected sales requirements as determined by internal sales forecasts, or (iv) fails to meet commercial sale specifications, the inventory is written-down through a charge to cost of revenues. The determination of whether inventory costs will be realizable requires estimates by management of future expected inventory requirements, based on sales forecasts. If actual market conditions are less favorable than those projected by management, inventory write-downs may be required. Inventory, net of current portion on our consolidated balance sheets includes inventory expected to remain on hand beyond one year. We recognized a $5.4 million inventory impairment charge during the year ended December 31, 2023, in cost of revenues in the consolidated statements of operations due to lower of cost or market adjustments of $2.1 million for finished goods and $3.3 million for work in progress. No inventory impairment was recognized during the year ended December 31, 2022.

Contingent Consideration

We have acquisition-related contingent consideration, which consists of potential milestone and royalty obligations, which was recorded in the consolidated balance sheets at our acquisition-date estimated fair value. We remeasure the fair value each reporting period, with changes recorded in the consolidated statements of operations. The determination of fair value requires the exercise of significant judgment and estimates by management. These include estimates and assumptions regarding the achievement and timing of milestones, forecasted revenues and assumptions utilized in calculating a discount rate. If management's assumptions prove to be inaccurate, it could result in changes to the contingent consideration liability and have a material effect on our results of operations.

Warrant Liability

Accounting for liability classified warrants requires management to exercise judgment and make estimates and assumptions regarding their fair value (for more information about the material inputs and assumptions used to value the liability classified warrants refer to Note 3, "Fair Value of Financial Assets and Liabilities" of our audited and unaudited consolidated financial statements included elsewhere in this prospectus). The warrant liabilities are initially recorded at fair value upon the date of issuance and subsequently remeasured to fair value at each reporting date, with changes recognized in the consolidated statements of operations. Changes in the fair value of the liability classified warrants will continue to be recognized until the warrants are exercised, expire or qualify for equity classification.

Convertible Note Receivable

We have a convertible note receivable from the August 2020 disposition of the UltraMIST business. We use a bond valuation that employs a credit default model, which requires the use of estimates and judgment by management regarding: (i) the fair value and volatility of the issuer's common stock, (ii) probability and timing of converting the note, and (iii) risk-free interest rate. If our assumptions and estimates prove to be inaccurate, it could result in changes to the convertible note receivable and have a material effect on our results of operations.

Stock-Based Compensation

We recognize compensation expense related to stock options granted to employees and nonemployees based on the estimated grant date fair value and recognize forfeitures as they occur. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model for service-based and performance-based awards. For awards with market conditions, we utilize a Monte-Carlo model to estimate the fair value of those awards. The grant date fair value of the stock-based awards is recognized on a straight-line basis over the requisite service period, which is typically the vesting period of the respective awards. The Black-Scholes option-pricing model and Monte-Carlo model requires the use of highly subjective assumptions to determine the fair value of stock-based awards. See Note 13, "Stock-Based Compensation" to our audited consolidated financial statements included elsewhere in this prospectus for information concerning certain of the specific assumptions used in applying the Black-Scholes option-pricing model to determine the estimated fair value of stock options granted during the years ended December 31, 2023 and 2022 and Note 11 "Stock-Based Compensation" to our unaudited consolidated financial statements included elsewhere in this prospectus for information concerning certain of the specific assumptions used in applying the Black-Scholes option-pricing model to determine the estimated fair value of stock options granted during the period ended September 30, 2024. Such assumptions involve inherent uncertainties and the application of significant judgment. As a result, if factors or expected outcomes change and we use significantly different assumptions or estimates, our stock-based compensation could be materially different.

Leases

We cannot readily determine the interest rate implicit in the lease, therefore, we use our incremental borrowing rate, or IBR, to measure lease liabilities. The IBR is the rate of interest that we would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use, or ROU, asset in a similar economic environment. The IBR therefore reflects what we 'would have to pay', which requires estimation when no observable rates are available or when they need to be adjusted to reflect the terms and conditions of the lease. We estimate the IBR using observable inputs (such as market interest rates) when available and are required to make certain entity and asset-specific estimates. The IBR used in the calculation of the present value of lease payments in calculating lease liabilities and the corresponding ROU requires the use of significant judgment by management.

Short-Term Debt

We elected the fair value option to account for the financial instrument as per the PPA. As of December 31, 2023, due to the short term nature of the debt, the fair value approximates the settlement amount which was fully paid on January 17, 2024. As of December 31, 2022, the estimate of the fair value was determined using a binomial lattice model. The fair value measurement of the debt was determined using Level 3 inputs and assumptions unobservable in the market. Changes in the fair value of debt that is accounted for at fair value, inclusive of related accrued interest expense, are presented as gains or losses in the accompanying consolidated statements of operations and comprehensive income (loss) under change in fair value of debt. The portion of total changes in fair value of debt attributable to changes in instrument-specific credit risk are determined through specific measurement of periodic changes in the discount rate assumption exclusive of base market changes and are presented as a component of comprehensive income (loss) in the accompanying consolidated statements of operations and comprehensive income (loss). The actual settlement of the short-term debt could differ from estimates based on the timing of when and if Yorkville elects to convert amounts into common shares, potential cash repayment by us prior to maturity, and movements in our common share price.

Recent Accounting Pronouncements

See Note 2, "Summary of Significant Accounting Policies" to our consolidated financial statements included elsewhere in this prospectus for information about recent accounting pronouncements, the timing of their adoption, and our assessment, to the extent it has made one, of their potential impact on our financial condition of results of operations.

BUSINESS

We are a cellular and regenerative medicine company focused on improving health longevity, which the U.S. National Academy of Medicine defines as the state in which a person's number of years in good health approaches their biological lifespan. The objective of extending health longevity is to compress the period of time in which an individual experiences aging-related degenerative diseases and disorders associated with increased mortality towards the end of life. Aging is known to be a major risk factor for many degenerative disorders and diseases that span various therapeutic areas including cancer, regenerative medicine, and immune disorders. Common to all degenerative disorders and diseases is the progressive loss of function or structure (or both) of affected tissues and organs based on a continuous process of degenerative cell changes. In this way, the reduction of tissue and organ repair and regenerative potential are implicated in health longevity and by extension, human lifespan. Likewise, age-associated immunosenescence and other physiologic changes contribute to increased vulnerability to infections. Infection can also be the cause of aging and even common infections such as influenza and pneumonia have been linked causally to frailty development.

We are developing off-the-shelf placental-derived allogeneic cellular therapies and advanced biomaterial products for the treatment of degenerative disorders and diseases including those associated with aging. These include off-the-shelf placental-derived allogeneic cellular therapy candidates that target aging processes at the cellular level such as stem cell exhaustion and cellular senescence. One is MLASCs for which we have clinical datasets from Phase I and Phase II clinical studies and are prioritizing Phase III-ready programs in DFU and CD. In DFU, we anticipate in the first half of 2025 that we will request an end of Phase 2 or EOP2 meeting with the FDA in which we intend to discuss our Phase 3 plan and protocols. In CD, we expect in the first half of 2025 to complete an assessment of safety and efficacy data, which will be one basis for determining whether to progress it to a Phase 3 clinical trial.

We also develop and market off-the-shelf placental-derived allogeneic biomaterial products including allografts and connective tissue matrices for use in soft tissue repair and reconstructive procedures in the treatment of age-associated degenerative disorders and diseases. In addition to our existing commercial-stage biomaterial products, we are working toward a set of milestones with respect to off-the-shelf placental-derived allogeneic biomaterial product candidates. We expect to submit a 510(k) application for our Celularity Tendon Wrap in the second quarter of 2025. We expect to advance the development of our FUSE Bone Void Filler with the objective of a 510(k) filing in the second half of 2026, and to advance the development of our Celularity Placental Matrix with the objective of a 510(k) filing in the second half of 2027.

Aging and longevity are determined by a complex combination of genetic, nongenetic, and environmental factors. While aging is not itself a disease, it increases vulnerability to disease and is among the most important known risk factors for most chronic diseases. For example, aging is the major risk factor for cancer development. The accumulation of senescent cells in aged tissues is suggested to be a key factor underlying age related cancer. Likewise, age is an important risk for autoimmunity and many autoimmune diseases preferentially occur in the second half of adulthood, when immune competence has declined and thymic T cell generation has ceased. Autoimmune diseases have a long latent phase and numerous tolerance checkpoints have to be overcome to develop overt disease. These checkpoint failures may be specifically induced by the aging process

Aging is associated with a progressive degeneration of tissues, which has a negative impact on the structure and function of vital organs. There is increasing evidence that chronic inflammatory conditions represent an acceleration of the aging process. Low- grade systemic inflammation sometimes called *inflammaging* is characterized by higher levels of circulating pro-inflammatory cytokines caused by the accumulation of pro-inflammatory tissue damage and the pro-inflammatory effect of senescent cells, among other factors. Even when the number of early senescent cells is not large, their presence promotes age-related diseases by limiting the regenerative capacity of tissue stem cells and inducing the accumulation of cellular damage.

There is a close relationship between inflammation and cellular senescence, which is the process in which cellular stresses converge to promote cell cycle arrest, and cellular senescence has been described as a link between cancer and age-related degenerative disease. Senescent cells demonstrate activation of NF-κB, a major transcription factor in the regulation of inflammation, and release increased amounts of various inflammatory cytokines that result in enhanced inflammation. In younger organisms, cellular senescence prevents the proliferation of damaged cells. With aging, however, deficient clearance and replenishment of senescent cells results in their accumulation, which contributes to aging.

Another mechanism that contributes to aging is stem cell exhaustion, which reduces the regenerative potential of tissues and accelerates the process of aging along with stem cell depletion that occurs with increasing age. It may be possible to slow or reverse the aging process by increasing the number and quality of stem cells in order to restore tissues' regenerative power. So, too, the aging process is always accompanied by *immunosenescence* or the immune dysfunction that occurs with age and contributes to increased susceptibility to infection and possibly autoimmune disease and cancer. It is believed that age-related decay processes may be limited by increasing the number and the quality of immune cells like natural killer or NK cells and naive T cells that improve immune rejuvenation and repair function in damaged tissues.

There likewise is a need for novel biomaterial-based therapies to address the decline in tissue and organ regeneration that is associated with age. The skin, for example, is the largest organ in the human body, with a surface area of approximately two square meters (2m2). It has multiple specialized functions including thermo regulation, immunological surveillance, and a protective barrier against external chemical, mechanical and pathogenic insults. Similar to other organs in the human body, the skin undergoes a structural and functional decline with age. Structural changes associated with skin aging are cumulative and progressive and can lead to debilitating conditions including defective wound healing.

We believe the development of effective therapies against the degenerative processes (including aging-ameliorating preventive therapies) that underlie aging-related diseases and disease complications and susceptibilities will be central to the extension of health longevity. By harnessing the placenta's unique biology and ready availability, we may be able to develop therapeutic solutions that address a significant unmet global need for effective, accessible, and affordable therapeutics to promote health longevity. To this end, we are developing a pipeline of off-the-shelf placental-derived allogeneic cellular therapy product candidates such as, human placental-derived stems cells, or HPDSCs and MLASCs. These therapeutic candidates have the potential to target indications across multiple age-related degenerative diseases and conditions, including immune and infectious disease and cancer.

Biomaterials also are thought to have a role in effective therapies against the degenerative processes by helping to regenerate biological and biomechanical function. The International Union of Societies for Biomaterials Science and Engineering defines a *biomaterial* as "a material designed to take a form that can direct, through interactions with living systems, the course of any therapeutic or diagnostic procedure." An *advanced biomaterial* is a biomaterial that has regenerative properties that effectively promote the repair of defective tissues without the addition of cells or bioactive factors. Physically, biomaterials encompass a wide range of materials, including human (autologous or allogeneic) or xenogeneic biomaterials derived from living organisms, or bio-derived biomaterials, as well as man-made synthetic material, either alone or made of multiple components. Advanced biomaterials are used today in wound care and surgery as soft-tissue fillers or as structural scaffolds whose basic structure provides an appropriate physical environment for tissue regeneration. They may also have uses as part of a treatment method to intervene in the process of a degenerative disease or condition because of their ability to work without destroying the original structure of the tissue. In bio-derived biomaterials like the allogeneic ones we derive from the postpartum human placenta and umbilical cord, the structural scaffold is an acellular tissue matrix that has been decellularized to remove immunogenic substances and leave behind collagens and other molecules that form a fibrous matrix.

We developing and currently market off-the-shelf placental-derived allogeneic advanced biomaterial products including allografts and connective tissue matrices for soft tissue repair and reconstructive procedures in the treatment of degenerative disorders and diseases including those associated with aging. Our currently-marketed advanced biomaterial products include:

- Biovance®, a human amniotic membrane allograft designed to cover or offer protection from the surrounding environment in soft tissue repair and reconstructive procedure.
- Biovance®3L, a Tri-Layer Biovance® human amniotic membrane allograft designed for use as a covering, barrier, or wrap to surgical sites.
- Biovance® 3L Ocular, a tri-layer Biovance® human amniotic membrane allograft designed to support the treatment of ocular surface disease and ocular surgical applications.
- Interfyl®, a decellularized human placental connective tissue matrix designed for use to replace or supplement damaged or inadequate integumental tissue.
- CentaFlex®, a decellularized human placental matrix allograft derived from human umbilical cord designed for use as a surgical covering, wrap, or barrier to protect and support the repair of damaged tissues.
- Rebound™, a full thickness, placental derived extracellular matrix that contain amnion and chorion for use as a wound covering or barrier to protect and support full thickness wounds.

Prior to 2023, we marketed our advanced biomaterial products in the United States directly and through our distribution network primarily to the orthopedic, surgical, and wound care markets. In addition to the United States, we now intend to explore opportunities to market our advanced biomaterial products outside of the United States with an initial focus on Southeast Asia. We also are developing new placental-derived advanced biomaterial products to deepen our commercial pipeline. We plan to explore opportunities to generate revenue and leverage our core expertise in advanced biomaterial product manufacturing by providing contract manufacturing services under which we manufacture one or more of our advanced biomaterial products for a distributor to sell under its own brand name(s).

We also pursue opportunities to generate revenues that leverage our core expertise in cellular therapeutic development and manufacturing by providing contract manufacturing and development services to third parties. Contract manufacturing and development optimization services can help accelerate translational and clinical discoveries and mitigate the complexity and risk associated with introducing new cell therapeutics, including process variability, vulnerable supply chains, and manufacturing capacity constraints on scalability. Likewise, our biomaterial contract manufacturing and development services support scale-up for small and large commercial volumes, including tissue procurement, prototyping, private branding, and product distribution. Leveraging over three decades of experience in human tissue procurement and biobanking, we maintain supplies of cryopreserved placental tissue procured from informed consent donors so it is available on demand to be converted rapidly to finished biomaterial products, thereby addressing the structural vulnerabilities and inefficiencies inherent to most tissue supply chains.

Our Celularity IMPACT (***IM***munomodulatory ***P***lacenta-derived ***A***llogeneic ***Cellular therapy***) platform capitalizes on the benefits of placenta-derived cells to target multiple diseases and provides seamless integration, from biosourcing postpartum placentas from informed consent donors through manufacturing cryopreserved and packaged allogeneic cells in our purpose-built U.S.-based 147,215 square foot facility. We believe the use of cells sourced from the placentas of full-term healthy informed consent donors has potential inherent advantages from a scientific and an economic perspective. First, relative to adult-derived cells, placental-derived cells demonstrate greater stemness, meaning the ability to expand and persist. Second, placental-derived cells are immunologically naïve, meaning the cells have never been exposed to a specific antigen, and suggesting the potential for less toxicity and for low or no GvHD in transplant. Third, our placental-derived cells are allogeneic, meaning they are intended for use in any patient, as compared to autologous cells, which are derived from an individual patient for that patient's sole use. We believe this is a key difference that will enable readily available off-the-shelf treatments that can be delivered faster, more reliably, at greater scale and to more patients.

Our Celularity IMPACT manufacturing process is a seamless, fully integrated process designed to optimize speed, scalability, and efficiency, from the sourcing of placentas from full-term healthy informed consent donors through the use of proprietary processing methods, cell selection, product-specific chemistry, manufacturing and controls, or CMC, advanced cell manufacturing and cryo preservation. The result is a suite of allogeneic inventory-ready, on demand placental-derived cellular therapy products. We also operate and manage a commercial biobanking business that includes the collection, processing, and cryogenic storage of certain birth byproducts for third parties. A biobank is an organized collection of biological human material and its associated information stored for future retrieval and use in research, regenerative medicine, and innovation. We intend to explore opportunities to diversify our biobanking business, including adult cell banking.

Our current science is the product of our seasoned and experienced management team's cumulative background and effort over two and a half decades. We have our roots in Anthrogenesis Corporation, or Anthrogenesis, a company founded under the name Lifebank in 1998 by Robert J. Hariri, M.D., Ph.D., our founder, Chief Executive Officer and Chairman of the Board, and acquired in 2002 by Celgene Corporation. The team continued to hone their expertise in the field of placental-derived technology at Celgene through August 2017, when we acquired Anthrogenesis. As of the date of this prospectus, we have a robust global intellectual property portfolio comprised of over 350 patents and patent applications protecting our Celularity IMPACT platform, our processes, technologies, and current key cellular therapy programs. We believe this know-how, expertise and intellectual property will drive the rapid development and, if approved, commercialization of these potentially lifesaving therapies for patients with unmet medical needs.

Our Pipeline

Leveraging our Celularity IMPACT platform, we can derive four allogeneic cell types from a single source material, the postpartum human placenta: T cells, or pT cells; unmodified NK cells, or pNK cells, or CYNK-001; MLASCs, or APPL-00; and HPDSCs, or PSC-100. In 2022, we had active and approved clinical trials under development utilizing CYNK-001, a placental derived unmodified NK cell, for the treatment of AML, a blood cancer, and for glioblastoma multiforme, or GBM, a solid tumor cancer. We also had an active clinical trial utilizing CYNK-101, a genetically modified NK cell, for the treatment of HER2+ gastric cancer. Due to a need to prioritize corporate resources, in January 2023 we announced our intention to cease recruitment in the GBM and the HER2+ gastric trials. In addition, in April 2023, we announced based on the preliminary results of the Phase 1 trial data of CYNK-001, the AML trial would be closed to further enrollment and completed follow up. We are not actively investigating CYNK-001 for any indication. During the second quarter of 2023, we fully impaired the in-process research and development, or IPR&D, assets associated with CYNK-001. In the first quarter of 2022, we submitted an IND to investigate CYCART-19, a placental-derived CAR-T cell therapy targeting the cluster of differentiation 19, for the treatment of B-cell malignancies. In late May 2022, we received formal written communication from FDA requesting additional information before we could proceed with the Phase 1/2 clinical trial. After assessing the status of the IND to determine an optimal path forward for the CYCART-19 program, we elected to terminate development of CYCART-19 for B-cell malignancies during the third quarter of 2023. We may continue pre-clinical development of other T-cell candidates. MLASC is in development for the treatment of Crohn's disease, and other degenerative diseases. Due to an internal alignment of corporate resources, we paused development in exosomes to focus on other priorities.

In addition, we can derive genetically modified versions of three of these cell types: a pT cell that is genetically modified with a CAR, or CYCART; a pNK cell that is genetically modified with a CAR, or CYNK; and a MLASC that is genetically modified via CRISPR-mediated tissue factor gene knockout, or APPL. We also are researching a placenta-derived adherent cell exosome, or pEXO, and an exosome derived from a placental-derived immune cell such as a pT cell or a pNK cell.

In the fourth quarter 2023 following a strategic review, we refocused our cellular therapeutics pipeline. We plan to continue to develop T cell and NK cell products at the IND-enabling study stage to target oncology, autoimmune, and aging related disease indications. These programs have built on the learnings from our previous clinical programs to help us ensure we have product candidates that are optimized for efficacy, safety, and persistence to offer first-in-class or best-in-class potential. We have developed a novel approach to addressing age-related conditions by using our healthy young NK cell to attack and destroy senescent cells using the mechanism of attacking stress-ligand expressing cells, a process we have termed "senoablation". Data on our preclinical NK cell senoablation study has also been submitted for presentation at the American Society of Gene and Cell Therapy. We plan to continue to advance our preclinical autoimmune candidates, modified NK cells and T cells, in SLE, scleroderma and multiple sclerosis. We also plan to continue to explore the opportunity to investigate APPL-001, our genetically modified MLASC, to build on our existing data for our MLASC in Crohn's disease, an autoimmune disease that leads to chronic inflammation of the gastrointestinal tract; Facioscapulohumeral muscular dystrophy, or FSHD, a rare progressive genetic muscle disease; and Sarcopenia, or age-related muscle loss.

CELL THERAPY PIPELINE

Platform	Candidate	Optimization	Indications	Discovery	Pre-clinical	Phase 1/2	Phase 3
MLASC	PDA-001/002	Unmodified	Autoimmune (Crohn's) & Degenerative Disease (DFU)				(Phase 3 Ready)
MLASC	PDA-001/002	Unmodified	FSHD			(Phase 1 Ready)	
pNK	CYNK-001	Unmodified / CAR + persistence + Stealth + Reduced Lymphodepletion	Age-Related Disease				
pT	undisclosed	CAR + Persistence + Stealth	Solid Tumor				
pT/ pNK	undisclosed	CAR + Persistence + Stealth	Autoimmune Disease				

Also following a strategic review in fourth quarter 2023, we reconfirmed our advanced biomaterial product pipeline's focus on three developmental-stage medical devices intended to treat aging-associated and other degenerative diseases and disorders characterized by the progressive loss of function and/or structure of the affected tissues. The three advanced biomaterial products are Celularity Tendon Wrap, or CTW, Celularity Bone Void Filler, or CBVF, and Celularity Placental Matrix, or CPM. We are developing our CTW for the treatment and management of tendon injuries in which there has been no substantial loss of tendon tissue as a structural barrier for injured tendon tissue and does not depend on chemical action (pharmacological activity) to mediate this effect. We are developing our CBVF medical device for use as a passive osteoconductive bone filler in the pelvis, extremities, and posterior-lateral spinal fusion settings as well as other skeletal defects that are not dependent on chemical action to mediate an effect. We are developing our CPM medical device for use as a passive temporary wound covering which is not meant to achieve its primary intended purpose through chemical action (pharmacological activity) and is not dependent on being metabolized for the achievement of its intended purpose. CPM is a fully resorbable device composed of extracellular matrix, or ECM derived from decellularized human placental tissue, intended to treat partial and full-thickness wounds, pressure ulcers, venous ulcers, diabetic ulcers, chronic vascular ulcers, tunneled/undermined wounds, surgical wounds, trauma wounds, and draining wounds. We intend to seek premarket review and clearance by the FDA for CTW, CBVF and CPM through the 510(k) premarket notification procedure. With respect to our biomaterial product candidate pipeline, we expect to:

- Submit a 510(k) application for CTW in the second quarter of 2025.
- Advance the development of CBVF with the objective of a 510(k) filing in the second half of 2026.
- Advance the development of CPM with the objective of a 510(k) filing in the second half of 2027.

ADVANCED BIOMATERIAL PIPELINE

Product Names/Candidates	Indication	Discovery	Regulatory Pathway	Commercialization
Amniotic Membrane Allograft	Wound Care		361 HCT/P	BIOVANCE
Tri-Layer Amniotic Membrane Allograft	Wound Care		361 HCT/P	3L
Tri-Layer Amniotic Membrane Allograft	Ocular Protective Cover		361 HCT/P	Biovance 3L OCULAR
Amniotic Membrane Allograft	Wound Care		361 HCT/P	CentaFlex
Tri-Layer Amniotic Membrane Allograft	Wound Care		361 HCT/P	REBOUND
Placental Connective Tissue Matrix	Wound Care		361 HCT/P	Interfyl
Celularity Tendon Wrap (CTW)	Surgical Tendon Management		510(k)	
FUSE Bone Void Filler	Orthopedics / Bone, Spine, Dental		510(k)	
Celularity Placental Matrix (CPM)	Soft Tissue Management		510(k)	

Regulatory denotes FDA submissions.

As a developmental stage company in cellular therapy, we intend to develop and commercialize therapeutic product candidates, advance our preclinical pipeline, and utilize our technical operations infrastructure and expertise in multiple clinical areas.

Mesenchymal-like Adherent Stromal Cells (MLASCs)/Placenta-Derived Adherent Cells (PDA)

PDA cells are a mesenchymal-like cell population derived from normal, full-term human placental tissue. PDA-002 is culture-expanded to six passages as a plastic-adherent, undifferentiated in vitro cell population that expresses the nominal phenotype CD34-, CD10+, CD105+ and CD200+. PDA cells come in two formulations: PDA-002 for intramuscular administration and PDA-001 for intravenous administration.

PDA-001: Five indications were studied with PDA-001 product among 88 patients. CD was the first indication where in one Phase 1, one Phase 2a, and one Phase 1b studies were completed among 53 patients. The first Phase I clinical study involved investigating two dose levels of PDA-001 (150 million and 600 million cells) among six patients each. On both day 365 and day 730, a clinical response of 83% and a clinical remission of 50% were observed among the 150 million PDA-001 cell group after only two doses of treatment. During the second Phase 2a study, the primary efficacy endpoint of clinical response at both weeks four and six was achieved in 33.3% of patients who received 150 million PDA-001 cells in comparison to 0% response within the placebo group. The secondary endpoint of clinical remission was noted to be 13.3% in patients who received 150 million PDA-001 cells versus 0% in the placebo group. In the third Phase 1b study, a lower dose of 37 million PDA-001 cells was investigated with only seven patients treated among the PDA-001 group versus five patients within the placebo group. The PDA-001 cell group demonstrated a 42% clinical response and 28% clinical remission versus 0% placebo patients that were assessed on the day 365 follow-up visit. The overall safety among all three studies was concluded to be favorable with Grade 1 and Grade 2 local thrombophlebitis being the most common adverse event.

The second indication with PDA-001 included a Phase 2a Multiple Sclerosis study where six patients in each of the two dose levels of PDA-001 (150 million and 600 million cells) were compared to four patients within the placebo group. The study met the primary endpoint of Cutter's rule (≥ five new lesions present on two consecutive monthly scans), warranting a proof-of-concept study. The remaining three indications for PDA-001 cells included Rheumatoid arthritis (17 patients), stroke (two patients), and Sarcoidosis (four patients) which were closed.

PDA-002: Two indications were studied with PDA-002 product. DFU with or without Peripheral Artery Disease was the first indication wherein one Phase I and one Phase II studies were completed. The Phase II study was a randomized, placebo-controlled, double-blind study that investigated two doses of PDA-002 intramuscularly at three dose levels (3×10^6, 10×10^6, 30×10^6 cells) versus placebo. Safety was well-tolerated with injection-site reactions being the most comment adverse event among the 145 patients. The primary efficacy endpoint was the rate of response, defined as complete wound closure within three months after dosing and retention of wound closure for the subsequent four weeks. The highest response rate, observed in the 3×10^6 PDA-002 cells group was 38.5% compared to the 22.6% response rate within the placebo group. The response rates were 29.6% in the 10×10^6 PDA-002 cells group and 35.7% in the 30×10^6 PDA-002 cells group. A sub-group analysis was conducted to compare the ulcer closure at 12-week and 20-week timepoints with the currently approved FDA products which demonstrated equivalent closure rate of 42.8% and 53.8% with 3×10^6 PDA-002 dose level.

Diabetic Peripheral Neuropathy was the second indication that involved a Phase 2a study wherein 16 patients were treated with PDA-002 cells versus nine patients with placebo. The safety was well-tolerated. An increase in nerve fiber density was observed, warranting a proof-of-concept study.

CYNK-001: CYNK-001 is an allogeneic off-the-shelf cell therapy enriched for CD56+/CD3- NK cells expanded from human placental CD34+ cells. We conducted four clinical trials of CYNK-001 among four indications: the CYNK-001-AML-001 is a Phase 1, open-label dose-escalation study in adults with either Minimum Residue Disease, or MRD, or Relapsed/Refractory, or R/R, AML patients. In December 2023, the results of this study were presented at the American Society of Hematology. A total of eight patients (17 with R/R AML and 11 with MRD positive AML) were enrolled during dose escalation, and 27 received at least one dose of CYNK-001. In R/R AML patients treated, three of the six patients achieved an objective response of Morphologic Leukemia-Free State on day 28. One of the three patients with MRD positive patients achieved MRD negativity until day 120.

The remaining three clinical studies were completed in Multiple Myeloma (CYNK-001-MM-002), Glioblastoma (CYNK-001-GBM-001), and COVID-19 (CYNK-001-COVID-19) wherein a total of nine, three, and seven subjects were treated respectively. The safety was well-tolerated among all 46 patients with Grade 1 and 2 Cytokine Release Syndrome being the most common adverse event. There were no events of GvHD associated with the CYNK-001 treatment.

CYNK-101: CYNK-101 is a human placental hematopoietic stem/progenitor cell derived NK cell product, that is genetically modified to express a variant of CD16, Fc gamma receptor III (FcγRIII), via lentiviral vector transduction. We initiated a Phase 1 open-label study of CYNK-101 in combination with Trastuzumab and Pembrolizumab in newly diagnosed patients with Locally Advanced Unresectable or Metastatic HER2-Positive Gastric or Gastroesophageal Junction (G/GEJ) Adenocarcinoma. One patient was treated with five doses of CYNK-101 with no reported safety concerns.

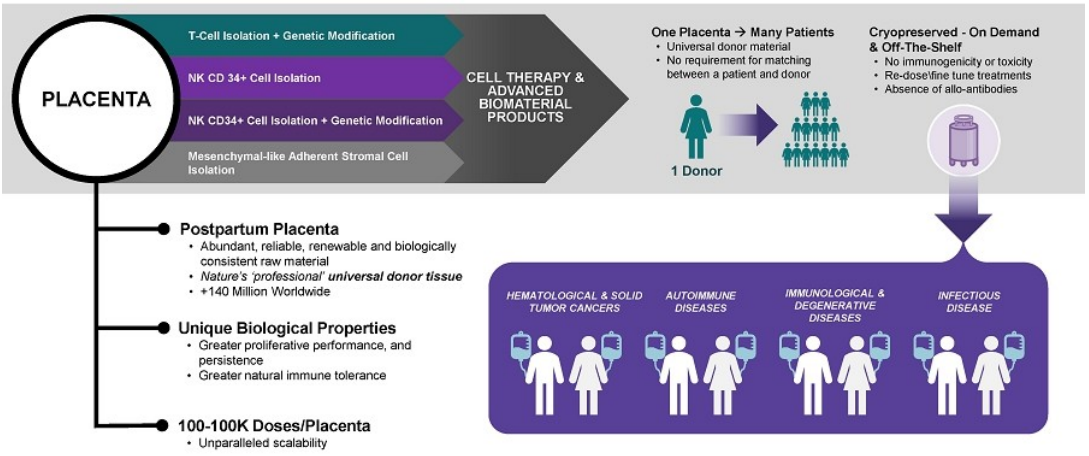
Celularity IMPACT Platform

Placental-derived cellular therapies offer potentially lifesaving therapies for patients with unmet medical needs. We have developed and acquired proprietary technology for collecting, processing, and storing placental stem cells with potentially broad therapeutic applications across the treatment of aging-associated and other degenerative disorders and diseases which span various therapeutic areas for which aging is known to be a major risk factor, including cancer, regenerative medicine, and immune disorders.

Common to all degenerative disorders and diseases is the progressive loss of function or structure (or both) of affected tissues and organs based on a continuous process of degenerative cell changes. We use our proprietary Celularity IMPACT platform for the development of allogeneic cellular therapies that we believe exert immunomodulatory and regenerative effects. Immunomodulation is the regulation and modulation of immunity achieved by reducing or enhancing the immune response, for example, promoting immune tolerance to cellular therapies. We believe that by harnessing the placenta's unique biology and ready availability, we will be able to develop therapeutic solutions that address a significant unmet global need for effective, accessible, and affordable therapeutics.

Our Celularity IMPACT manufacturing process is a seamless, fully integrated process that is built to optimize speed and scale, from the sourcing of human full term healthy postpartum placentas from informed consent donors through proprietary processing methods, cell selection, product-specific CMC, advanced cell manufacturing, and cryopreservation resulting in allogeneic inventory-ready and on-demand cellular therapy products. The fully integrated process is housed in our purpose-built manufacturing, translational research, and biobanking facility located in Florham Park, NJ.

Our Celularity IMPACT platform capitalizes on our integrated processes and the unique biologic characteristics of placental-derived allogeneic cells to target degenerative disorders and diseases including those associated with aging that span various therapeutic areas including cancer, regenerative medicine, and immune disorders, and infectious diseases. The platform is designed to accelerate the speed at which therapies can be provided to patients while ensuring manufacturing excellence of high quality and pure placental-derived cellular therapy products at a lower cost. We believe our IMPACT platform enables cellular therapy inventory to be available to physicians on demand to treat patients in need and to enable repeat dosing regimens that other cellular therapy platforms will not be able to support.



Our Strategy

Our goal is to lead the next evolution in cellular and regenerative medicine by delivering off-the-shelf allogeneic cellular therapies, at greater scale and quality with attractive economics. We believe achieving this goal will result in placental-derived allogeneic cellular therapies becoming a standard of care in various indications across cancer, infectious and degenerative diseases, and enable us to make potentially lifesaving therapies more readily accessible to more patients throughout the world. We plan to achieve this mission by:

- ***Leveraging the inherent advantages of placental-derived cells***. Our cells come from the postpartum placenta donated by healthy donors who have signed an informed consent, representing a renewable, economical, and highly scalable starting material collected under rigorous controls. We use those cells to produce on-demand, off-the-shelf investigational allogeneic cellular therapy products investigational medicines that are designed to sidestep treatment delays inherent to more costly autologous cellular therapies and other allogeneic cellular therapy approaches, all while offering the potential for greater in vivo expansion, persistence, potency, and acceptance. Further, we believe the immunological naïveté of placental cells may allow for potentially less toxicity.

- ***Capturing efficiencies through our integrated Celularity IMPACT platform***. Manufacturing allogeneic cell therapeutic candidates involves a series of complex and precise steps. We believe a critical component to our success will be to leverage our rapidly scalable, end-to-end supply chain. Applying proprietary manufacturing know-how, expertise and capacity utilizing our purpose-built U.S.-based cGMP, compliant facility, we believe our fully integrated manufacturing operations and infrastructure will allow us to improve the manufacturing process, eliminate reliance on contract manufacturing organizations, or CMOs, and more rapidly advance therapeutic candidates. We also plan to leverage this core expertise to generate revenues by providing contract manufacturing and development services to third parties.

- ***Selectively targeting indications with unmet patient need with potential for accelerated development***. Our pipeline reflects our intent to leverage the unique biology of the placenta to develop placental-derived allogeneic cells for indications where the demonstrated properties of such cells could provide an advantage, both in terms of development (sourcing and proliferation) and potential efficacy (affinity). In selecting indications, we evaluate where the biological properties of placental-derived cells position them for success, as well as where there is a clearly defined regulatory pathway providing the potential for accelerated development to address unmet patient need.

- ***Growing our existing commercial business and deepening the pipeline of placentally derived biomaterial products.*** We intend to grow our existing commercial business both through higher volumes of product sold through existing domestic distribution relationships as well as distribution relationships outside of the United States. We plan to continue to invest in new biomaterials programs, some or all of which may require different regulatory pathways than Section 361 HCT/Ps. We are currently developing a tendon wrap indicated for the management and protection of tendon injuries in which there has been no substantial loss of tendon tissue. We are also developing a bone void filler product for use in orthopedic surgical markets. We have preliminary data from an osteoarthritis animal model that placentally derived extracellular matrix may decrease joint inflammation and promote chondrogenesis in early to moderate stage knee osteoarthritis. These programs have been developed to offset the changes in the reimbursement environment which the CMS has been exploring over the last 12-18 months. These products achieve two goals: the first is to address significant unmet needs in their particular medical specialties; and the second is to achieve reimbursement in a different vertical of CMS which is more consistent without deteriorating reimbursement.

- ***Continuing to invest in basic and translational research.*** We intend to continue to invest in the discovery and development of additional pipeline cell franchises and explore other placental-derived cell opportunities. Preclinical and early clinical data demonstrating the unique biological activity and potential of placental-derived stem cells, provide potential for multiple highly effective cellular therapy programs.

- ***Benefiting from collective experience of deep, seasoned management team.*** We have a deep, seasoned management team with experience in all aspects of cellular medicine, including discovery and translational research, clinical development and product approval, manufacturing and process development and commercialization. For over two decades, the team has been at the vanguard of cellular medicine, and has collectively seen a number of programs, including one cellular therapy, through FDA-approval to commercialization.

Recent Developments

On October 9, 2024, the Company entered into an asset purchase agreement with Sequence pursuant to which the Company acquired Sequence's Rebound™ full thickness placental-derived allograft matrix product and certain assets related thereto. The aggregate consideration paid for the Asset was $5,500,000, which consisted of (i) an upfront cash payment of $1,000,000 (ii) an aggregate of up to $4,000,000 in monthly milestone payments, or the Milestone Payments, and (iii) a credit of $500,000 for the previous payment made by the Company to Sequence pursuant to that certain letter of intent between the Company and Sequence dated August 16, 2024. Pursuant to the terms of the Asset Purchase Agreement, the Milestone Payments are calculated based on 20% of net sales collected by the Company from its customers during the preceding calendar month, commencing the first full month after the closing of the transaction. The closing of the transaction occurred on October 9, 2024. Concurrently with the execution of the Asset Purchase Agreement, the Company entered into an exclusive supply agreement with Sequence for the manufacture and supply of the Product for a minimum period of six months. The Company retains the right to manufacture the Product internally and intends to commence a technology transfer as soon as practicable.

On November 25, 2024, the Company entered into a securities purchase agreement with an accredited investor pursuant to which the Company agreed to sell and issue to the investor and other purchasers in a private placement transaction, in one or more closings, the November Notes and the November Warrants. As of the date of this prospectus, the Company has issued and sold $750,000 in aggregate principle amount of November Notes and related November Warrants. The November Notes bear interest at an annual rate of 8% (increasing to 10% in the event of default as defined in the securities purchase agreement) and have a maturity date of one year from the date of issuance. Upon an event of default, the November Notes are convertible at the holder's option into shares of the Company's Class A common stock at a price per share equal to (i) $2.85 (adjusted for stock splits, reverse stock splits, stock dividends, or similar transactions); or (ii) the offering price of a subsequent financing transaction with gross proceeds of $2,500,000 or more, subject to a floor price of $1.00 per share. The November Warrants entitle the holder thereof to purchase shares of Class A common stock equal to the principal amount of November Notes purchased by such holder, divided by the exercise price of $2.85 per share. The exercise price, and the number of shares of Class A common stock issuable under the November Warrants, are subject to a one-time reset upon the completion of a subsequent financing transaction with gross proceeds of $2,500,000 or more, subject to a floor price of $1.00 per share. The November Warrants are immediately exercisable and have a five-year term.

On December 27, 2024, the Company entered into a securities purchase agreement with an institutional investor for the issuance and sale in a private placement of (i) 1,263,157 shares of the Company's Class A common stock and (ii) five-year warrants to purchase up to 1,263,157 shares of the Company's Class A common stock, at a purchase price of $2.375 per share of Class A common stock and accompanying warrant. Effective as of January 23, 2025, the December Placement was terminated.

On January 24, 2025, the Company agreed with the holder of the 2024 Warrants to purchase 535,274 shares of Class A common stock and the 2020 Warrant to purchase 652,981 shares of Class A common stock to amend the exercise price of the Warrants to $2.07 per share from $2.49 per share. The holder agreed to exercise the Warrants for gross proceeds to the Company of approximately $2.46 million.

On January 29, 2025, Dr. Robert Hariri, our CEO, extended the maturity date of his outstanding loans from December 31, 2024 to December 31, 2025.

Allogeneic Placental-Derived Cells

Biomaterials Collection

The initial source material for our four allogeneic cell types is the postpartum human placenta. We source human placental birth material used for the manufacture of our products from accredited hospitals and birth centers, with collections performed by licensed health care professionals. Eligibility for donation is determined by a donor screening process that includes education about the donor program, obtaining informed consent from the donor, and completion of a detailed maternal health questionnaire and family health history. These forms are completed by the donor, with assistance from trained collection technicians as needed. Donors providing birth materials do not encounter any fees and are not renumerated.

Licensed health care professionals collect donor material utilizing our proprietary collection kits, which include barcode labels for biomaterials (cord blood, placenta, and maternal blood samples) along with appropriate chain of custody documentation. Once collected, the donated material and a maternal blood sample are shipped in an insulated container via courier to our Florham Park, New Jersey laboratory and manufacturing facility.

Upon arrival at our facility, the donated material is reviewed for labeling completeness and accuracy of the barcoded kit and is electronically coded into a validated software database. If all quality criteria are met, the donated material is then individually evaluated and forwarded to the appropriate production suite for processing and manufacturing. We believe that our sourcing is rapidly scalable due to numerous established procurement relationships that provide a constant renewable supply to meet current and future manufacturing needs.

Unique Biology of Placenta-Derived Cells

Placental-derived cells have unique biology related to immunological naïveté, stemness, persistence and proliferation that makes them a biologically preferred starting material with the potential for less toxicity and superior biological activity relative to adult bone marrow or peripheral blood-derived cells.

Research has shown that the human placenta is a novel and valuable source of multi potential stem/progenitor cells of mesenchymal and hematopoietic origin, which have multiple therapeutic applications. Our characterization data show that approximately one to five percent of placental-derived cells are CD34+ hematopoietic stem cells, or HSCs, among which expression of certain markers suggests that such HSCs have more self-renewal capacity and the potential to facilitate the early engraftment of the placental-derived cells. In addition, further characterization has shown low T-cell content and immature T subpopulations. This demonstrated immunological naïveté further suggests the potential for low or no GvHD in transplant. Furthermore, mesenchymal-like cells have been shown to possess other characteristics, capabilities, and effects (*e.g.*, osteogenic, chondrogenic, adipogenic differentiation capabilities and immunomodulatory effects). The high quantity of mesenchymal-like cells and Treg cells indicate that placental-derived cells can potentially contribute to prevention of GvHD and host microenvironment modulation. In summary, we believe the stemness, potential capacity of proliferation and persistence of placental-derived cells support multiple potential therapeutic applications, including those in development by us.

We are also researching placental-derived exosomes for potential therapeutic applications. Exosomes are a kind of extracellular vesicle that act as communication channels between cells and cause functional changes in recipient cells. Exosomes enable intercellular communication by transferring specific cargo contents to a recipient cell and can confer epigenetic changes in the recipient cells by delivering microRNAs, or miRNAs. Exosomes have been identified as the primary factors responsible for paracrine effects detected in all types of stem cells and for the transfer of genetic material from stem cells to the tissue-specific cell that needs regeneration. Exosomes have been shown to possess powerful regenerative potential, including immune-modulatory properties and anti-inflammatory properties. We discovered a type of exosome that we call a placenta-derived adherent cell exosome, or pEXO. Rich in growth factors, deoxyribonucleic acid, or DNA, fragments, miRNAs, and messenger RNAs, pEXO exhibit particular markers that distinguish them from other exosomes that are not derived from placenta-derived adherent cells. We are investigating purified pEXO formulated into pharmaceutical compositions for human administration to promote angiogenesis and/or vascularization, to modulate immune activity, and to repair tissue damage.

Overview of CAR-T Cells

White blood cells are a component of the immune system and responsible for defending the body against infectious pathogens and other foreign material. T cells are a type of white blood cell and are involved in both sensing and killing infected or abnormal cells, including cancer cells, as well as coordinating the activation of other cells in an immune response.

Unlike adult peripheral blood mononuclear cell, or PBMC, derived T cells, placental-derived T cells are mostly naïve and can be readily expanded while maintaining an earlier differentiation phenotype, such as greater expression of naïve/memory markers and lower expression of effector/exhaustion markers. These characteristics allow for greater proliferative potential of these cells *ex vivo*. Placental-derived T cells are also known to have greater immune tolerance and display impaired allogeneic activation, contributing to lower incidences of severe GvHD, which makes them an attractive cell population for use as an allogeneic, adoptive cellular therapy. We have developed a robust process for the isolation, transduction, and expansion of placental-derived T cells to generate "off-the-shelf" allogeneic CAR-T cells.

Allogeneic human placental T cells are derived from healthy donor placentas. We separate out mononuclear cells using a mononuclear cell separation method to isolate placental T cells prior to cryopreservation. Our allogeneic CAR-T cell product begins with the thawing and activation of the isolated placental T cells, followed by viral transduction of the cancer-targeting CAR construct and an additional genetic modification step to minimize any risk of GvHD. Once transduced and transfected, the CAR-T cells are expanded to yield large quantities of these cells prior to harvest, final formulation, and cryopreservation of the cellular therapeutic.

Overview of NK cells — Unmodified and Genetically Modified

NK cells are potent effector cells of the innate immune system responsible for identifying and eliminating abnormal and stressed host cells. They are equipped with NK cell-specific activating receptors that recognize conserved antigens induced by cellular stress while being simultaneously tuned with inhibitory receptors to avoid mistakenly targeting healthy cells. NK cells are particularly relevant in combating viral infections and mediating anti-tumor immunity in which normal cellular processes are stressed for the purposes of perpetuating viral infection and cancer cell proliferation.

Commercializing NK cellular therapies has been limited by the difficulty and cost to scale the production of mature NK cells for clinical dosing. Utilizing our Celularity IMPACT platform, our proprietary process has mitigated these limitations by expanding and differentiating placental-derived stem cells into NK cells over a period of 35 days. We derive the HSCs from healthy donor placentas, then propagate and differentiate these cells into NK cells. This process can produce hundreds of doses per donor placenta. We also developed technologies that can achieve high genetic modification efficiency by transducing placenta HSCs and producing downstream stable gene modified CYNK cells with enhanced cancer killing activities. These cells are then cryopreserved and available to be shipped upon request.

For our genetically modified NK cells, our allogeneic modified NK cell product begins with the thawing and activation of the isolated placental NK cells. We then use a lentiviral vector transduction to augment the effector functions of the NK cells and to sustain their tumor-killing properties. We believe that our genetically modified NK cells can be used in combination with therapeutic mAbs to boost antibody-dependent cellular cytotoxicity, or ADCC, potential.

Overview of MLASCs

Placental-derived MLASCs are a novel, culture-expanded mesenchymal-like cell population derived from placental tissue. *In vivo*, we demonstrated that MLASCs' immune-modulatory properties alleviate autoimmunity and possess anti-inflammatory activity. Both intravenous and intramuscular administration formulations of the first generation of MLASCs have been developed and investigated in clinical studies in Crohn's Disease, multiple sclerosis, rheumatoid arthritis, stroke, diabetic foot ulcers and diabetic peripheral neuropathy. We are developing next generation genetically modified MLASCs for the treatment of degenerative diseases.

Allogeneic human placental MLASCs are derived from healthy donor placentas. Our allogeneic MLASC product begins with the thawing and activation of the isolated placental-derived MLASCs, followed by genetic modification of tissue factor to reduce potential toxicities and lower risk of adverse effects. Once modified, we expand the MLASCs to large quantities prior to harvest, final formulation, and cryopreservation of the cellular therapeutic.

Overview of Exosomes

Exosomes are acellular, nano-size lipid bilayer membrane particles released by cells into extracellular space and play important roles in cell to cell, tissue to tissue and organ to organ communications. Also referred to as intraluminal vesicles, or ILVs, exosomes are a subtype of extracellular vesicles, or EVs, along with microvesicles, or MVs, and apoptotic bodies from which exosomes are differentiated based upon their biogenesis, release pathways, size, content, and function. Exosomes are generated from late endosomes with 30-200 nanometers in diameter. When fused with the targeted cells, the molecular cargos (e.g., proteins, lipids, DNAs, mRNAs, and microRNAs) carried by exosomes are inserted into the cells to exert the functions.

Recently, exosomes are being recognized as promising candidates in the treatment of degenerative diseases. Evidence has suggested that part of the observed cell therapeutic effects is mediated by exosomes and that mesenchymal stem cell exosomes can act as a therapeutic entity to help reduce tissue injury or when it occurs, to contribute to injury recovery. Other evidence suggests exosome-based therapy may be superior in anti-senescence and anti-inflammatory effects to stem cell–based therapy. Exosome therapy has certain advantages over cellular therapy such as: low/non-immunogenicity, easy storage, and administration. In addition, due to their nano-size, exosomes can cross the brain-blood barrier and be delivered to broader target tissues and organs than cell-based therapeutics.

pExo-001 is a human postpartum placenta derived exosome product which consists of cytokines, chemokines, and growth factors that have been reported to have regenerative and immuno-regulatory activities.

Allogeneic Cellular therapies — an "Off-the-Shelf" Approach

There are two primary approaches to engineered cellular therapies: autologous and allogeneic. Autologous therapies use engineered cells derived from the individual patient, while allogeneic therapies use cells derived from an unrelated third-party healthy donor. We believe our human placental-derived allogeneic platform is leading the next evolution of cellular medicine because we aim to deliver off-the-shelf allogeneic cellular therapies, at greater scale and quality with attractive economics, potentially making lifesaving therapies more readily accessible to more patients throughout the world.

Our human placental-derived allogeneic cryopreserved, off-the-shelf platform currently includes placental CAR-T cells, or CYCART, NK cells MLASCs, or APPL-001, and exosomes, or pEXO-001.

CYCART

Currently, autologous CAR-T products are manufactured by isolating T cells from the patient's blood through a process known as leukapheresis. The cancer-targeting construct expressing specific CAR proteins is virally transduced into the T cells and the engineered T cells are then propagated until a sufficient number are available for infusion. The engineered T cells are then shipped back to the clinical center for administration to the patient. The process from leukapheresis to delivery to the clinical center takes approximately four weeks. While the autologous approach has been revolutionary, with other companies' previously-approved products demonstrating compelling efficacy in many patients, this autologous approach is burdened by lengthy vein-to-vein time, high production cost, variable potency, and manufacturing failures.

Conversely, our allogeneic placental-derived T cells are derived from healthy donors that have undergone rigorous donor screening and selection. Manufactured drug product can be deployed from inventory to patients immediately in sufficient quantities because administration is not limited by patient cell sourcing and individual drug product expansion. As an "off-the-shelf" treatment, CYCART cells also offer the potential to re-dose patients, if necessary. Healthy births are in hundreds of millions worldwide, and the placenta provides an abundant, renewable source of healthy, ready to use lymphocytes. In addition, placental-derived T cells contain an abundance of stem cell memory T cells, which confer high proliferation and durability. Placental T cells are known to be immune-privileged and have low donor to host toxicity, or GvHD. We are therefore potentially a generally safer cell population. Furthermore, allogeneic placental T cells can be genetically engineered to minimize the risk of GvHD and avoid being destroyed by the patient's immune system. Therefore, CYCART cells may possess an advantageous safety profile while delivering effective tumor eradication activity and durable persistence in patients. Our CYCART development efforts were previously under IND for cancer and has been discontinued.

CYNK

Similarly, autologous NK cells and genetically modified autologous NK cells have been used in the setting of immuno-oncology. NK cells can directly kill cancer cells by recognizing signals of cellular stress and carry no risk of GvHD. However, autologous peripheral blood derived NK cells have limited proliferation capacity and usually require leukemia cell line-based technology to assist production. In addition, autologous CAR-NK was shown to encounter technical challenges due to low transduction efficiency of CAR vectors in the peripheral NK cells. Our NK platform propagates human placenta derived HSCs and differentiates these cells into unmodified NK cells (CYNK-001). This process can produce hundreds of doses per placenta donor. We have also developed technologies that can achieve high genetic modification efficiency by transducing placenta HSCs and produce downstream stable gene modified CYNK cells with enhanced and selective cytotoxic and senolytic activity for potential use in age-related diseases, including cancer, and autoimmune diseases. These cells are cryopreserved and can be shipped to clinical administration immediately upon request. Our CYNK-001 development efforts were previously under IND for cancer and has been discontinued.

MLASCs

Both autologous and allogeneic bone marrow or adipose tissue derived MLASCs have been used in human clinical trials. Autologous MLASC therapies have advantages including the absence of donor cell related adverse events and fewer regulatory hurdles since cell products are derived from a donor's own cells. However, autologous MLASC products carry the inherited or aging-related biological defects from the donor, which may impair therapeutic value. Furthermore, in most cases, autologous cells still require cultivation before patient administration and there is a risk of manufacturing failure.

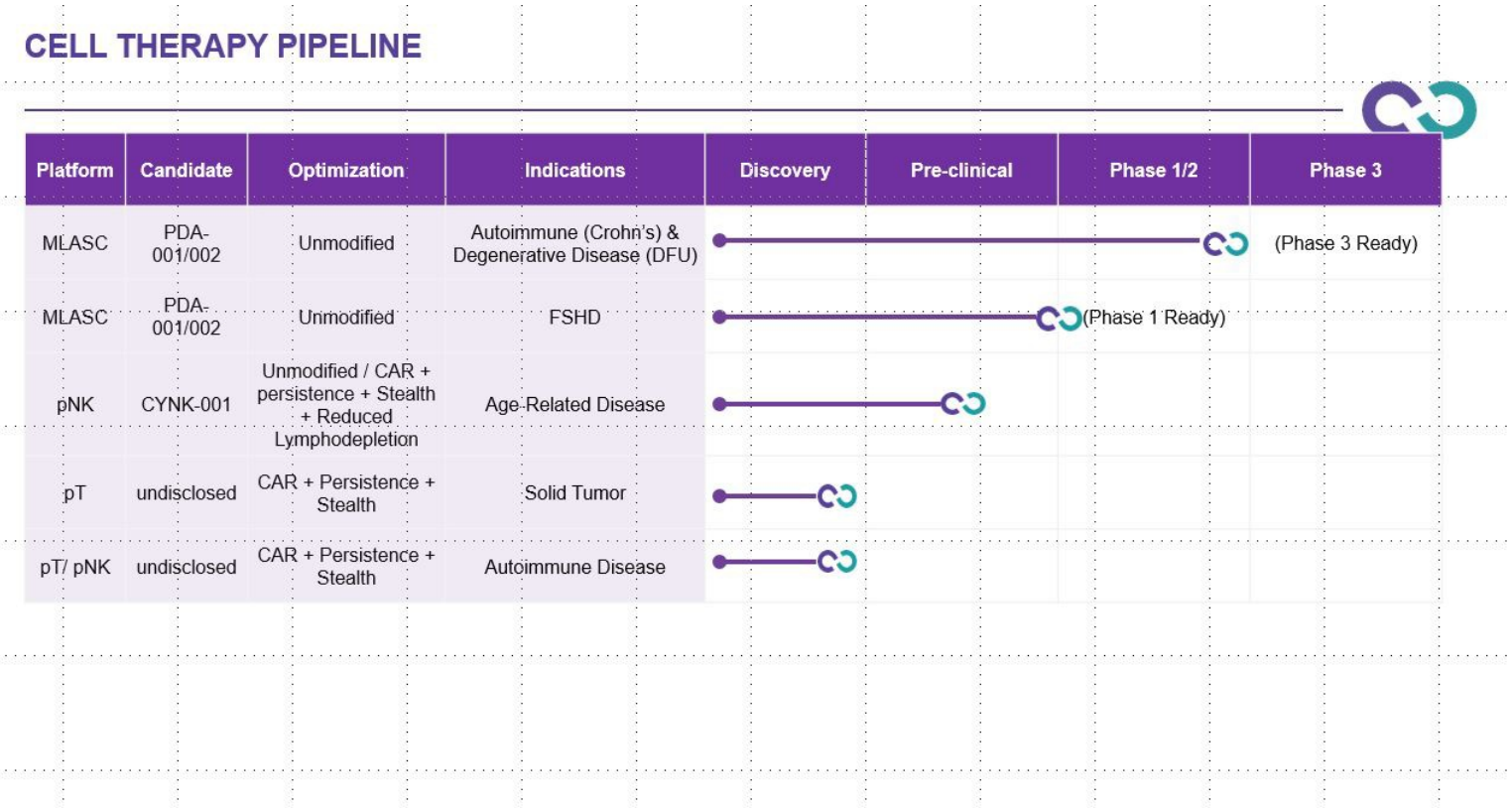
Conversely, allogeneic MLASCs can provide an off-the-shelf product with high quality and flexibility of dosing. MLASCs are regarded as immune-privileged due to their relative low-level major histocompatibility complex class I and II protein expression. Our placenta tissue derived MLASCs are potentially more immune privileged due to their fetal origin. In addition, because APPL cells have higher proliferative capability, they are expected to be more suitable for genetic manipulations to engineer the cells to have specific features to enhance their functions or to mitigate risk factors.

pEXOs

Exosomes derived from certain cell or tissue types including mesenchymal stem cells, or MSCs, affect angiogenesis, inflammation, and bone remodeling. Recent studies have demonstrated that MSC-derived exosomes, or MSC-EXOs, alleviate inflammation and restore matrix homeostasis in knee osteoarthritis, or KOA, a leading degenerative joint disease in the aging population.

Therapeutic Candidate Pipeline and Development Strategy

We are researching and developing multiple placental-derived allogeneic cellular therapeutic candidates for the treatment of indications across aging-related degenerative diseases including cancer and autoimmune diseases as well as infectious diseases. From a single source material, the placenta, we focus on four allogeneic cell types: CAR-T cells, unmodified NK cells, genetically modified NK cells, and MLASCs. We are also researching pEXO. Our product pipeline is represented in the diagram below:



Future Pipeline Opportunities

We plan to utilize our Celularity IMPACT platform to pursue additional targets of interest. These include the additional indications for the four allogeneic cell types currently in the pipeline as well as other targets that might be validated in the future. Our placental-derived T cell platform has potential to target other receptors.

In addition, we regularly survey the scientific and industry landscape for opportunities to license, partner or acquire technologies that may help us advance current or new cellular therapies for the benefit of patients.

Our ability to prosecute future opportunities including those with scientific and potential commercial merit may be influenced by our ability to raise sufficient capital to pursue those opportunities or to find commercial partners that are willing and able to fund portions of their development. Co-developed or partnered programs may have longer term economics that are less favorable than internally funded programs, but those programs also may have higher odds of success with a well-capitalized development partner with specific expertise in the disease state under investigation.

Commercial Businesses

We are continuing to invest in new biomaterials programs to expand our pipeline of placenta-derived advanced biomaterial products. We are currently developing a tendon wrap indicated for the management and protection of tendon injuries in which there has been no substantial loss of tendon tissue; a bone void filler product for use in orthopedic surgical markets; and a placenta-derived extracellular matrix, or PECM, for use as a passive temporary wound covering. We have preliminary data from a knee osteoarthritis animal model that our PECM may decrease joint pain and promote chondrogenesis in damaged cartilage. Our product pipeline is represented in the diagram below:

Advanced Biomaterial Products for Degenerative Diseases

We report sales of advanced biomaterial products within the Degenerative Disease operating segment, which includes products for use in wound care and the treatment of degenerative disease. The National Cancer Institute defines "degenerative disease" as a disease in which the function or structure of the affected tissues or organs changes for the worse over time. Our advanced biomaterials business today is comprised primarily of the sale of Biovance and Rebound product lines, directly or through our distribution network. Biovance 3L is a tri-layer decellularized, dehydrated human amniotic membrane derived from the placenta of a healthy, full-term pregnancy. It is an intact, natural extracellular matrix that provides a foundation for the wound regeneration process and acts as a scaffold for restoration of functional tissue. Rebound is a full thickness extracellular matrix that contains amnion and chorion. We are developing new placental biomaterial products to deepen the biomaterials commercial pipeline. We also market our Biovance and Interfyl products, directly or through our distribution network. Biovance is decellularized, dehydrated human amniotic membrane derived from the placenta of a healthy, full-term pregnancy. It is an intact, natural extracellular matrix that provides a foundation for the wound regeneration process and acts as a scaffold for restoration of functional tissue. Rebound is a full thickness extracellular matrix that contains amnion and chorion. Interfyl is human connective tissue matrix derived from the placenta of a healthy, full-term pregnancy. It is used by a variety of medical specialists to fill soft tissue deficits resulting from wounds, trauma, or surgery.

We have focused our marketing and sales strategy within the Advanced Biomaterial Products segment on developing strong distribution partners for our products rather than building out our own direct sales force. On May 7, 2021, we entered into a six-year supply and distribution agreement with Arthrex, Inc., as amended, that includes: (i) an exclusive Biovance, Biovance 3L, Interfyl, and Centaflex license for distribution and commercialization within the United States in the field of orthopedic surgery; and (ii) a non-exclusive license to commercialize and distribute such products within the United States in the field of acute and chronic non-healing wound care. On December 11, 2023, we entered into an exclusive commercialization agreement with BioCellgraft Inc., or BioCellgraft, to manufacture advanced biomaterial products for BioCellgraft that it will distribute under private label brand names for use in dental and oral healthcare applications.

We continue to invest in creating new or differentiated products for the Degenerative Disease segment to supplement sales of our mature commercial products, Biovance and Interfyl. For example, we are developing three investigational advanced biomaterial products: Celularity Tendon Wrap; Fuse Bone Void Filler, and Celularity Placental Matrix. We are developing our CTW investigational product for the management and protection of tendon injuries in which there has been no substantial loss of tendon tissue as a structural barrier for injured tendon tissue and does not depend on chemical action (pharmacological activity) to mediate this effect, to be classified as a surgical mesh. Based on the FDA Office

of Combination Products', or OCP, preliminary assessment we now intend to submit a 510(k) notification for CTW in 2025. We are developing our Fuse Bone Void Filler investigational product for use as a passive osteoconductive bone filler in the pelvis, extremities, and posterior-lateral spinal fusion settings as well as other skeletal defects that are not dependent on chemical action to mediate an effect. Based on OCP's preliminary assessment, we now intend to submit a 510(k) notification for FUSE in the second half of 2025. We are developing our CPM investigational product for use as a passive temporary wound covering which is not meant to achieve its primary intended purpose through chemical action (pharmacological activity) and is not dependent on being metabolized for the achievement of its intended purpose.

Biobanking

We provide a fee-based biobanking service to expectant parents who contract with us to collect, process, cryogenically preserve and store certain biomaterial, including umbilical cord blood and placenta derived cells and tissue. We receive a one-time fee for the collection, processing, and cryogenic preservation of the biomaterials, and a storage fee to maintain the biomaterials in our biobank payable annually generally over a period of 18 to 25 years. We acquired our biobanking business in May 2017 from HLI, which HLI operated as LifebankUSA, along with the degenerative disease products Biovance and Interfyl, and in October 2018, we acquired CariCord Inc., or CariCord, a family cord blood bank.

Manufacturing

We have a 147,215 square foot purpose-built facility located in Florham Park, New Jersey, which includes a cGMP-ready manufacturing center, along with dedicated research and office spaces and space for shared services. Our facility includes nine Grade C/ISO-7 and six Grade D/ISO-8 manufacturing suites designed for commercial production of cellular therapies and advanced biomaterials. We intend to manufacture all finished product in-house at our manufacturing facility in Florham Park, New Jersey. We have invested resources to optimize our manufacturing process, including the development of improved analytical methods. We plan to continue to invest in process science, product characterization and manufacturing to improve our production and supply chain capabilities over time. We have also used CMOs, as needed, on a non-exclusive basis, and may use CMOs in the future, for certain of our therapeutic candidates. For example, we used a CMO for the clinical manufacture and supply of CYNK-001 through 2022. We subsequently manufactured CYNK-001 in house. All other finished products are manufactured in-house. Notwithstanding, we will engage CMOs as necessary to ensure continuous supply of clinical and commercial grade product based on demands.

Our cellular therapeutic candidates are designed and manufactured via a platform comprised of defined unit operations and technologies. The process is gradually developed from small to larger scales, incorporating compliant procedures to create cGMP conditions. Notwithstanding this platform-based model, each therapeutic is unique and for each new therapeutic candidate, a developmental phase is necessary to individually customize each engineering step and to create a robust procedure that can later be implemented in a cGMP environment to ensure the production of clinical batches. This work is performed in a research and development environment to evaluate and assess variability in each step of the process in order to define the most reliable production conditions.

We plan to leverage our core expertise in cellular therapeutic development and manufacturing to generate revenues by providing contract manufacturing and development services to third parties. The initial focus of this new service offering will be to assist development stage cell therapy companies with the development and manufacturing of their therapeutic candidates for clinical trials. We believe that we will be able to provide a flexible and cost effective alternative to the larger contract manufacturing organizations currently serving this market.

Licensing Agreements

We enter into license agreements in the ordinary course of our business. As part of the acquisition of Anthrogensis is from Celgene, we granted Celgene a worldwide, royalty-free, fully paid up, non-exclusive license, to use certain intellectual property for both research and commercial purposes, and granted Celgene the CVRs, which provide Celgene the right to future milestone and royalty payments in certain circumstances.

Celgene Corporation

In August 2017, in connection with the Anthrogenesis acquisition, we entered into a license agreement, or the Celgene License, with Celgene, which has since been acquired by Bristol Meyers Squibb. Pursuant to the Celgene License, we granted Celgene a worldwide, royalty-free, fully-paid up, non-exclusive license, without the right to grant sublicenses (other than to its affiliates), under Anthrogenesis' intellectual property in existence as of the date of the Celgene License or as developed by Celgene in connection with any transition services activities related to the merger for non-commercial pre-clinical research purposes, as well as to develop, manufacture, commercialize and fully exploit products and services that relate to the construction of any CAR, the modification of any T-cell or NK cell to express such a CAR, and/or the use of such CARs or T-cells or NK cells for any purpose, which commercial license is sublicensable. Either party may terminate the Celgene License upon an uncured material breach of the agreement by the other party or insolvency of the other party.

In August 2017, Legacy Celularity also issued shares of its Series X Preferred Stock to Celgene as merger consideration and entered into a contingent value rights agreement, or the CVR Agreement, with Celgene pursuant to which Legacy Celularity issued one contingent value right or CVR, in respect of each share of Legacy Celularity Series X Preferred Stock issued to Celgene in connection with the Anthrogenesis acquisition. The CVR Agreement entitles the holders of the CVRs to an aggregate amount, on a per program basis, of $50.0 million in regulatory milestones and an aggregate $125.0 million in commercial milestone payments with respect to certain of our investigational therapeutic programs. In addition, with respect to each such program and calendar year, the CVR holders will be entitled to receive a royalty equal to a mid-teen percentage of the annual net sales for such program's therapeutics from the date of the first commercial sale of such program's therapeutic in a particular country until the latest to occur of the expiration of the last to expire of any valid patent claim covering such program therapeutic in such country, the expiration of marketing exclusivity with respect to such therapeutic in such country, and August 2027 (i.e., the tenth anniversary of the closing of the acquisition of Anthrogenesis). No payments under the CVR Agreement have been made to date. We estimate the liability associated with the CVR quarterly. Changes to that liability include but are not limited to changes in our clinical programs, assumptions about the commercial value of those programs and the time value of money.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for the technologies supporting our Celularity IMPACT platform, and our future therapeutic candidates, as well as novel discoveries, product development technologies, and know-how. Our commercial success also depends in part on our ability to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to develop and maintain protection of our proprietary position by, among other methods, filing or in-licensing U.S. and foreign patents and applications related to our technology, inventions, and improvements that are important to the development and implementation of our business.

We also rely on trademarks and copyright law, trade secrets, know-how, continuing technological innovation, confidentiality agreements, and invention assignment agreements to develop and maintain our proprietary position. The confidentiality agreements are designed to protect our proprietary information and the invention assignment agreements are designed to grant us ownership of technologies that are developed for us by our employees, consultants, or other third parties. We seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in our agreements and security measures, either may be breached, and we may not have adequate remedies. In addition, our trade secrets may otherwise become known or independently discovered by competitors.

With respect to both licensed and Company-owned intellectual property, we cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our commercial therapeutics and methods of using and manufacturing the same. In addition, our patents and patent applications could face other challenges, such as interference proceedings, opposition proceedings, re-examination proceedings, and other forms of post-grant review. Any of these challenges, if successful, could result in the invalidation of, or in a narrowing of the scope of, any of our patents and patent applications subject to challenge. Any of these challenges, regardless of their success, would likely be time consuming and expensive to defend and resolve, and would divert our management and scientific personnel's time and attention.

We are actively building our intellectual property portfolio around our Celularity IMPACT platform, our four allogeneic cell types and our therapeutic candidates based on our own intellectual property as well as licensed intellectual property. As of the date of this prospectus, we are the owner of, co- owner of, or the licensee of 358 patents and patent applications in the United States and worldwide protecting our Celularity IMPACT platform, our processes, our technologies and current key cell therapy programs.

Our patent portfolio includes patents and patent applications directed toward our five allogeneic placental-derived cell and extracellular vesicle types: CAR-T cells, unmodified NK cells, genetically modified NK cells, MLASCs and exosomes as follows:

- We have three utility patent families in the CAR-T technology area supporting our CYCART-19 and CYCART-201 therapeutic candidates comprising three patent families owned by us to support both CYCART-19 and CYCART-201 and three patent families licensed from Sorrento to support CYCART-19. These patent applications include licensed CAR-T patent families and owned placental-derived CAR-T patent families directed toward early CAR receptor technology, CAR receptor method and composition, anti-CD19 CAR receptor and product characterization. Patents issuing from these families have expected expiry dates ranging from 2039 to 2040 and include pending patent applications in the United States and under the PCT, Australia, Brazil, Canada, China, European Patent Convention, Hong Kong, India, Japan, Korea, Mexico, New Zealand, Philippines, Singapore, and South Africa.

- We have approximately 42 utility patent applications in the NK technology that include patents and patent applications covering process, treatment of indications, and product characterization. Issued patents directed towards our NK technology have expected expiry dates ranging from 2028 to 2041 and include patents issued and pending patent applications in the United States and under the PCT, e.g., Brazil, Canada, China, European Patent Office, Hong Kong, Israel, India, Japan, Republic of Korea, Mexico, Malaysia, New Zealand, Singapore and South Africa.

- We have approximately 107 utility applications owned by us in the MLASC technology area supporting our former legacy MLASC candidates, which that include pending patent applications and issued patents covering product characterization and method of production, as well as product description and indications. Patents issuing from these families have expiry dates ranging from 2026 to 2041 and include patents issued and pending patent applications in the United States and under the PCT, Argentina, Australia, Canada, China, Colombia, European Patent Office, Hong Kong, Israel, India, Japan, Republic of Korea, Mexico, New Zealand, Taiwan R.O.C., Vietnam, and South Africa. Although issued patents in this technology area began to expire in 2021, we have numerous patent families in this technology area directed to improvements in the cells and methods/indications for their use, which include recently filed applications directed towards APPL-001, a second generation, genetically modified MLASC therapeutic candidate. These applications have projected expiration dates to 2041 and are expected to replace the early-expiring applications. Accordingly, we do not expect that the expiry of the early-filed MLASC patents will have a material effect on our business.

- We have 31 utility patent applications in the exosome technology area supporting our placental exosome candidates, which include issued patents and pending applications. These patent applications include product characterization focused on identifying and protecting the key molecular markers that define these unique exosome populations and establish protection for their anti-inflammatory and immunomodulatory properties as well as for their use in the treatment of specific indications such as osteoarthritis. Patents issuing from these families have expected expiry dates ranging from 2035 to 2043 and include issued patents and pending patent applications in the United States and under the PCT, Australia, Canada, China, European Patent Convention, India, Japan, Korea, Mexico, New Zealand, Singapore, and South Africa.

More generally, our patent portfolio and filing strategy is designed to provide multiple layers of protection by pursuing claims directed toward composition of matter, methods of making, and methods of use, amongst others. We strive to protect and enhance the proprietary technologies that we believe are important to our business, including seeking patent protection intended to cover our technology and related technologies and uses thereof.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the date of filing of the first non-provisional

application to which priority is claimed. In the United States, patent term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the United States Patent and Trademark Office in granting a patent or may be shortened if a patent is terminally disclaimed over an earlier-filed patent. In the United States, the term of a patent that covers an FDA-approved drug may also be eligible for a patent term extension of up to five years under the Hatch-Waxman Act, which is designed to, among other things, compensate for the patent term lost during the FDA regulatory review process. The length of the patent term extension is calculated based on the length of time we take for regulatory review. A patent term extension under the Hatch-Waxman Act is the earlier of up to five years from grant date of the patent to 14 years from the date of product approval, and only one patent applicable to an approved drug may be restored. Moreover, a patent can only be extended only once. Thus, if a single patent is applicable to multiple products, the term of the patent can only be extended based on one product. Provisions designed to restore patent term lost during the regulatory review process are available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug.

Competition

Our products will compete with novel therapies developed by biopharmaceutical companies, academic research institutions, governmental agencies, and public and private research institutions, in addition to existing standard of care treatments.

Due to the promising therapeutic effect of cellular therapies in other companies' clinical trials, we anticipate increasing competition from existing and new companies developing these therapies, as well as in the development of allogeneic cellular therapies.

Potential cellular therapy and biomaterials competitors include:

- *allogeneic CAR-T cellular therapies:* Allogene Therapeutics, Inc., Atara Biotherapeutics, Inc., Cellectis S.A., Fate Therapeutics Inc., Precision Biosciences, Inc., Sana Biotechnology, CRISPR Therapeutics, Caribou Bio and Wugen.
- *allogeneic NK cellular therapies:* Fate Therapeutics Inc., Century Therapeutics, Inc., Nkarta, Inc., Artiva Biotherapeutics, Wugen, and Shoreline Biosciences.
- *allogeneic MLASC therapies:* Mesoblast Limited and, Longeveron.
- *Exosomes:* Aegle Therapeutics Corporation, Capricor Therapeutics, Inc., and Evox Therapeutics Ltd.
- *Cellular therapy competition:* Allogene Therapeutics, Inc., Atara Biotherapeutics, Inc., Adaptimmune Therapeutics PLC, Celyad S.A., CRISPR Therapeutics AG, Intellia Therapeutics, Inc., Gilead Sciences, Inc., Poseida Therapeutics, Inc., Precision Biosciences, Inc., Sangamo Therapeutics, Inc., Fate Therapeutics, Sana Biotechnology, Caribou Bio, and Artiva Biotherapeutics
- *Biomaterials competition:* MimedxGroup, Inc., Organogenesis Holdings Inc., Skye Biologics Holdings LLC, Regenerative Labs, and Legacy Medical Consultants.

Competition will also arise from non-cell-based therapies pursued by small-cap biotechnology and large-cap pharmaceutical companies including Amgen Inc., AstraZeneca plc, Bristol Myers Squibb Company, Incyte Corporation, Merck & Co., Inc., and F. Hoffmann-La Roche AG.

Many of our competitors, either alone or with their collaboration partners, have significantly greater financial resources and expertise in research and development, preclinical testing, clinical trials, manufacturing, and marketing than we do. Future collaborations and mergers and acquisitions may result in further resource concentration among a smaller number of competitors.

Our commercial potential could be reduced or eliminated if our competitors develop and commercialize therapeutics that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than cellular therapeutics that we may develop. Our competitors also may obtain FDA or other regulatory approval for their therapies more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market or make development efforts more complicated. The key competitive factors affecting the success of all of our programs are likely to be efficacy, safety, and convenience.

These competitors may also vie for a similar pool of qualified scientific and management talent, sites, and patient populations for clinical trials, as well as for technologies complementary to, or necessary for, our programs.

Government Regulation and Product Approval

As a biopharmaceutical company that operates in the United States, we are subject to extensive regulation. All of our products are subject to regulation in the United States under the Federal Food, Drug, and Cosmetic Act, or FDCA, as implemented and enforced by the FDA.

Our cell therapeutics will be regulated as biologics. With this classification, commercial production of our cellular therapeutics will need to occur in registered facilities in compliance with cGMP for biologics. The FDA categorizes human cell or tissue-based products as either minimally manipulated or more than minimally manipulated, and has determined that more than minimally manipulated products require clinical trials to demonstrate product safety and efficacy and the submission of a biologics license application, or BLA, for marketing authorization. Our cellular therapeutic candidates are considered more than minimally manipulated and will require evaluation in clinical trials and the submission and approval of a BLA before we can market them.

Our developmental advance biomaterial products will be regulated as medical devices. The FDA categorizes medical devices into one of three classes—Class I, Class II or Class III—depending on the degree of risk associated with each medical device and the extent of control needed to ensure safety and effectiveness. Class I devices are those for which safety and effectiveness can be assured by adherence to FDA's general controls for medical devices, or General Controls, which include compliance with the applicable portions of the FDA's Quality System Regulation, or QSR, facility registration and product listing, reporting of adverse medical events, and appropriate, truthful and non-misleading labeling, advertising, and promotional materials. Some Class I devices also require premarket clearance by the FDA through the 510(k) premarket notification process described below. Class II devices are subject to FDA's General Controls, and any other special controls as deemed necessary by FDA to ensure the safety and effectiveness of the device. Premarket review and clearance by the FDA for Class II devices is accomplished through the 510(k) premarket notification procedure, unless an exemption applies. A Class III product is a product which has a new intended use or uses advanced technology that is not substantially equivalent to that of a legally marketed device. The safety and effectiveness of Class III devices cannot be assured solely by the General Controls and the other requirements described above. These devices almost always require formal clinical studies to demonstrate safety and effectiveness.

Government authorities in the United States (at the federal, state and local level) and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of biopharmaceutical products such as those we are developing. Our therapeutic candidates must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agencies before they may be legally marketed in foreign countries. Generally, our activities in other countries will be subject to regulation that is similar in nature and scope as that imposed in the United States, although there can be important differences. Additionally, some significant aspects of regulation in Europe are addressed in a centralized way, but country-specific regulation remains essential in many respects. The process for obtaining regulatory marketing approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Product Development Process

In the United States, the FDA regulates pharmaceutical and biological products under the FDCA, the Public Health Service Act and their implementing regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. These sanctions could include, among other actions, the FDA's refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls or withdrawals from the market, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on our operation and business. The process required by the FDA before a biological product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practices, or GLPs, and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may begin;
- approval by an independent IRB or ethics committee at each clinical site before the trial is commenced;
- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as good clinical practices and any additional requirements for the protection of human research patients and their health information, to establish the safety and efficacy of the proposed biological product for its intended use;

- submission to the FDA of a BLA for marketing approval that includes substantial evidence of safety, purity, and potency from results of nonclinical testing and clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the biological product is produced to assess compliance with cGMP, to assure that the facilities, methods and controls are adequate to preserve the biological product's identity, strength, quality and purity and, if applicable, the FDA's GTPs for the use of human cellular and tissue products;
- potential FDA audit of the nonclinical study and clinical trial sites that generated the data in support of the BLA; and
- FDA review and approval, or licensure, of the BLA.

Before testing any biological product candidate, including our cellular therapeutic candidates, in humans, the therapeutic candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs. The clinical trial sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA raises concerns or questions regarding the

proposed clinical trials and places the trial on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a biological product candidate at any time before or during clinical trials due to safety concerns or non-compliance. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such trials.

In addition to the submission of an IND to the FDA before initiation of a clinical trial in the United States, certain human clinical trials involving recombinant or synthetic nucleic acid molecules are subject to oversight of IBCs as set forth in the NIH Guidelines for Research Involving Recombinant or Synthetic Nucleic Acid Molecules, or NIH Guidelines. Under the NIH Guidelines, recombinant and synthetic nucleic acids are defined as: (i) molecules that are constructed by joining nucleic acid molecules and that can replicate in a living cell (i.e., recombinant nucleic acids); (ii) nucleic acid molecules that are chemically or by other means synthesized or amplified, including those that are chemically or otherwise modified but can base pair with naturally occurring nucleic acid molecules (i.e., synthetic nucleic acids); or (iii) molecules that result from the replication of those described in (i) or (ii). Specifically, under the NIH Guidelines, supervision of human gene transfer trials includes evaluation and assessment by an IBC, a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment, and such review may result in some delay before initiation of a clinical trial. While the NIH Guidelines are not mandatory unless the research in question is being conducted at or sponsored by institutions receiving NIH funding of recombinant or synthetic nucleic acid molecule research, many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them.

Clinical trials involve the administration of the biological product candidate to patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted and monitored in accordance with the FDA's regulations comprising the GCP requirements including the requirement that all research patients provide informed consent. Further, each clinical trial must be reviewed and approved by an independent IRB at or servicing each institution at which the clinical trial will be conducted. An IRB is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if we determine that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing clinical studies and clinical study results to public registries.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1.* The biological product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- *Phase 2.* The biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- *Phase 3.* Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk to benefit ratio of the product and provide an adequate basis for product labeling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA, and the investigators for serious and unexpected adverse events, any findings from other studies, tests in laboratory animals or in vitro testing that suggest a significant risk for human patients, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk, including risks inferred from other unrelated immunotherapy trials. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

Human cellular therapy products are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA will require to be enrolled in the trials in order to establish the safety, efficacy, purity and potency of cellular therapy products, or that the data generated in these trials will be acceptable to the FDA to support marketing approval.

Concurrently with clinical trials, companies usually complete additional studies and must also develop additional information about the physical characteristics of the biological product as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHSA emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

FDA Biologics License Application

After the completion of clinical trials of a biological product, FDA approval of a BLA must be obtained before commercial marketing of the biological product. The BLA submission must include results of product development, laboratory and animal studies, human trials, information on the manufacture and composition of the product, proposed labeling and other relevant information. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the BLA for filing and, even if filed, that any approval will be granted on a timely basis, if at all.

Under the Prescription Drug User Fee Act, as amended, or PDUFA, each BLA must be accompanied by a significant user fee. The FDA adjusts the PDUFA user fees on an annual basis. PDUFA also imposes an annual program fee for biological products. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the BLA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe, potent, and/or effective for its intended use, and has an acceptable purity profile, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, safety, strength, quality, potency and purity. The FDA may refer applications for novel biological products or biological products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the biological product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy, or REMS, is necessary to assure the safe use of the biological product. A REMS is a safety strategy to manage a known or potential serious risk associated with a medicine and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. If the FDA concludes a REMS is needed, the sponsor of the BLA must submit a proposed REMS. The FDA will not approve a BLA without a REMS, if required.

Before approving a BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the therapeutic unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the therapeutic within required specifications. For cellular therapies, the FDA also will not approve the product if the manufacturer is not in compliance with the GTPs, to the extent applicable. These are FDA regulations and guidance documents that govern the methods used in, and the facilities and controls used for, the manufacture of human cells, tissues, and cellular and tissue based products, or HCT/Ps, which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND trial requirements and GCP requirements. To assure cGMP, GTP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production and quality control.

In November 2017, the FDA released a guidance document entitled "Regulatory Considerations for Human Cells, Tissues, and Cellular and Tissue — Based Products: Minimal Manipulation and Homologous Use — Guidance for Industry and Food and Drug Administration Staff", which it revised and reissued in July 2020, or the Guidance. The document confirmed the FDA's stance that sheet forms of amniotic tissue are appropriately regulated as solely Section 361 HCT/Ps when manufactured in accordance with 21 CFR Part 1271 and intended for use as a barrier or covering. The primary intent of the GTP requirements is to ensure that cell and tissue-based therapeutics are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Although FDA had indicated in its Guidance that the agency would exercise enforcement discretion under limited conditions with respect to the IND application and pre-market approval requirements for certain HCT/Ps, this period of enforcement discretion ended May 31, 2021.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the agency decides not to approve the BLA in its present form, the FDA will issue a complete response letter that describes all of the specific deficiencies in the BLA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a therapeutic receives regulatory approval, the approval may be limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the therapeutic. Further, the FDA may require that certain contraindications, warnings or precautions be included in the labeling. The FDA may impose restrictions and conditions on distribution, prescribing, or dispensing in the form of a risk management plan, or otherwise limit the scope of any approval. In addition, the FDA may require post marketing clinical trials, sometimes referred to as Phase 4 clinical trials, designed to further assess a biological product's safety and effectiveness, and testing and surveillance programs to monitor the safety of approved therapeutics that have been commercialized.

In addition, under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA must contain data to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any product for an indication for which orphan designation has been granted. However, if only one indication for a therapeutic has orphan designation, a pediatric assessment may still be required for any applications to market that same therapeutic for the non-orphan indication(s).

510(k) Clearance Marketing Pathway for Devices

When a 510(k) is required, the manufacturer must submit to the FDA a premarket notification submission demonstrating that the device is "substantially equivalent" to a predicate device already on the market. A predicate device is a legally marketed device that is not subject to premarket approval, i.e., a device that was legally marketed prior to May 28, 1976 (pre-amendments device) and for which a premarket approval application, or PMA, is not required, a device that has been reclassified from Class III to Class II or I, or a device that was found substantially equivalent through the 510(k) process.

If the FDA agrees that the device is substantially equivalent to a predicate device, it will grant clearance to commercially market the device in the U.S. The FDA's 510(k) clearance process usually takes from three to twelve months from the date the application is submitted and filed with the FDA but may take significantly longer and clearance is never assured. Although many 510(k) pre-market notifications are cleared without clinical data, in some cases, the FDA requires significant clinical data to support substantial equivalence. In reviewing a pre-market notification, the FDA may request additional information, including clinical data, which may significantly prolong the review process. If the FDA determines that the device, or its intended use, is not "substantially equivalent," the FDA may deny the request for clearance.

After a device receives 510(k) clearance, any subsequent modification of the device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, will require a new 510(k) clearance or could require pre-market approval. The FDA requires each manufacturer to make this determination initially, but the FDA may review any such decision and may disagree with a manufacturer's determination. If the FDA disagrees with a manufacturer's determination, the FDA may require the manufacturer to cease marketing or recall the modified device, or both, until 510(k) clearance or pre-market approval is obtained. We have modified aspects of some of our devices since receiving regulatory clearance and we have made the determination that new 510(k) clearances or pre-market approvals were not required.

Over the last several years, the FDA has proposed reforms to its 510(k) clearance process, and such proposals could include increased requirements for clinical data and a longer review period, or could make it more difficult for manufacturers to utilize the 510(k) clearance process for their products. For example, in November 2018, FDA officials announced forthcoming steps that the FDA intends to take to modernize the premarket notification pathway under Section 510(k) of the FDCA. Among other things, the FDA announced that it planned to develop proposals to drive manufacturers utilizing the 510(k) pathway toward the use of newer predicates. These proposals included plans to potentially sunset certain older devices that were used as predicates under the 510(k) clearance pathway, and to potentially publish a list of devices that have been cleared on the basis of demonstrated substantial equivalence to predicate devices that are more than 10 years old. The FDA also announced that it intends to finalize guidance to establish a premarket review pathway for "manufacturers of certain well-understood device types" as an alternative to the 510(k) clearance pathway and that such premarket review pathway would allow manufacturers to rely on objective safety and performance criteria recognized by the FDA to demonstrate substantial equivalence, obviating the need for manufacturers to compare the safety and performance of their medical devices to specific predicate devices in the clearance process.

In May 2019, the FDA solicited public feedback on its plans to develop proposals to drive manufacturers utilizing the 510(k) pathway toward the use of newer predicates, including whether the FDA should publish a list of devices that have been cleared on the basis of demonstrated substantial equivalence to predicate devices that are more than 10 years old. The FDA requested public feedback on whether it should consider certain actions that might require new authority, such as whether to sunset certain older devices that were used as predicates under the 510(k) clearance pathway. These proposals have not yet been finalized or adopted, and the FDA may work with Congress to implement such proposals through legislation. More recently, in September 2019, the FDA finalized the aforementioned guidance to describe an optional "safety and performance based" premarket review pathway for manufacturers of "certain, well-understood device types" to demonstrate substantial equivalence under the 510(k) clearance pathway, by demonstrating that such device meets objective safety and performance criteria established by the FDA, obviating the need for manufacturers to compare the safety and performance of their medical devices to specific predicate devices in the clearance process. The FDA maintains a list of device types appropriate for the "safety and performance based pathway" and develop product-specific guidance documents that identify the performance criteria for each such device type, as well as the testing methods recommended in the guidance documents, where feasible.

FDA PMA Approval Process for Devices

Although unlikely for the types of medical devices we are currently developing, the FDA may classify devices, or the particular use of a device, into Class III, and the device sponsor must then fulfill more rigorous PMA requirements. A PMA application, which is intended to demonstrate that a device is safe and effective, must be supported by extensive data, including extensive technical and manufacturing data and data from preclinical studies and human clinical trials. After a PMA application is submitted and filed, the FDA begins an in-depth review of the submitted information, which typically takes between one and three years, but may take significantly longer. During this review period, the FDA may request additional information or clarification of information already provided. Also, during the review period, an advisory panel of experts from outside the FDA will usually be convened to review and evaluate the application and provide recommendations to the FDA as to the approvability of the device. In addition, the FDA will conduct a pre-approval inspection of the manufacturing facility to ensure compliance with the QSR, which imposes stringent design development, testing, control, documentation and other quality assurance procedures in the design and manufacturing process. The FDA may approve a PMA application with post-approval conditions intended to ensure the safety and effectiveness of the device including, among other things, restrictions on labeling, promotion, sale and distribution and collection of long-term follow-up data from patients in the clinical study that supported approval. Failure to comply with the conditions of approval can result in materially adverse enforcement action, including the loss or withdrawal of the approval. New PMA applications or PMA supplements are required for significant modifications to the manufacturing process, labeling of the product and design of a device that is approved through the PMA process. PMA supplements often require submission of the same type of information as an original PMA, except that the supplement is limited to information needed to support any changes from the device covered by the original PMA, and may not require as extensive clinical data or the convening of an advisory panel.

A clinical trial is typically required to support a PMA application and is sometimes required for a 510(k) pre-market notification. Clinical trials generally require submission of an application for an Investigational Device Exemption, or IDE, to the FDA. The IDE application must be supported by appropriate data, such as animal and laboratory testing results, showing that it is safe to test the device in humans and that the investigational protocol is scientifically sound. The IDE application must be approved in advance by the FDA for a specified number of patients, unless the product is deemed a non-significant risk device and eligible for more abbreviated IDE requirements. Clinical trials for a significant risk device may begin once the IDE application is approved by the FDA as well as the appropriate institutional review boards at the clinical trial sites, and the informed consent of the patients participating in the clinical trial is obtained. After a trial begins, the FDA may place it on hold or terminate it if, among other reasons, it concludes that the clinical subjects are exposed to an unacceptable health risk. Any trials we conduct must be conducted in accordance with FDA regulations as well as other federal regulations and state laws concerning human subject protection and privacy.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a therapeutic that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the therapeutic is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the therapeutic with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

In April 2021, the FDA granted orphan drug designation to our non-genetically modified cryopreserved human placental hematopoietic stem cell-derived NK cell therapy, CYNK-001, for the treatment of patients with malignant gliomas.

Expedited Development and Review Programs

The FDA has programs intended to facilitate and expedite the development and review of new drugs to address unmet medical needs in the treatment of a serious or life-threatening condition. These programs include fast track designation, breakthrough therapy designation, accelerated approval, and priority review designation. Specifically, new therapeutics are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the therapeutic and the specific indication for which it is being studied. Unique to a fast track product, the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

Any therapeutic submitted to the FDA for approval, including a therapeutic with a fast track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A therapeutic is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed therapeutics. The FDA will attempt to direct additional resources to the evaluation of an application for a new therapeutic designated for priority review in an effort to facilitate the review. Additionally, a therapeutic may be eligible for accelerated approval. Therapeutics studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies with due diligence and, under the Food and Drug Omnibus Reform Act of 2022, or FDORA, the FDA is now permitted to require, as appropriate, that such trials be underway prior to approval or within a specific time period after the date of approval for a product granted accelerated approval. Under FDORA, the FDA has increased authority for expedited procedures to withdraw approval of a drug or indication approved under accelerated approval if, for example, the confirmatory trial fails to verify the predicted clinical benefit of the product. In addition, for products being considered for accelerated approval, the FDA currently requires, unless the sponsor is otherwise informed by the agency, that all advertising and promotional materials intended for dissemination or publication within 120 days of marketing approval be submitted to the agency for review during the pre-approval review period, which could adversely impact the timing of the commercial launch of the product. In addition, breakthrough therapy designation is intended to expedite the development and review of therapeutics that treat serious or life-threatening conditions. The designation by the FDA requires preliminary clinical evidence that a therapeutic candidate, alone or in combination with other drugs and biologics, demonstrates substantial improvement over currently available therapy on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. If the FDA designates a breakthrough therapy, it may take actions appropriate to expedite the development and review of the application, which may include (i) holding meetings with the sponsor and the review team throughout the development of the therapy, (ii) providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable, (iii) involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review, (iv) assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor and (v) considering alternative clinical trial designs when scientifically appropriate, which may result in smaller trials or more efficient trials that require less time to complete and may minimize the number of patients exposed to a potentially less efficacious treatment. Breakthrough therapy designation comes with all of the benefits of fast track designation,

which means that the sponsor may file sections of the BLA for review on a rolling basis if certain conditions are satisfied, including an agreement with FDA on the proposed schedule for submission of portions of the application and the payment of applicable user fees before the FDA may initiate a review.

The breakthrough therapy designation is a distinct status from both accelerated approval and priority review, which can also be granted to the same product if relevant criteria are met. If a product is designated as breakthrough therapy, FDA will expedite the development and review of such product.

Fast track designation, priority review and breakthrough therapy designation do not change the standards for approval but may expedite the development or approval process.

In March 2021, we received fast track designation from the FDA for our non-genetically modified cryopreserved human placental hematopoietic stem cell-derived NK cell therapy. This program is currently not active.

Post-Approval Requirements

Any therapeutics for which we receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, and complying with FDA promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in patient populations that are not described in the product's approved labeling (known as "off-label use"), limitations on industry-sponsored scientific and educational activities, and requirements for promotional activities involving the internet. Although a physician may prescribe a legally available product for an off-label use, if the physicians deems such product to be appropriate in his/her professional medical judgment, a manufacturer may not market or promote off-label uses. However, companies may share truthful and not misleading information that is otherwise consistent with a product's FDA approved labeling. A company that is found to have promoted off-label use of its product may be subject to significant liability, including administrative, civil and criminal sanctions.

In addition, quality control and manufacturing procedures must continue to conform to applicable manufacturing requirements after approval to ensure the long-term stability of the product. cGMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved products, and those supplying products, ingredients, and components of them, are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. Manufacturers and other parties involved in the drug supply chain for prescription drug products must also comply with product tracking and tracing requirements and for notifying the FDA of counterfeit, diverted, stolen and intentionally adulterated products or products that are otherwise unfit for distribution in the United States. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved BLA, including, among other things, recall or withdrawal of the product from the market. In addition, changes to the manufacturing process are strictly regulated, and depending on the significance of the change, may require prior FDA approval before being implemented. Other types of changes to the approved product, such as adding new indications and claims, are also subject to further FDA review and approval.

The FDA also may require post-marketing testing, known as Phase 4 testing, and surveillance to monitor the effects of an approved product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our therapeutics under development.

U.S. Marketing Exclusivity

The Biologics Price Competition and Innovation Act, or BPCIA, amended the PHSA to authorize the FDA to approve similar versions of innovative biologics, commonly known as biosimilars. A competitor seeking approval of a biosimilar must file an application to establish its molecule as highly similar to an approved innovator biologic, among other requirements. The BPCIA, however, bars the FDA from approving biosimilar applications for 12 years after an innovator biological product receives initial marketing approval. This 12-year period of data exclusivity may be extended by six months, for a total of 12.5 years, if pediatric exclusivity is granted. Pediatric exclusivity is another type of regulatory market exclusivity in the United States. This six-month exclusivity, which runs from the end of other exclusivity protection, may be granted based on the voluntary completion of a pediatric trial that fairly responds to an FDA-issued "Written Request" for such a trial.

Depending upon the timing, duration and specifics of the FDA approval of the use of our therapeutic candidates, some of its U.S. patents, if granted, may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years, as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA plus the time between the submission date of a BLA and the approval of that application. Only one patent applicable to an approved therapeutic is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The U.S. Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may intend to apply for restoration of patent term for one of our currently owned or licensed patents to add patent life beyond our current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA.

Federal and State Licenses and Registrations

The health care industry is subject to stringent regulation by a wide range of authorities. Accordingly, our business requires us to maintain certain licenses, registrations, permits, authorizations, approvals, certifications, accreditations and other types of federal, state, and local governmental permissions and to comply with various regulations in every jurisdiction in which we operate. For example, we are required to maintain licenses and registrations in several states, and has obtained biologics, tissue bank and blood bank licenses, permits and registrations in states where such licensure is required for us to market and support our products and services. Some states, such as New York, impose state law restrictions on products that have not been the subject of a BLA based upon their interpretation of guidance issued under federal law, including the FDA's guidance on HCT/Ps, which can lead to different, and potentially conflicting, regulatory frameworks applicable to our degenerative disease products on a state by state basis. We also maintain an annual registration with the FDA as a tissue bank, and national accreditation by the American Association of Blood Banks. The failure to comply with such licensure requirements can result in enforcement actions, including the revocation or suspension of the licenses, registrations or accreditations, or subject us to plans of correction, monitoring, civil money penalties, civil injunctive action and/or criminal penalties.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, the Centers for Medicare & Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services (*e.g.*, the Office of Inspector General), the U.S. Department of Justice, or DOJ, and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, our business practices, including our research and sales, marketing and scientific/educational grant programs may be required to comply with the fraud and abuse provisions of the Social Security Act, false claims laws, anti-kickback and anti-bribery laws, the data privacy and security provisions of the Health Insurance Portability and Accountability Act, or HIPAA, federal transparency requirements and similar state laws, each as amended.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity, from knowingly and willfully offering, paying, soliciting or receiving any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for, either the referral of an individual for, or the purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. The federal Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and require strict compliance in order to offer protection. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Our practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor.

Additionally, the intent standard under the federal Anti-Kickback Statute was amended by the Patient Protection Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively, the Affordable Care Act, to a stricter standard such that a person or entity no longer needs to have actual knowledge of the federal Anti-Kickback Statute or specific intent to violate it in order to have committed a violation. Rather, if "one purpose" of the remuneration is to induce referrals, the federal Anti-Kickback Statute is violated. In addition, the Affordable Care Act codified case law that a claim that includes items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act (discussed below).

The federal civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have knowingly presented or caused to be presented a false or fraudulent claim to, among others, a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Further, violations of the Anti-Kickback Statute are subject to civil and criminal fines and penalties for each violation, plus up to three times the remuneration involved, imprisonment, and exclusion from government healthcare programs.

The federal civil and criminal false claims laws, including the federal civil False Claims Act, prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other federal government programs that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government, including federal healthcare programs. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes "any request or demand" for money or property presented to the federal government. Pharmaceutical and other healthcare companies are being investigated or, in the past, have been prosecuted under these laws for, among other things, allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, pharmaceutical and other healthcare companies also have been prosecuted for causing false claims to be submitted because of the companies' marketing of the product for unapproved, and thus non-reimbursable, uses. The federal False Claims Act also permits a private individual acting as a "whistleblower" to bring actions on behalf of the federal government alleging violations of the federal False Claims Act and to share in any monetary recovery.

HIPAA created additional federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the federal Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

We may be subject to data privacy and security regulations by both the federal government and the states in which we conduct our business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their implementing regulations, imposes requirements on certain types of individuals and entities, including covered entities (*i.e.*, certain healthcare providers, health plans and healthcare clearinghouses), relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to business associates (and their

subcontractors) that are independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions.

State laws also govern the privacy and security of personal information. Many state laws differ from each other in significant ways, thus complicating compliance efforts. For example, the California Consumer Privacy Act, or CCPA establishes data privacy rights for individuals located in California, and imposes certain requirements on how businesses can collect and use personal information about such individuals. The California Privacy Rights Act, or CPRA, which became effective on January 1, 2023, the CPRA imposes additional obligations on companies covered by the legislation and significantly modifies the CCPA, including by expanding consumers' rights with respect to certain sensitive personal information and establishes a state agency vested with the authority to enforce the CCPA. It is not yet fully clear how the CCPA (as amended by the CPRA) will be enforced and how it will be interpreted. The evolving nature of the CCPA may require us to modify our data collection or processing practices and policies and to incur substantial costs and expenses in an effort to comply.

The CCPA (as amended by the CPRA) has prompted the enactment of similar, comprehensive privacy and data protection legislation in other states, such as Virginia, Colorado, Utah and Connecticut, which will all become effective in 2023. Furthermore, a number of other U.S. states have proposed similar privacy and data protection legislation, and it is possible that certain of these proposals will pass. Although many of the existing state privacy laws exempt clinical trial information and health information governed by HIPAA, future privacy and data protection laws may be broader in scope. Further, the proliferation of state privacy laws has heightened risks and uncertainties concerning our collection and use of personal information. This could lead to significant compliance costs and expenses on our business, increase our potential exposure to regulatory enforcement and/or litigation and have a negative effect on our ability to attract and retain new customers.

Additionally, the federal Physician Payments Sunshine Act created under the Affordable Care Act, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) annually report information to CMS related to certain payments or other transfers of value made or distributed to physicians (defined to include doctors, dentists, optometrists, podiatrists, and chiropractors) and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members. Effective January 1, 2022, applicable manufacturers were also required to report information regarding payments and other transfers of value provided during the previous year to physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, anesthesiologist assistants and certified nurse-midwives.

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring us to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor. In order to distribute therapeutics commercially, we must comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states and local jurisdictions have enacted legislation requiring pharmaceutical and biotechnology companies to establish marketing compliance programs and comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical and biotechnology companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to significant penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, additional reporting requirements and/or oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any therapeutic candidates for which we obtain regulatory approval. In the United States and certain markets in other countries, sales of any therapeutics for which we receive regulatory approval for commercial sale will depend, in part, on the extent to which third-party payors provide coverage, and establish adequate reimbursement levels for such products. No uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. As a result, the coverage determination process is often time-consuming and costly. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price of a product or from establishing the reimbursement rate that such a payor will pay for the product. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our therapeutics, in addition to the costs required to obtain the FDA approvals. Our therapeutic candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Net prices for our therapeutics may also be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Further, one payor's determination to provide coverage for a therapeutic does not assure that other payors will also provide coverage for the therapeutic. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in therapeutic development.

Different pricing and reimbursement schemes exist in other countries. In the European Union, or EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular therapeutic candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country. Accordingly, in markets outside the United States, the reimbursement for our products may be reduced compared with the United States and may be insufficient to generate commercially reasonable revenue and profits. Pricing and rebate programs must comply with the Medicaid rebate requirements of the U.S. Omnibus Budget Reconciliation Act of 1990 and more recent requirements in the Patient Protection Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, collectively, the Affordable Care Act. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply.

The marketability of any therapeutic candidates for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on healthcare pricing. For example, actions by federal and state governments and health plans may put additional downward pressure on pharmaceutical pricing and health care costs, which could negatively impact coverage and reimbursement for our products if approved, our revenue, and our ability to compete with other marketed products and to recoup the costs of our research and development. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more therapeutics for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been, and continue to be, several legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of therapeutic candidates, restrict or regulate post-approval activities, and affect the ability to profitably sell therapeutic candidates for which marketing approval is obtained. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

For example, the Affordable Care Act has substantially changed healthcare financing and delivery by both governmental and private insurers. Among the Affordable Care Act provisions of importance to the pharmaceutical and biotechnology industries, in addition to those otherwise described above, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs that began in 2011;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, retroactive to January 1, 2010, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively, and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price (AMP);
- a new Medicare Part D coverage gap discount program, in which manufacturers must now agree to offer 70% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the 340B Drug Discount Program;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted, or injected;

- requirements to report certain financial arrangements with physicians and teaching hospitals;
- a requirement to annually report certain information regarding drug samples that manufacturers and distributors provide to physicians;

- establishment of a Center for Medicare and Medicaid Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending; and
- a licensure framework for follow on biologic products.

There remains executive, legal and political challenges to certain aspects of the Affordable Care Act. For example, in December 2019, the Further Consolidated Appropriations Act (H.R. 1865), which repealed the Cadillac tax, the health insurance provider tax, and the medical device excise tax, was signed into law. Moreover, the Bipartisan Budget Act of 2018, effective January 2019, among other things, amended the Affordable Care Act to close the coverage gap in most Medicare drug plans, commonly referred to as the "donut hole". In June 2021, the U.S. Supreme Court dismissed the most recent judicial challenge to the Affordable Care Act brought by several states without specifically ruling on the constitutionality of the Affordable Care Act. Prior to the Supreme Court's decision an Executive Order was issued to initiate a special enrollment period from February 15, 2021 through August 15, 2021 for purposes of obtaining health insurance coverage through the Affordable Care Act marketplace. The Executive Order also instructed certain governmental agencies to review and reconsider their existing policies and rules that limit access to healthcare, including among others, reexamining Medicaid demonstration projects and waiver programs that include work requirements, and policies that create unnecessary barriers to obtaining access to health insurance coverage through Medicaid or the Affordable Care Act. The ultimate content, timing or effect of any healthcare reform legislation on the United States healthcare industry is unclear.

Previously, in October 2017, an Executive Order was signed terminating the cost-sharing subsidies that reimburse insurers under the Affordable Care Act. The former administration concluded that cost-sharing reduction, or CSR, payments to insurance companies required under the Affordable Care Act have not received necessary appropriations from Congress and announced that it will discontinue these payments immediately until those appropriations are made. Several state Attorneys General filed suit to stop the administration from terminating the subsidies, but their request for a restraining order was denied by a federal judge in California in October 2017. In August 2020, the U.S. Court of Appeals for the Federal Circuit ruled in two separate cases that the federal government is liable for the full amount of unpaid CSRs for the years preceding and including 2017. For CSR claims made by health insurance companies for years 2018 and later, further litigation will be required to determine the amounts due, if any. Further, in June 2018, the U.S. Court of Appeals for the Federal Circuit ruled that the federal government was not required to pay more than $12 billion in Affordable Care Act risk corridor payments to third-party payors who argued the payments were owed to them. In April 2020, the United States Supreme Court reversed the U.S. Court of Appeals for the Federal Circuit's decision and remanded the case to the U.S. Court of Federal Claims, concluding the government has an obligation to pay these risk corridor payments under the relevant formula.

We anticipate that the Affordable Care Act, if substantially maintained in its current form, will continue to result in additional downward pressure on coverage and the price that we receive for any approved therapeutic, and could seriously harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our therapeutics. Such reforms could have an adverse effect on anticipated revenue from therapeutic candidates that we may successfully develop and for which we may obtain regulatory approval and may affect our overall financial condition and ability to develop therapeutic candidates.

Further legislation or regulation could be passed that could harm our business, financial condition and results of operations. Other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, in August 2011, the Budget Control Act of 2011 was signed into law, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for fiscal years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year. These reductions went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will remain in effect through 2030, with the exception of a temporary suspension from May 1, 2020 through March 31, 2022. Then, a 1% payment reduction occurred beginning April 1, 2022 through June 30, 2022, and the 2% payment reduction resumed on July 1, 2022. Further, in January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, further reduced Medicare payments to several types of providers, including hospitals, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

In addition, on May 30, 2018, the Right to Try Act was signed into law. The law, among other things, provides a federal framework for certain patients to access certain investigational new drug products that have completed a Phase 1 clinical trial and that are undergoing investigation for FDA approval. Under certain circumstances, eligible patients can seek treatment without enrolling in clinical trials and without obtaining FDA permission under the FDA expanded access program. There is no obligation for a pharmaceutical manufacturer to make its drug products available to eligible patients as a result of the Right to Try Act.

There has also been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. At the federal level, an Executive Order was signed in July 2021 affirming the administration's policy to (i) support legislative reforms that would lower the prices of prescription drug and biologics, including by allowing Medicare to negotiate drug prices, imposing inflation caps and supporting the development and market entry of lower-cost generic drugs and biosimilars; and (ii) support the enactment of a public health insurance option. Among other things, the Executive Order also directs the Department of Health and Human Services, or HHS to provide a report on actions to combat excessive pricing of prescription drugs, to enhance the domestic drug supply chain, to reduce the price that the Federal government pays for drugs, and to address price gouging in the industry; and directs the FDA to work with states and Indian Tribes that propose to develop section 804 Importation Programs in accordance with the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, and the FDA's implementing regulations. FDA released such implementing regulations in September 2020, which went into effect in November 2020, providing guidance for states to build and submit importation plans for drugs from Canada. Further, in November 2020, CMS issued an Interim Final Rule implementing the Most Favored Nation Model under which Medicare Part B reimbursement rates will be calculated for certain drugs and biologicals based on the lowest price drug manufacturers receive in Organization for Economic Cooperation and Development countries with a similar gross domestic product per capita. In December 2021, CMS rescinded the Most Favored Nation rule. Further, authorities in Canada have passed rules designed to safeguard the Canadian drug supply from shortages. If implemented, importation of drugs from Canada may materially and adversely affect the price we receive for any of our therapeutic candidates. Additionally, in December 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. In December 2020, HHS published a regulation removing safe harbor protection for price reductions from pharmaceutical manufacturers to plan sponsors under Part D, either directly or through pharmacy benefit managers, unless the price reduction is required by law. The rule also creates a new safe harbor for price reductions reflected at the point-of-sale, as well as a safe harbor for certain fixed fee arrangements between pharmacy benefit managers and manufacturers. Pursuant to court order, the removal and addition of the aforementioned safe harbors were delayed and recent legislation imposed a moratorium on implementation of the rule until January 2026. The Inflation Reduction Act of 2022, or the IRA, further delayed implementation of this rule to January 2032.

In August 2022, the IRA was signed into law. The IRA includes several provisions that will impact our business to varying degrees, including provisions that create a $2,000 out-of-pocket cap for Medicare Part D beneficiaries, impose new manufacturer financial liability on all drugs in Medicare Part D, allow the U.S. government to negotiate Medicare Part B and Part D pricing for certain high-cost drugs and biologics without generic or biosimilar competition, require companies to pay rebates to Medicare for drug prices that increase faster than inflation, and delay the rebate rule that would require pass through of pharmacy benefit manager rebates to beneficiaries. The effect of IRA on our business and the healthcare industry in general is not yet known.

Although a number of these and other proposed measures may require authorization through additional legislation to become effective, and the Executive branch may reverse or otherwise change these measures, both the current administration and Congress have indicated that they will continue to seek new legislative measures to control drug costs. Individual states in the United States have also become increasingly active in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

Additional Regulation

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

Europe/Rest of World Government Regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our therapeutics. Whether or not we obtain FDA approval of a therapeutic, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the therapeutic in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. In the EU, for example, a clinical trial application must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the clinical trial application is approved in accordance with a country's requirements, clinical trial development may proceed. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under EU regulatory systems, we must submit a Market Authorization Application. The application used to file the BLA in the United States is similar to that required in the EU, with the exception of, among other things, country-specific document requirements.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials must be conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of therapeutics, operating restrictions and criminal prosecution.

Employees and Human Capital Resources

As of December 31, 2024, we had 123 full-time employees and 16 non-employee leased workers. Of these employees, 19 held Ph.D. and/or M.D. degrees, 25 were engaged in research and development and 60 were engaged in technical operations. Substantially all of our employees are located in Florham Park, New Jersey. Our employees are not represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good. In January 2023, we announced reprioritization of efforts, which resulted in a reduction of approximately 70 full-time employees and 20 non-employee leased workers in March 2023.

Our human capital resources objectives include, as applicable, identifying, recruiting, retaining, incentivizing, and integrating our existing and additional employees. The principal purposes of our incentive plans are to attract, retain and motivate selected employees, consultants, and directors through the granting of stock-based compensation awards and when available, cash-based performance bonus awards.

Legal Proceedings

From time to time, we may become involved in litigation or other legal proceedings. Except as set forth below, we are not currently a party to any litigation or legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact because of defense and settlement costs, diversion of management resources and other factors.

Arbitration Demand from Palantir Technologies Inc.

On April 20, 2023, Palantir Technologies Inc., or Palantir, commenced an arbitration with JAMS Arbitration, or JAMS, asserting claims for declaratory relief and breach of contract relating to the May 5, 2021 Master Subscription Agreement, or Palantir MSA, seeking damages in an amount equal to the full value of the contract. We have responded to the arbitration demand and asserted counterclaims for breach of contract, breach of warranty, fraudulent inducement, violation of California's Unfair Competition Law, amongst others, in relation to the Palantir MSA. On December 21, 2023, we entered into a settlement and release agreement as amended pursuant to the JAMS arbitration proceeding asserting claims for declaratory relief and breach of contract relating to the Palantir MSA. Both parties agreed to dismiss the arbitration proceeding and dispute and provide for mutual releases upon satisfaction of a settlement payment obligation. Through June 3, 2024, we made total settlement payments of $3.5 million and issued Palantir an aggregate of 60,584 shares of our Class A common stock as consideration for further amendments to the settlement and release agreement, and on June 4, 2024, the parties dismissed all claims and counterclaims. The Palantir MSA has fully terminated and neither party has any further rights or obligations thereunder. The shares of our Class A common stock issued to Palantir were issued with piggyback registration rights. Resale of such shares by Palantir shall be included on any future registration statement we file.

Celularity Inc. v. Evolution Biologyx, LLC, et al.

On April 17, 2023, we filed a complaint against Evolution Biologyx, LLC, Saleem S. Saab, individually, and Encyte, LLC, (collectively, "Evolution"), in the U.S. District Court for the District of New Jersey to recover unpaid invoice amounts for the sale of our biomaterial products in the amount of approximately $2.35 million, plus interest. In September 2021, we executed a distribution agreement with Evolution, whereupon Evolution purchased biomaterial products from us for sale through Evolution's distribution channels. We fulfilled Evolution's orders and otherwise performed each of our obligations under the distribution agreement. Despite attempts to recover the outstanding invoices and Evolution's promise to pay, Evolution has refused to pay any of the invoices and has materially breached its obligations under the distribution agreement. Our complaint asserts claims of breach of contract, amongst others. On April 4, 2024, Evolution filed a counter claim alleging damages in an amount to be determined resulting from alleged breach of contract, breach of warranty, quasi contract and fraud. We believe Evolution's counter claims are without any merit, and we intend to vigorously pursue the matter to recover the outstanding payments owed by Evolution, including interest and associated attorney's fees, as well as defend against Evolution's counterclaims.

Civil Investigative Demand

We received a Civil Investigative Demand, or Demand, under the False Claims Act, 31 U.S.C. § 3729, dated August 14, 2022, from the U.S. Attorney's Office for the Eastern District of Pennsylvania. The Demand requests documents and information relating to claims submitted to Medicare, Medicaid, or other federal insurers for services or procedures involving injectable human tissue therapy products derived from amniotic fluid or birth tissue and includes Interfyl. We are cooperating with the request and are engaged in an ongoing dialogue with the Assistant U.S. Attorneys handling the Demand. The matter is still in preliminary stages and there is uncertainty as to whether the Demand will result in any liability.

TargetCW v. Celularity Inc.

On March 27, 2024, WMBE Payrolling, Inc., dba TCWGlobal, filed a complaint in the United States District Court for the Southern District of California alleging a breach of contract and account stated claims relating to a Master Services Agreement dated May 4, 2020, or the TCWGlobal MSA, for the provision of certain leased workers to perform services on our behalf. The complaint alleges that we breached the TCWGlobal MSA by failing to make payments on certain invoices for the services of the leased workers. On May 7, 2024, we entered into a settlement agreement and mutual release with TCWGlobal pursuant to which we agreed to pay $516,127.31 in tiered monthly installments, with the last payment due and payable on May 1, 2025, in exchange for a dismissal of the complaint and full release of all claims.

Corporate Information

Celularity Inc., formerly known as GX Acquisition Corp. ("GX"), was a blank check company incorporated in Delaware on August 24, 2018. The Company was formed for the purpose of effectuating a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or other similar business combination with one or more businesses. On July 16, 2021 (the "Closing Date"), the Company consummated the previously announced merger pursuant to the Merger Agreement and Plan of Reorganization, dated January 8, 2021 (the "Merger Agreement"), by and among GX, Alpha First Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of GX ("First Merger Sub"), Celularity LLC (f/k/a Alpha Second Merger Sub LLC), a Delaware limited liability company and a direct, wholly owned subsidiary of GX ("Second Merger Sub"), and the entity formerly known as Celularity Inc., incorporated under the laws of the state of Delaware on August 29, 2016 ("Legacy Celularity"). Upon completion of the merger transaction, GX changed its name to Celularity Inc.

Our principal executive offices are located at 170 Park Avenue, Florham Park, New Jersey 07932, and our telephone number is (908) 768-2170. We maintain a website at *https://celularity.com/* where general information about us is available. The information contained on our website is not incorporated by reference into this prospectus, and you should not consider any information contained on, or that can be accessed through, our website as part of this prospectus or in deciding whether to purchase our securities.

Available Information

We post our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, free of charge, on the Investors section of our public website (www.celularity.com) as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. In addition, you can read our SEC filings over the Internet at the SEC's website at www.sec.gov. The contents of these websites are not incorporated into this annual report on Form 10-K. Further, our references to the URLs for these websites are intended to be inactive textual references only.

MANAGEMENT

The following table sets forth the name, age and position of each of our executive officers, key employees and directors as of January 24, 2025.

Name	Age	Position(s)
Executive Officers		
Robert J. Hariri, M.D., Ph.D.(1)	65	Chief Executive Officer and Chairman of the Board of Directors
David C. Beers	55	Chief Financial Officer
Stephen A. Brigido, DPM	48	President, Degenerative Disease
John R. Haines	67	Senior Executive Vice President, Chief Administrative Officer and Corporate Secretary
Non-Employee Directors		
Richard J. Berman(3)	82	Director
Peter Diamandis, M.D.(2)	63	Director
Dean C. Kehler(3)	68	Director
Geoffrey Ling, M.D.(2)	68	Director
Diane Parks(2)	72	Director

(1) Class III director whose terms will expire at the annual meeting of stockholders to be held in 2027.

(2) Class I director whose terms will expire at the annual meeting of stockholders to be held in 2025.

(3) Class II director whose terms will expire at the annual meeting of stockholders to be held in 2026.

Robert J. Hariri, M.D., Ph.D. is the founder of Legacy Celularity and has served as our Chief Executive Officer and Chairman of our board of directors since the July 2021 business combination, served as President since the business combination through September 2021 and was Legacy Celularity's founder before the business combination and has previously served as its President and Chief Executive Officer and as Chairman of its board of directors from 2016. Dr. Hariri has also served as a director at Cryoport from September 2015 and Biovie from June 2020. Prior to joining Legacy Celularity, Dr. Hariri founded and served as Chief Executive Officer of Anthrogenesis Corporation, and after its acquisition by Celgene, Dr. Hariri served as Chief Executive Officer of Celgene Cellular Therapeutics from 2005 to 2013. Dr. Hariri also co-founded the genomic-based health intelligence company, Human Longevity, Inc. and longevity-focused Fountainlife. Dr. Hariri is also an Adjunct Professor of Neurosurgery and a member of the Board of Fellows at the Weill-Cornell University Medical College. He is a member of the X PRIZE Foundation scientific advisory board for the Archon X PRIZE for Genomics. Dr. Hariri served as a trustee and vice-chair of the Liberty Science Center. Dr. Hariri has served as a member of the board of directors of various companies, including Myos Corporation from July 2011 to November 2020, where he served as Chairman of the board from April 2012 to November 2020, Bionik Laboratories Corp. from March 2015 to October 2017. Dr. Hariri obtained an A.B. in Biological Anthropology from Columbia University School of Engineering and Applied Sciences and Columbia College and an M.D. and Ph.D. from Cornell University. Our board of directors believes that Dr. Hariri's history in building companies in biotechnology, medical devices and therapeutics, as well as his expertise and experience in life sciences, including his work in immune-oncology and cell therapeutics and his educational background, provide him with the qualifications and skills to serve on our board of directors.

David C. Beers. Mr. Beers has served as our Chief Financial Officer since the July 2021 business combination and before that served as Legacy Celularity's Chief Financial Officer since January 2020. Mr. Beers previously served as a portfolio manager at Goldman Sachs Asset Management or GSAM from 2010 to March 2019, where he managed the Goldman Sachs Income Builder portfolio and the Real Estate Balanced portfolio as a member of the GSAM high yield team. Previously, Mr. Beers served as a technology and media analyst with T. Rowe Price from 2004 to 2010 and with Morgan Stanley Investment Management from 1996 to 2002. Mr. Beers obtained an AB from Princeton University in 1992 and an MBA from The Wharton School of Business at The University of Pennsylvania in 2004.

Stephen A. Brigido, DPM. Dr. Brigido has served as our President, Degenerative Disease since the July 2021 business combination and before that, served as Legacy Celularity's President, Degenerative Disease and Biobanking since September 2019. Prior to joining Legacy Celularity, Dr. Brigido served as Managing Partner at Venel Holdings from November 2010 to present, and at BBHP Medical LLC from October 2016 to present. Before his tenure at BBHP Medical LLC, Dr. Brigido served as President and Chief Medical Officer at Edge Orthopaedics, LLC from April 2012 to July 2016. While at Edge Orthopaedics, Dr. Brigido was responsible for the development and commercial release of over 30 FDA approved products in foot and ankle surgery. In 2016, he facilitated a sale of that company to Orthofix SRL in Verona, Italy. Dr. Brigido is a founding partner of Plazmology 4, Inc., and has served on its board of directors since 2012. From

2005-2019 Dr. Brigido was the Section Chief of Foot and Ankle Reconstruction at Coordinated Health; and was Director of the Reconstructive Foot and Ankle Fellowship from 2010-2019. In addition to his duties as a surgeon, Dr. Brigido served on the Board of Directors of Coordinated Health Holding Company from 2008-2019. Dr. Brigido has published over 120 peer reviewed papers in regenerative medicine and orthopedics; and has written numerous book chapters. Dr. Brigido is a Professor of Surgery at The Commonwealth Medical College in Scranton, PA, and has numerous patents involving biomaterials and orthopedic hardware. Dr. Brigido obtained a Bachelor of Science from Randolph-Macron College and a Medical Degree from Temple University.

John R. Haines. Mr. Haines has served as our Senior Executive Vice President and Chief Administrative Officer since October 2022 and our Corporate Secretary since 2018. He served as our Executive Vice President and Chief Operating Officer since the July 2021 business combination. Prior thereto, he served as Legacy Celularity's Chief Operating Officer since October 2020, and as its Chief Administrative Officer since September 2017. Prior to joining Legacy Celularity, from 2013 to 2017, Mr. Haines served as President and Chief Executive Officer at Andiscern Corporation, a private company he cofounded to develop particle accelerator-based technology to detect fissile material used to make nuclear weapons. Prior to his tenure at Andiscern, from 2009 to 2013, Mr. Haines served as President and Chief Executive Officer at Ionetix Corporation, a private company he cofounded in 2009 to commercialize superconducting cyclotron technology developed at the MIT Plasma Fusion Laboratory. Mr. Haines served as President and Chief Operating Officer of Anthrogenesis Corporation from July 1999 through December 2002, when it was acquired by Celgene Corporation and renamed Celgene Cellular Therapeutics. Mr. Haines obtained a Bachelor of Arts in Economics from Villanova University, a Master of Science from the University of Pennsylvania, a Master of Bioethics from the University of Pennsylvania Graduate School of Medicine, a Master of Arts from King's College London, and a postgraduate diploma from Stanford University.

Richard J. Berman has served as member of our board of directors since 2024. Mr. Berman's business career spans over 40 years of venture capital, senior management and merger & acquisitions experience. Mr. Berman has served as a director and/or officer of over a dozen public and private companies. From 2006 to 2011, he was Chair of National Investment Managers, a company with $12 billion in pension administration assets. Mr. Berman is currently a director of six publicly traded companies: Cryoport, Inc., Comsovereign Holding Corp., BioVie, Inc., Context Therapeutics Inc. (where he is Chair), Genius Group Limited and Sidus Space Corp. Mr. Berman also served as a director of Cuentas, Inc. from 2018 through 2022. Over the last decade he has served on the board of six companies that have reached over $1 billion in market capitalization – Cryoport, Advaxis, EXIDE, Internet Commerce Corporation, Strategic Funding Source, Inc. (Kapitus) and Ontrak (Catasys). Previously, Mr. Berman worked at Goldman Sachs; was Senior Vice President of Bankers Trust Company, where he started the M&A and Leveraged Buyout Departments; created the largest battery company in the world in the 1980's by merging Prestolite, General Battery and Exide to form Exide Technologies (XIDE); helped to create what is now Soho (NYC) by developing five buildings; and advised on over $4 billion of M&A transactions. He is a past Director of the Stern School of Business of NYU where he obtained his BS and MBA. He also has U.S. and foreign law degrees from Boston College and The Hague Academy of International Law, respectively. Our board of directors believes Mr. Berman is well qualified to serve on our board of directors due to his extensive biotechnology, international management and banking experience.

Peter H. Diamandis, M.D. has served as a member of our board of directors since the July 2021 business combination. Dr. Diamandis was a co-founder of Legacy Celularity and served as Vice Chairman of its board of directors from 2016. Dr. Diamandis is also the Founder and Executive Chairman of the XPRIZE Foundation, a non-profit foundation that has designed and operated large-scale incentive competitions and the Executive Founder of Singularity University, a graduate-level Silicon Valley institution founded in 2008 that counsels the world's leaders on exponentially growing technologies. Dr. Diamandis is the Vice Chairman and co-Founder of Human Longevity, Inc., a company focused on extending the human lifespan. Dr. Diamandis currently serves on the boards of Vaxxinity and DPCM Capital, and SWAG III (Nasdaq: SWAG). Dr. Diamandis obtained degrees in Molecular Engineering and Aerospace Engineering from MIT and an M.D. from Harvard Medical School. Our board of directors believes he is well qualified to serve on the board due to his extensive operational and management experience in the technology industry.

Dean C. Kehler has served as a member of our board of directors since inception. Mr. Kehler is also a Managing Partner of Trimaran, which he co-founded in 1998, serves as a Manager of Trimaran Fund II, and serves as Co-Chairman and Chief Executive Officer and a director of GX Acquisition Corp. II (Nasdaq: GXII). Mr. Kehler has been a director of NioCorp Developments Ltd. (Nasdaq: NB) since March 2023. He served as a director of El Pollo Loco Holdings, Inc. (restaurants; Nasdaq: LOCO) from November 2005 to March 2023. Prior to Trimaran, Mr. Kehler was a Managing Director and Vice Chairman of CIBC, where he was responsible for CIBC's United States and European Merchant Banking activities, which were conducted through the CIBC Funds. In addition, Mr. Kehler was responsible for overseeing CIBC's United States and European Leveraged Finance businesses, which included financial sponsor coverage; acquisition finance; high yield origination, underwriting, sales and trading; private placements; and financial restructuring advisory services. Prior to CIBC, Mr. Kehler was a co-founder of Argosy. Prior to Argosy, Mr. Kehler was a Managing Director of Drexel Burnham Lambert Inc., and before that he was an investment banker at Lehman Brothers. Mr. Kehler serves on the Boards of Directors of Portman Ridge Finance Corporation. (investment company; Nasdaq: PTMN) and Security First Corp. (cyber security and data management software), of which he is Vice Chairman. He also serves as a Member of the Board of Overseers of the University of Pennsylvania School of Nursing, and formerly served as its Chairman. Within the last five years, he has served a director of Inviva Inc. (insurance), and Graphene Frontiers, LLC (graphene). Mr. Kehler previously served as a director of Ashley Stewart Holdings, Inc. (retail); Continental Airlines Inc. (airlines; NYSE: CAL); Global Crossing Ltd. (telecommunications; NYSE: GX); Hills Department Stores, Inc. (retail; NYSE: HDS); TeleBanc Financial Corp. (Internet banking; Nasdaq: TBFC); Booth Creek Ski Group, Inc. (real estate; leisure); CB Holding Corp. (restaurants); CNC Holding Corp. (retail); Heating Oil Partners, L.P. (energy); Jefferson National Financial Corporation (annuities); PrimeCo Wireless Communications, LLC (communications); Source Financing Corp. (retail); TLC Beatrice International Inc. (consumer products); and Urban Brands, Inc. (retail). In addition, Mr. Kehler previously served as a board observer of ITC Holdings, Inc. (electric transmission). Mr. Kehler previously served as a Director, Treasurer and Chair of the Finance Committee of CARE USA, one of the world's largest private humanitarian organizations. Mr. Kehler graduated from the Wharton School of the University of Pennsylvania. Our board of directors believes Mr. Kehler is well qualified to serve on our board of directors due to his extensive financial, investment, operation and private and public company experience.

Geoffrey Ling, M.D. has served as a member of our board of directors since September 2023. Mr. Ling co-founded On Demand Pharmaceuticals, a private technology company developing advanced, miniaturized, and automated pharmaceutical manufacturing systems that create from precursors to final formulated drugs. He also serves as a Professor of Neurology and an Attending Neurocritical Care physician at Johns Hopkins University and Hospital and the Uniformed Services University of the Health Science (USUHS).Dr. Ling previously served as the Founding Director of the Biological Technologies Office at the Defense Advanced Research Projects Agency (DARPA) and as Assistant Director for Medical Innovation of the Science Division in President Obama's White House Office of Science and Technology Policy (OSTP).He is a retired U.S. Army colonel who served for 27 years and was deployed to Iraq and Afghanistan. Dr. Ling obtained his medical degree from Georgetown University and his doctorate in Pharmacology is from Cornell University. He was a postdoctoral research fellow at Memorial Sloan Kettering Cancer Center, completed his neurology residency at Walter Reed Army Medical Center, and his Neuro Critical Care fellowship at Johns Hopkins. Dr. Ling has published over two hundred peer-reviewed articles, book chapters and reviews.He is a member of the honor societies of Alpha Omega Alpha, Sigma Xi, and the Military Medical Order of Merit. He is a fellow of the American Neurological Association, American Academy of Neurology and Neurocritical Care Society. Dr. Ling is a member of the Society for Critical Care Medicine, the American Society of Pharmacology and Experimental Therapeutics, and AMSUS (the Association of Military Surgeons of the United States). Our board of directors believes he is well qualified to serve on the board due to his extensive background in medicine and operational and management experience.

Diane Parks, has served as a member of our board of directors since June 2022. From February 2016 to July 2018, Ms. Parks served as Senior Vice President, Head of U.S. Commercial for Kite Pharma, Inc., a publicly-held biopharmaceutical company, which was acquired by Gilead, where she developed and executed the strategic plan for the commercial launch of Yescarta®, the first CAR-T therapy approved for large B-cell lymphoma. From October 2014 to October 2015, Ms. Parks served as Vice President, Head of Global Marketing for Pharmacyclics, Inc., a publicly-held biopharmaceutical company, which was acquired by AbbVie, Inc., where she was responsible for the marketing strategy and launch of Imbruvica®. From 2007 to 2014, she served as Vice President, Sales for Amgen, a publicly-held biotechnology company, where she successfully led the hospital and nephrology sales teams. From 1999 to 2002, she served as Senior Vice President, Specialty Biotherapeutics and Managed Care for Genentech, Inc., a publicly-held biotechnology company, which was acquired by F. Hoffmann-La Roche AG. She currently serves on the boards of Calliditas Therapeutics AB, a publicly-held biopharmaceutical company, CTI BioPharma Corp., as publicly-held biopharmaceutical company, Kura Oncology, Inc., a publicly-held biopharmaceutical company, Soligenix, Inc., a publicly-held biopharmaceutical company, TriSalus Life Sciences (formerly Surefire Medical, Inc.), a privately-held medical device company and the Lymphoma Research Foundation. Ms. Parks earned an M.B.A. from Georgia State University and a B.S. from Kansas State University. Our board of directors believes she is well qualified to serve on the board due to her extensive experience as a member of senior management and boards of directors of multiple biopharmaceutical companies as well as her expertise in leading the overall strategy, organization and operations for oncology product commercial launches.

Family Relationships

There are no family relationships between or among any of our directors or executive officers.

Director Independence

Applicable Nasdaq Stock Market LLC rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act and that compensation committee members satisfy independence criteria set forth in Rule 10C-1 under the Exchange Act. Under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries. In addition, in affirmatively determining the independence of any director who will serve on a company's compensation committee, Rule 10C-1 under the Exchange Act requires that a company's board of directors must consider all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including: the source of compensation to the director, including any consulting, advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our board of directors has determined that all members of the board of directors, except Dr. Hariri, are independent directors, including for purposes of the rules of Nasdaq and the SEC. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. There are no family relationships among any of our directors or executive officers. Dr. Hariri is not an independent director under these rules because he is one of our executive officers.

Information Regarding Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee and may form other committees from time to time. Each of the audit committee, compensation committee, and nominating and corporate governance committee operates under a charter that satisfies the applicable standards of the SEC and Nasdaq. Each such committee reviews its respective charter at least annually. A current copy of the charter for each of the audit committee, compensation committee, and nominating and corporate governance committee is posted on the corporate governance section of our website, *https://celularity.com/corporate-governance.*

The following table provides membership and meeting information for each standing committee of the board of directors:

Name	Audit	Compensation	Nominating
Robert J. Hariri, M.D., Ph.D.			
Richard J. Berman	X	X	
Peter Diamandis, M.D.		X	X
Dean C. Kehler	X		X
Geoffrey Ling, M.D.			X
Diane Parks	X	X	

Audit Committee

Our audit committee currently consists of Richard Berman, Dean C. Kehler and Diane Parks. Richard J. Berman serves as the chair of the audit committee. Each of the members of the audit committee satisfy the independence requirements of Nasdaq and Rule 10A-3 under the Exchange Act. Each member of the audit committee can read and understand fundamental financial statements in accordance with Nasdaq audit committee requirements.

The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- monitoring the rotation of partners of our independent auditors on our engagement team as required by law;
- prior to engagement of any independent auditor, and at least annually thereafter, reviewing relationships that may reasonably be thought to bear on their independence, and assessing and otherwise taking the appropriate action to oversee the independence of our independent auditor;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," and discussing the statements and reports with our independent auditors and management;
- reviewing, with our independent auditors and management, significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls;
- reviewing with management and our independent auditors any earnings announcements and other public announcements regarding material developments;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting or auditing matters and other matters;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and providing oversight of any related-person transactions in accordance with our related person transaction policy and reviewing and monitoring compliance with legal and regulatory responsibilities, including our code of business conduct and ethics;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management are implemented;
- reviewing on a periodic basis our investment policy;
- reviewing and evaluating on an annual basis the performance of the audit committee and the audit committee charter; and
- providing oversight of the Company's cybersecurity and data privacy programs, including reviewing cybersecurity risk exposures, policies, and procedures to address potential threats, and ensuring the adequacy and effectiveness of controls to protect sensitive Company and customer data.

Richard J. Berman qualifies as an audit committee financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of the Nasdaq Listing Rules. Our independent registered public accounting firm and the management periodically meet privately with the audit committee.

The composition and functioning of the audit committee complies with all applicable requirements of the Sarbanes-Oxley Act and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee

The compensation committee currently consists of Richard J. Berman, Peter Diamandis, M.D. and Diane Parks. Diane Parks serves as the chair of the compensation committee. Each of members of our compensation committee is a non-employee director as defined in Rule 16b-3 promulgated under the Exchange Act and satisfies the Nasdaq Stock Market independence requirements. The functions of this committee include, among other things:

- reviewing, modifying and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) our overall compensation strategy and policies;
- reviewing and making recommendations to the full board of directors regarding the compensation and other terms of employment of our executive officers;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) performance goals and objectives relevant to the compensation of our executive officers and assessing their performance against these goals and objectives;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) the equity incentive plans, compensation plans and similar programs advisable for us, as well as modifying, amending or terminating existing plans and programs;
- evaluating risks associated with our compensation policies and practices and assessing whether risks arising from our compensation policies and practices for our employees are reasonably likely to have a material adverse effect on us;
- reviewing and making recommendations to the full board of directors regarding the type and amount of compensation to be paid or awarded to our non-employee board members;
- establishing policies with respect to votes by our stockholders to approve executive compensation as required by Section 14A of the Exchange Act and determining our recommendations regarding the frequency of advisory votes on executive compensation, to the extent required by law;
- reviewing and assessing the independence of compensation consultants, legal counsel and other advisors as required by Section 10C of the Exchange Act;
- administering our equity incentive plans;
- establishing policies with respect to equity compensation arrangements;
- reviewing the competitiveness of our executive compensation programs and evaluating the effectiveness of our compensation policy and strategy in achieving expected benefits to us;
- reviewing and making recommendations to the full board of directors regarding the terms of any employment agreements, severance arrangements, change in control protections and any other compensatory arrangements for our executive officers;
- reviewing with management and approving our disclosures under the caption "Compensation Discussion and Analysis" in our periodic reports or proxy statements to be filed with the SEC, to the extent such caption is included in any such report or proxy statement;

- preparing the report that the SEC requires in our annual proxy statement; and
- reviewing and assessing on an annual basis the performance of the compensation committee and the compensation committee charter.

The composition and functioning of the compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee currently consists Dean C. Kehler, Peter Diamandis, M.D., and Geoffrey Ling, M.D. Mr. Kehler serves as the chair of the nominating and corporate governance committee. Each of the members of this committee satisfy the Nasdaq Stock Market independence requirements. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on the board of directors consistent with criteria approved by the board of directors;
- determining the minimum qualifications for service on the board of directors;
- evaluating director performance on the board of directors and applicable committees of the board of directors and determining whether continued service on the board of directors is appropriate;
- evaluating, nominating and recommending individuals for membership on the board of directors;

- evaluating nominations by stockholders of candidates for election to the board of directors;
- considering and assessing the independence of members of the board of directors;
- developing a set of corporate governance policies and principles, including a code of business conduct and ethics, periodically reviewing and assessing these policies and principles and their application and recommending to the board of directors any changes to such policies and principles;
- considering questions of possible conflicts of interest of directors as such questions arise; and
- reviewing and assessing on an annual basis the performance of the nominating and corporate governance committee and the nominating and corporate governance committee charter.

The composition and functioning of the nominating and corporate governance committee complies with all applicable requirements of the Sarbanes-Oxley Act and all applicable SEC and Nasdaq rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Policy on Trading, Pledging and Hedging of Company Stock

Certain transactions in our securities (such as purchases and sales of publicly traded put and call options, and short sales) create a heightened compliance risk or could create the appearance of misalignment between management and stockholders. In addition, securities held in a margin account or pledged as collateral may be sold without consent if the owner fails to meet a margin call or defaults on the loan, thus creating the risk that a sale may occur at a time when an officer or director is aware of material, non-public information or otherwise is not permitted to trade in our securities. Our insider trading policy expressly prohibits short sales and derivative transactions of our stock by our executive officers, directors, employees and certain designated consultants and contractors, including short sales of our securities. Our insider trading policy expressly prohibits, without the advance approval of our audit committee, purchases or sales of puts, calls, or other derivative securities of the Company or any derivative securities that provide the economic equivalent of ownership.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the code is posted on the corporate governance section of our website, which is located at *https://celularity.com/corporate-governance/*. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Clawback Policy

Our board of directors adopted a compensation recovery policy, or the Clawback Policy, designed to comply with Rule 10D-1 of the Exchange Act and Nasdaq Listing Rule 5608, which provides for recoupment of incentive compensation in the event of an accounting restatement resulting from material noncompliance with financial reporting requirements under the relevant securities laws. The policy applies to our current and former executive officers. Erroneously Awarded Compensation (as defined in the Clawback Policy) that is granted, earned or vested maybe subject to recoupment.

Governance Principles

Our board of directors has adopted Governance Principles to assure that the board will have the necessary authority and practices in place to review and evaluate our business operations as needed and to make decisions that are independent of our management. The Governance Principles are also intended to align the interests of directors and management with those of our stockholders. The Governance Principles set forth the practices the board intends to follow with respect to, among other things, board composition and selection including diversity, board meetings and involvement of senior management, and board committees and compensation. The Governance Principles is available on our website, which is located at *https://celularity.com/corporate-governance/*.

Board Leadership Structure

Our board of directors is chaired by Dr. Hariri, the Chief Executive Officer. In such role, Dr. Hariri has the authority, among other things, to call and preside over board of directors meetings, to set meeting agendas and to determine materials to be distributed to the board of directors. The board of directors believes that combining the positions of Chief Executive Officer and Board Chair helps to ensure that the board of directors and management act with a common purpose and that separating the positions of Chief Executive Officer and Board Chair has the potential to give rise to divided leadership, which could interfere with good decision-making or weaken the ability to develop and implement strategy. Instead, the board of directors believes that combining the positions of Chief Executive Officer and Board Chair provides a single, clear chain of command to execute its strategic initiatives and business plans. In addition, the board of directors believes that a combined Chief Executive Officer/Board Chair is better positioned to act as a bridge between management and the board of directors, facilitating the regular flow of information. We also believe that it is advantageous to have a Board Chair with an extensive history with and knowledge of the Company (as is the case with our Chief Executive Officer) as compared to a relatively less informed independent Board Chair.

Role of the Board in Risk Oversight

The audit committee of the board of directors are primarily responsible for overseeing its risk management processes on behalf of the board of directors. Going forward, we expect that the audit committee will receive reports from management at least quarterly regarding its assessment of risks. In addition, the audit committee reports regularly to the board of directors, which also considers our risk profile. The audit committee and the board of directors focus on the most significant risks we face, including those related to cybersecurity, and our general risk management strategies. The audit committee is tasked with providing oversight of our cybersecurity risk management program, which includes reviewing periodic reports on cybersecurity threats, incidents, and the effectiveness of our cybersecurity controls, as well as ensuring alignment with industry standards and regulatory requirements. While the board of directors oversees its risk management, management is responsible for day-to-day risk management processes, the board of directors expects management to consider risk and risk management in each business decision, to proactively develop and monitor risk management strategies and processes for day-to-day activities, including those related to data privacy and cybersecurity, and to effectively implement risk management strategies adopted by the audit committee and the board of directors. We believe this division of responsibilities is the most effective approach for addressing the risks it faces and that the board of directors leadership structure, which also emphasizes the independence of the board of directors in its oversight of its business and affairs, supports this approach.

Scientific Advisory Board

We established a scientific advisory board. We expect to regularly seek advice and input from these experienced scientific leaders on matters related to its research and development programs. Our scientific advisory board consists of experts across a range of key disciplines relevant to our programs and science. We intend to continue to leverage the broad expertise of our advisors by seeking their counsel on important topics relating to our research and development programs. Some of the members of our scientific advisory board have entered into consulting agreements with us covering their respective confidentiality, non-disclosure and proprietary rights matters and own or have owned shares of our Class A common stock or options to purchase shares of our Class A common stock.

EXECUTIVE AND DIRECTOR COMPENSATION

The following is a discussion and analysis of compensation arrangements of our named executive officers. This discussion may contain forward-looking statements that are based on our current plans, considerations, expectations and determinations regarding future compensation programs. The actual compensation programs that we adopt may differ materially from the currently planned programs that are summarized in this discussion. As a "smaller reporting company" as defined under federal securities law, we are not required to include a Compensation Discussion and Analysis section and have elected to comply with the scaled disclosure requirements applicable to smaller reporting companies.

To achieve our goals, we have designed, and intend to modify as necessary, our compensation and benefits programs to attract, retain, incentivize and reward deeply talented and qualified executives who share our philosophy and desire to work towards achieving our goals. We believe our compensation programs should promote the success of our Company and align executive incentives with the long-term interests of our stockholders. This section provides an overview of our executive compensation programs, including a narrative description of the material factors necessary to understand the information disclosed in the summary compensation table below.

Our board of directors, with input from our Chief Executive Officer, have historically determined the compensation for our named executive officers. Our named executive officers for the year ended December 31, 2024, were Dr. Hariri, our Chief Executive Officer, Mr. Haines, our Senior Executive Vice President, Chief Administrative Officer and Corporate Secretary, and Mr. David Beers, our Chief Financial Officer.

Summary Compensation Table

The following table sets forth information concerning the compensation of our named executive officers for the years ended December 31, 2024 and 2023. We did not provide any non-qualified deferred compensation during the periods presented so we have omitted that column from the table below.

Name and Principal Position	Year	Salary ($)[1]	Bonus ($)	Stock Awards ($)[2]	Option Awards ($)[2]	Non-Equity Incentive Plan Compensation ($)	All Other Compensation ($)[3]	Total ($)
Robert J. Hariri, M.D., Ph.D.	2024	179,140			634,563		35,256	848,959
Chief Executive Officer	2023	1,200,000	—	—	—	—	34,342	1,234,342
John Haines	2024	434,375			46,658		35,973	517,006
Senior Executive Vice President, Chief Administrative Officer and Corporate Secretary	2023	500,000	—	281,200	—	—	34,615	815,815
David Beers	2024	369,219			39,660		36,162	445,041
Chief Financial Officer	2023	425,000		175,750	—	—	34,804	635,554

1. Salary amounts represent actual amounts earned during 2024 and 2023. In order to comply with the securities purchase agreement with Dragasac Limited dated January 12, 2024, effective February 16, 2024, we implemented a 15% across the board reduction in the annual base salary rate of the members of our executive leadership team for the year ended December 31, 2024, except for Dr. Hariri, who voluntarily elected to reduce his annual base salary rate for the year ended December 31, 2024 by 85%. Dr. Hariri previously agreed to defer a portion of his 2023 base salary, such that a minimum wage level of $35,568 was paid to Dr. Hariri in 2023, with the remaining salary deferred until December 31, 2023. As of December 31, 2023, $1,087,612 of Dr. Hariri's 2023 base salary was deferred. As further described in the section titled "*Agreements with Named Executive Officers and Potential Payments Upon Termination of Employment*

or Change in Control" below, Dr. Hariri subsequently agreed to waive the payment of such deferred portion. On January 1, 2025, Dr. Hariri's annual base salary increased to the rate in effect prior to the reduction, or $1,200,000, and Messrs. Haines and Beers' base salaries increased to $500,000 and $425,000, respectively.

2. Amounts reported represent the aggregate grant date fair value of equity awards granted to the named executive officers, computed in accordance with the Financial Accounting Standards Board's, or FASB's, Accounting Standards Codification, or ASC, Topic 718. Additional information regarding the assumptions made in calculating the grant date fair value of the equity awards reported in these amounts will be provided in Note 13 to the consolidated financial statements to be included in Company's Annual Report on Form 10-K for the year ended December 31, 2024. These amounts do not reflect the actual economic value that may be realized by the named executive officer, which will depend on factors including the continued service of the executive and the future value of our stock.

3. This column reflects the aggregate value of other categories of payment, consisting of (i) for Dr. Hariri, in 2024, $35,037 for health insurance coverage, $78 for life insurance coverage and $141 for disability insurance coverage; and in 2023, $34,264 for health insurance coverage and $78 for life insurance coverage; (ii) for Mr. Haines, in 2024, $35,037 for health insurance coverage, $351 for life insurance coverage and $585 for disability insurance coverage; and in 2023, $34,264 for health insurance coverage and $351 for life insurance coverage; and (iii) for Mr. Beers, in 2024, $35,037 for health insurance coverage, $540 for life insurance coverage and $585 for disability insurance coverage; and in 2023, $34,264 for health insurance coverage and $540 for life insurance coverage.

Narrative Disclosures to the Summary Compensation Table

The base salaries of our executive officers are generally established and approved by the compensation committee of our board of directors at time of such named executive officer's commencement of employment, taking into account compensation paid in the market for similar positions, the market demand for such named executive officers and the named executive officer's total compensation package. The annual base salaries of our named executive officers are generally reviewed, determined and approved by our compensation committee periodically in order to compensate our named executive officers for the satisfactory performance of duties to us. Annual base salaries are intended to provide a fixed component of compensation to our named executive officers, reflecting their skill sets, experience, roles and responsibilities.

Bonus Compensation

From time to time the board of directors or compensation committee may approve discretionary cash bonuses for our named executive officers based on individual performance, Company performance or as otherwise determined appropriate. Neither the board of directors, nor the compensation committee thereof approved any performance-based compensation for 2024 or 2023.

Equity-Based Incentive Awards

Our equity-based incentive awards are designed to align our interests and those of our stockholders with those of our employees and consultants, including our named executive officers and other executive officers. The board of directors is responsible for approving equity grants. As of the date of this prospectus, stock option awards and restricted stock unit awards ("RSUs") were the only form of equity awards we have granted to any of our executive officers.

We have historically used stock options, and more recently RSUs, as an incentive for long-term compensation to our named executive officers because these are "at risk" as the realized value is dependent upon our stock price. Stock options allow our named executive officers to realize value from this form of equity compensation only if our stock price increases relative to the stock option's exercise price, which exercise price is set at the fair market value of our Class A common stock on the applicable date of grant. RSUs provide the recipient with one share of our Class A common stock at a designated issue date following the vesting of that unit, without the payment of an exercise price or other cash consideration for the issued share. We may grant equity awards at such times as our board of directors determines appropriate. Our named executive officers generally are awarded an initial grant in the form of a stock option (and since the July 2021 business combination, RSUs) in connection with their commencement of employment. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

All stock options prior to the July 2021 business combination were granted pursuant to Legacy Celularity's Amended and Restated 2017 Equity Incentive Plan, or the 2017 Plan. We now grant equity incentive awards under our 2021 Equity Incentive Plan, or the 2021 Plan. The board of directors may authorize grants of stock options, stock appreciation rights, restricted stock, RSUs, performance awards, and other stock-based awards under the 2021 Plan. The 2021 Plan will terminate upon the expiration of a ten (10) year term, and awards issued thereunder shall expire as provided in the award agreements with respect thereto.

All stock options are granted with an exercise price per share that is no less than the fair market value of our Class A common stock on the date of grant of such award. Stock option awards generally vest over a four-year period and may be subject to acceleration of vesting and exercisability under certain termination and change in control events. RSUs generally vest over a four-year period, with 25% vesting on the one-year anniversary of the grant date, and the remainder vesting in equal annual installments thereafter so that the RSUs vest in full on the four-year anniversary of the grant date. At times, the board of directors may approve exceptions to our standard RSU vesting terms. Any unvested shares will generally be forfeited upon termination of services. The fair value of an RSU is equal to the fair market value price of our Class A common stock on the date of grant. Annual grants to our executive officers are comprised of a mix of two-thirds stock options and one-third RSUs. See "*Executive and Director Compensation — Outstanding Equity Awards at Fiscal Year-End*." All share amounts and exercise prices have been adjusted to reflect a 1-for-10 reverse stock split effected February 28, 2024.

Agreements with Named Executive Officers and Potential Payments Upon Termination of Employment or Change in Control

Each of our named executive officers has entered into an agreement setting forth the terms of their employment with us, the material terms of which are described below. For a discussion of the severance pay and other benefits to be provided in connection with a termination of employment and/or a change in control under the arrangements with our named executive officers, please see the descriptions below that summarize the potential payments provided for in their respective employment agreements.

Robert J. Hariri, M.D., Ph.D.

We entered into an employment agreement with Dr. Hariri effective upon the July 2021 closing of the business combination, setting forth the terms of Dr. Hariri's employment as our Chief Executive Officer. The employment agreement incorporates our Employee Confidential Information, Inventions, Non-Solicitation and Non-Competition Agreement, which Dr. Hariri signed in connection with the employment agreement.

Pursuant to the employment agreement, Dr. Hariri is entitled to an initial annual base salary of $1,200,000. Dr. Hariri's employment agreement also provides for an annual target bonus of up to 75% of his base salary. Receipt of an annual bonus is subject to the achievement of individual and Company-wide annual performance goals, as established by the board of directors, or a committee thereof. Dr. Hariri's employment agreement provides that he is eligible to participate in our standard benefit plans maintained for the benefit of our similarly situated employees.

Effective January 25, 2023, in order to temporarily reduce operation expenses, Dr. Hariri agreed to temporarily decrease the portion of his base salary payable to him to $35,568 per year and to defer the remaining salary until December 31, 2023. As of December 31, 2023, $1.088 million was deferred. In January 2024, the compensation committee of our board of directors approved a cash bonus program, or bonus program, effective February 16, 2024, pursuant to which Dr. Hariri will be paid the $1.088 million if we raise additional cash through offerings of equity securities with aggregate net proceeds equal or greater to $21.0 million at a valuation at least equal to the valuation, cost per security or exercise/conversion price, as applicable, of the Class A common stock and PIPE Warrant purchased by Dragasac Limited in January 2024. Accordingly, we entered into a second amendment to Dr. Hariri's employment agreement implementing the 85% base salary reduction effective as of February 16, 2024 and documenting the bonus program described above and Dr. Hariri's waiver of his right to the deferred portion of his 2023 base salary. As a result of the reduction, Dr. Hariri's annual rate of base salary for the 2024 year was $180,000. Dr. Hariri's base salary was increased to the rate in effect prior to the reduction, or $1.2 million, effective as of January 1, 2025.

Under Dr. Hariri's employment agreement, if he resigns for "good reason" or we terminate Dr. Hariri's employment without "cause" (each as defined in the employment agreement, and excluding a termination on account of Dr. Hariri's death or disability), and if such termination or resignation is not in connection with a "change in control" (as defined in the 2021 Plan), then Dr. Hariri will be eligible to receive (i) continued payment of his base salary for 24 months following the termination (less applicable tax withholdings), (ii) COBRA premium coverage for up to 18 months, (iii) a prorated portion of his target bonus for the year of termination paid in a lump sum, and (iv) 24 months' of accelerated vesting of Dr. Hariri's unvested time-based equity awards. As a condition to receiving the foregoing severance benefits, Dr. Hariri must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all Company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Dr. Hariri's employment agreement, if he resigns for "good reason" or we terminate Dr. Hariri's employment without "cause", and excluding a termination on account of Dr. Hariri's death or disability), and if such termination or resignation occurs within three months prior to or within 12 months following the effective date of a "change in control", then Dr. Hariri will be eligible to receive (i) continued payment of his base salary for 36 months following the termination (less applicable tax withholdings), (ii) COBRA premium coverage for up to 18 months, (iii) 100% of his target bonus for the calendar year of termination paid in a lump sum, and (iv) full acceleration of the vesting of Dr. Hariri's unvested equity awards. As a condition to receiving the foregoing severance benefits, Dr. Hariri must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all Company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Dr. Hariri's employment agreement, if payments and benefits payable to Dr. Hariri in connection with a change in control would be subject to the excise tax imposed by Section 4999 of the Code, then such payments and benefits shall be reduced to equal either (A) an amount determined by us in good faith to be the maximum amount that may be provided to Dr. Hariri so that the Section 4999 excise tax does not apply, or (B) the largest portion of the payments after taking into account all applicable taxes, whichever results in Dr. Hariri receiving the greater economic benefit on an after-tax basis notwithstanding that some or all of the payment or benefit may be subject to excise tax.

Under Dr. Hariri's employment agreement, if Dr. Hariri is terminated on account of his death or "disability" (as defined in the employment agreement), then Dr. Hariri (or his legal representatives, in the event of his death) will be eligible to receive a prorated bonus for the year of termination paid in a lump sum. As a condition to receiving the foregoing payment, Dr. Hariri (or his legal representatives, in the event of his death) must sign and not revoke a general release contained in a separation agreement in the form presented by us.

John Haines

We entered into an employment agreement effective upon the July 2021 closing of the business combination, setting forth the terms of Mr. Haines' employment as our Chief Operating Officer, which was amended and restated in its entirety effective as of April 1, 2022 and further amended in February 2024. Such amended and restated employment agreement, as amended, is applicable to Mr. Haines' current role as our Chief Administrative Officer. The employment agreement incorporates our Employee Confidential Information, Inventions, Non-Solicitation and Non-Competition Agreement, which Mr. Haines signed in connection with the employment agreement.

Pursuant to the employment agreement, Mr. Haines was entitled to an initial annual base salary of $445,000 (which was increased to $500,000 in October 2022 in connection with his promotion to Chief Administrative Officer). Mr. Haines'

employment agreement also provided for an initial annual target bonus of up to 40% (increased to 50% in October 2022) of his base salary. Receipt of an annual bonus is subject to the achievement of individual and Company-wide annual performance goals, as established by our board of directors or a committee thereof. Mr. Haines' employment agreement provides that he is eligible to participate in our standard benefit plans maintained for the benefit of our similarly situated employees. Effective February 16, 2024, in order to comply with the Securities Purchase Agreement dated January 12, 2024 with Dragasac Limited, we entered into an amendment to the employment agreement with Mr. Haines, whereby Mr. Haines agreed to decrease his base salary to $425,000 per year through December 31, 2024. Effective as of January 1, 2025, Mr. Haines' base salary returned to the prior annual rate of $500,000.

Under Mr. Haines' employment agreement, if he resigns for "good reason" or we terminate Mr. Haines' employment without "cause" (each as defined in the employment agreement, and excluding a termination on account of Mr. Haines' death or disability), and if such termination or resignation is not in connection with a "change in control" (as defined in the 2021 Plan), then Mr. Haines will be eligible to receive (i) continued payment of his base salary for 12 months following the termination (less applicable tax withholdings), (ii) COBRA premium coverage for up to 12 months, (iii) a prorated bonus for the year of termination paid in a lump sum, and (iv) 12 months' of accelerated vesting of Mr. Haines' unvested time-based equity awards. As a condition to receiving the foregoing severance benefits, Mr. Haines must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all Company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Mr. Haines' employment agreement, if he resigns for "good reason" or we terminate Mr. Haines' employment without "cause", and if such termination or resignation occurs within three months prior to or within 12 months following the effective date of a "change in control", then Mr. Haines will be eligible to receive (i) continued payment of his base salary for 12 months following the termination (less applicable tax withholdings), (ii) COBRA premium coverage for up to 12 months, (iii) 100% of his target bonus for the calendar year of termination paid in a lump sum, and (iv) full acceleration of the vesting of Mr. Haines' unvested equity awards. As a condition to receiving the foregoing severance benefits, Mr. Haines must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all Company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Mr. Haines' employment agreement, if payments and benefits payable to Mr. Haines in connection with a change in control would be subject to the excise tax imposed by Section 4999 of the Code, then such payments and benefits shall be reduced to equal either (A) an amount determined by us in good faith to be the maximum amount that may be provided to Mr. Haines so that the Section 4999 excise tax does not apply, or (B) the largest portion of the payments after taking into account all applicable taxes, whichever results in Mr. Haines receiving the greater economic benefit on an after-tax basis notwithstanding that some or all of the payment or benefit may be subject to excise tax.

Under Mr. Haines' employment agreement, if Mr. Haines is terminated on account of his death or "disability" (as defined in the employment agreement), then Mr. Haines (or his legal representatives, in the event of his death) will be eligible to receive his prorated target bonus for the year of termination paid in a lump sum. As a condition to receiving the foregoing payment, Mr. Haines (or his legal representatives, in the event of his death) must sign and not revoke a general release contained in a separation agreement in the form presented by us.

David C. Beers

We entered into an employment agreement effective upon the July 2021 closing of the business combination, setting forth the terms of Mr. Beers' employment as our Chief Financial Officer, which was amended and restated in its entirety effective as of April 1, 2022 and further amended in February 2024. Such amended and restated employment agreement, as amended, is applicable to Mr. Haines' current role as our Chief Financial Officer. The employment agreement incorporates Celularity's Employee Confidential Information, Inventions, Non-Solicitation and Non-Competition Agreement, which Mr. Beers signed in connection with the employment agreement.

Pursuant to the employment agreement, Mr. Beers is entitled to an initial annual base salary of $425,000. Mr. Beers' employment agreement also provides for an annual target bonus of up to 40% of his base salary. Receipt of an annual bonus is subject to achievement of individual and Company-wide annual performance goals, as established by our board of directors of committee thereof. Mr. Beers' employment agreement provides that he is eligible to participate in our standard benefit plans maintained for the benefit of our similarly-situated employees. Effective February 16, 2024, in order to comply with the Securities Purchase Agreement dated January 12, 2024 with Dragasac Limited, we entered into an amendment to the employment agreement with Mr. Beers, whereby Mr. Beers agreed to decrease his base salary to $361,250 per year through December 31, 2024. Effective as of January 1, 2025, Mr. Beers' base salary returned to the prior annual rate of $425,000.

Under Mr. Beers' employment agreement, if he resigns for "good reason" or we terminate Mr. Beers' employment without "cause" (each as defined in the employment agreement, and excluding a termination on account of Mr. Beers' death or disability), and if such termination or resignation is not in connection with a "change in control" (as defined in 2021 Plan), then Mr. Beers will be eligible to receive (i) continued payment of his base salary for nine months following the termination (less applicable tax withholdings), (ii) COBRA premium coverage for up to nine months, (iii) a prorated bonus for the year of termination paid in a lump sum, and (iv) nine months' of accelerated vesting of Mr. Beers' unvested time-based equity awards. As a condition to receiving the foregoing severance benefits, Mr. Beers must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all Company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Mr. Beers' employment agreement, if he resigns for "good reason" or we terminate Mr. Beers' employment without "cause", and if such termination or resignation occurs within three months prior to or within 12 months following the effective date of a "change in control" , then Mr. Beers will be eligible to receive (i) continued payment of his base salary for 12 months following the termination (less applicable tax withholdings), (ii) COBRA premium coverage for up to 12 months, (iii) 100% of his target bonus for the calendar year of termination paid in a lump sum, and (iv) full acceleration of the vesting of Mr. Beers' unvested equity awards. As a condition to receiving the foregoing severance benefits, Mr. Beers must sign and not revoke a general release contained in a separation agreement in the form presented by us, return all company property and confidential information in his possession, comply with his post-termination obligations, and resign from any positions held with us.

Under Mr. Beers' employment agreement, if payments and benefits payable to Mr. Beers in connection with a change in control would be subject to the excise tax imposed by Section 4999 of the Code, then such payments and benefits shall be reduced to equal either (A) an amount determined by us in good faith to be the maximum amount that may be provided to Mr. Beers so that the Section 4999 excise tax does not apply, or (B) the largest portion of the payments after taking into account all applicable taxes, whichever results in Mr. Beers receiving the greater economic benefit on an after-tax basis notwithstanding that some or all of the payment or benefit may be subject to excise tax.

Under Mr. Beers' employment agreement, if Mr. Beers is terminated on account of his death or "disability" (as defined in the employment agreement), then Mr. Beers (or his legal representatives, in the event of his death) will be eligible to receive his prorated target bonus for the year of termination paid in a lump sum. As a condition to receiving the foregoing payment, Mr. Beers (or his legal representatives, in the event of his death) must sign and not revoke a general release contained in a separation agreement in the form presented by us.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information with respect to outstanding equity awards for each of our named executive officers as of December 31, 2024. The table reflects both vested and unvested options and unvested stock awards. All share amounts have been adjusted to reflect a 1-for-10 reverse stock split effected February 28, 2024.

		Option Awards				Stock Awards	
Named Executive Officer	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#) [3]	Market Value of Shares or Units of Stock That Have Not Vested ($) [4]
Robert J. Hariri, M.D., Ph.D.	2/20/2018	23,029	—	$ 28.70	2/20/2028		
	12/3/2018	17,468	—	$ 38.80	12/3/2028		
	2/6/2020	38,430	—	$ 37.00	2/6/2030		
	4/6/2021	192,149	—	$ 102.10	4/6/2031		
	9/9/2021	249,387(1)	19,621	$ 102.30	9/9/2031		
	4/13/2022	25,652(2)	12,828	$ 101.60	4/13/2032		
	4/13/2022[3]	—	—	$ —	—	6,562	$ 13,649
	2/16/2024	293,779	—	$ 4.34	2/16/2034		
John Haines	6/2/2017	10,261	—	$ 2.80	6/2/2027		
	2/20/2018	32,711	—	$ 28.70	2/20/2028		
	12/3/2018	6,114	—	$ 38.80	12/3/2028		
	2/6/2020	6,114	—	$ 37.00	2/6/2030		
	4/6/2021	38,430	—	$ 102.10	4/6/2031		
	9/9/2021	35,623(1)	2,807	$ 102.30	9/9/2031		
	4/13/2022	12,826(2)	6,414	$ 101.60	4/13/2032		
	4/13/2022[3]	—	—	$ —	—	3,282	$ 6,827
	2/17/2023[4]	—	—	$ —	—	20,000	$ 41,600
	2/16/2024	21,601	—	$ 4.34	2/16/2034		
David Beers	5/7/2020	53,802	—	$ 37.00	5/7/2030		
	4/6/2021	7,686	—	$ 102.10	4/6/2031		
	9/9/2021	14,249(1)	1,123	$ 102.30	9/9/2031		
	4/13/2022	8,016(2)	4,009	$ 101.60	4/13/2032		
	4/13/2022[3]	—	—	$ —	—	2,051	$ 4,266
	2/17/2023[4]	—	—	$ —	—	12,500	$ 26,000
	2/16/2024	18,361	—	$ 4.34	2/16/2034		

1. 50% is fully-vested as of the grant date; 50% is subject to time-based vesting over a four-year period from July 16, 2021, with 25% of this tranche vesting on the one-year anniversary of July 16, 2021, and the remainder vesting monthly thereafter so that vested in full on the four-year anniversary of July 16, 2021.
2. 25% vest at one year after grant, and monthly thereafter for three years.
3. 25% vest at one year after grant, and the remainder vesting in equal annual installments thereafter so that vested in full on the four-year anniversary of the grant date, and subject to continuous service on each vesting date.
4. 50% vest at one year after grant, and the remainder vesting in full on the two-year anniversary of the grant date, and subject to continuous service on each vesting date.
5. Based on the $2.08 closing price of our Class A common stock on December 31, 2024, the last trading day of 2024.

Perquisites, Health, Welfare and Retirement Benefits

Our named executive officers, during their employment with us, are eligible to participate in our employee benefit plans, including our medical, dental, group term life, disability and accidental death and dismemberment insurance plans, in each case on the same basis as all of our other employees. In addition, we provide a 401(k) plan to our employees, including our named executive officers, as discussed in the section below entitled "—401(k) Plan."

We generally do not provide perquisites or personal benefits to our named executive officer, except in limited circumstances. We do, however, pay the premiums for medical, dental, group term life, disability and accidental death and dismemberment insurance for all of our employees, including our named executive officers. The board of directors may elect to adopt qualified or nonqualified benefit plans in the future if we determine that doing so is in our best interests.

401(k) Plan

We maintain a defined contribution employee retirement plan, or 401(k) plan, for our employees. Our executive officers are eligible to participate in the 401(k) plan on the same basis as our other employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(k) of the Code. The 401(k) plan provides that each participant may contribute up to the lesser of 100% of his or her compensation or the statutory limit, which is $23,000 for 2024 and $22,500 for 2023. Participants that are 50 years or older can also make "catch-up" contributions, which in calendar years 2024 and 2023 may be up to an additional $7,500 above the statutory limit. We currently make matching contributions into the 401(k) plan on behalf of participants. Participant contributions are held and invested, pursuant to the participant's instructions, by the plan's trustee. During the year ended December 31, 2022, the Company accrued approximately $1.16 million, but has not made the matching contribution to the plan.

Nonqualified Deferred Compensation

We do not maintain nonqualified defined contribution plans or other nonqualified deferred compensation plans. The board of directors may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if we determine that doing so is in our best interests.

Compensation Risk Assessment

Our board of directors is responsible for the oversight of our risk profile, including compensation-related risks. Our compensation committee monitors our compensation policies and practices as applied to our employees to ensure that these policies and practices do not encourage excessive and unnecessary risk-taking. Our management, together with the compensation committee, reviews our compensation programs, including our executive compensation program, to determine if such programs create risks that are likely to have a material adverse effect on our Company. We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. Our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

Equity Compensation Plan Information (Information as of December 31, 2024)

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options and Rights(A)	Weighted-Average Exercise Price of Outstanding Options and Rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(A))
Equity compensation plans approved by security holders.[1]	$ 4,742,857[2]	$ 27.30[3]	838, 846[4]

1. The equity compensation plans approved by stockholders consist of the 2017 Plan, the 2021 Plan and the Celularity Inc. 2021 Employee Stock Purchase Plan, or the ESPP.
2. Includes 736,332 shares subject to RSUs that will entitle the holder to one share of Class A common stock for each unit that vests over the holder's period of continuous service.
3. The calculation does not take into account the 736,332 shares of Class A common stock subject to outstanding RSUs. Such shares will be issued at the time the RSUs vest, without any cash consideration payable for those shares.
4. Consists of shares available for future issuance under the 2021 Plan and the ESPP. As of December 31, 2024, 282,221 shares of Class A common stock were available for issuance under the 2021 Plan, and 556,625 shares of Class A common stock were available for issuance under the ESPP. The 2021 Plan and ESPP each contain an "evergreen" provision, pursuant to which on January 1st of each year we automatically add 4% of our shares of Class A common stock outstanding on the preceding December 31st to the shares reserved for issuance to the 2021 Plan and lesser of (i) 1% of the total number of shares of our Class A common stock outstanding on December 31 of the preceding calendar year, and (ii) 213,922 shares (100% of the initial share reserve) to the ESPP, provided that the our board of directors may authorize a lesser number in each case. Accordingly, effective January 1, 2025, 899,499 shares were added to the 2021 Plan reserve and 213,922 shares were added to the ESPP reserve.

Director Compensation

Our non-employee director compensation policy sets forth the terms upon which non-employee directors will be compensated for their service on our board of directors. Under this policy, non-employee directors are compensated in cash for their board service and service on committees, receive equity and reimbursement for reasonable and necessary out-of-pocket expenses incurred in connection with attending board and committee meetings or performing other services in their capacities as directors. Under the terms of the policy in effect in 2022, each non-employee director received an annual cash retainer of $45,000. Members of the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee received additional annual cash retainers of $10,000, $8,000 and $5,000, respectively, while the chairs of the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee received additional annual cash retainers of $20,000, $16,000 and $10,000, respectively.

Under the terms of the policy, each non-employee member of our board of directors continuing in office automatically receives an annual equity award equal to $300,000 as of the date of grant comprised 50% of options and 50% RSUs, on the date of our annual meeting of stockholders. Each non-employee director also receives an initial equity grant equal to $300,000 of options when he or she first joins our board of directors, which options vests ratably over three years from the grant date. Accordingly, on the date of our 2024 annual stockholders meeting, each non-employee director received an equity grant valued at $300,000, or options to acquire 84,746 shares and 67,416 RSUs and, on the date of our 2023 annual stockholders meeting, each non-employee director received an equity grant valued at $300,000, or options to acquire 27,778 shares and 19,992 RSUs.

The aggregate amount of compensation, including both equity compensation and cash compensation, paid to any non-employee director in a calendar year for services as a non-employee director will not exceed $1,000,000 in the first calendar year such individual becomes a non-employee director and $750,000 in any other calendar year. Dr. Hariri does not receive additional compensation for his services as a director.

The following table provides the compensation earned by our non-employee directors in 2024:

Name	Fees Earned or Paid in Cash ($)	Stock Awards ($)[1]	Option Awards ($)[1]	All Other Compensation ($)	Total ($)
Peter H. Diamandis, M.D.	53,000	150,001	150,000	—	353,001
Richard J. Berman(2)	20,833	150,001	452,365	—	623,199
Dean C. Kehler	70,500	150,001	150,000	—	370,501
Marc Mazur(3)	41,417	—	—	—	41,417
Geoffrey Ling, M.D.(4)	48,750	150,001	150,000	—	348,751
Diane Parks	65,000	150,001	150,000	—	365,001

1. Amounts reported represent the aggregate grant date fair value of equity awards granted to the non-employee directors during 2024, computed in accordance with the FASB's ASC Topic 718. The assumptions used in calculating the grant date fair value of the stock options reported in this column are set forth in Note 11 to our unaudited condensed consolidated financial statements included in Part I, Item 1. of the 2024 quarterly reports on Form 10-Q. These amounts do not reflect the actual economic value that may be realized by the non-employee director, which will depend on factors including the continued service of the executive and the future value of our stock.
2. Mr. Berman joined our board of directors on August 27, 2024 and his compensation for 2024 has been pro-rated to reflect the date he joined.
3. Mr. Mazur resigned from our board of directors and all committees thereof, effective July 31, 2024.

The table below shows the aggregate numbers of option awards (exercisable and unexercisable) and unvested stock awards held as of December 31, 2024 by each non-employee director who was serving as a member of our board of directors as of December 31, 2024 and who is currently serving as a member of the board of directors (each as adjusted for the 1-for-10 reverse stock split effected February 28, 2024).

Name	Stock Awards	Option Awards
Richard J. Berman	67,416	202,857
Peter H. Diamandis, M.D.	67,416	416,459
Dean C. Kehler	67,416	123,544
Geoffrey Ling, M.D.	67,416	209,746
Diane Parks	67,416	122,180

Company Policies and Practices Related to the Grant of Certain Equity Awards Close in Time to the Release of Material Nonpublic Information

The Compensation Committee last granted a stock option in February 2024. The Company does not grant stock options or similar awards to Section 16 Insiders, most SVPs, and other Vice Presidents and above who directly report to the CEO in anticipation of the release of material nonpublic information that is likely to result in changes to the price of the Company's stock, such as a significant positive or negative earnings announcement, or time the public release of such information based on stock option grant dates. In addition, the Company does not grant stock options or similar awards during the four business days prior to or the one business day following the filing of our periodic reports or the filing or furnishing of a Current Report on Form 8-K that discloses material nonpublic information. These restrictions do not apply to RSUs or other types of equity awards that do not include an exercise price related to the market price of the Company's stock on the date of grant. The Company also grants stock options to eligible new hires on the first day of the month following the employee start date.

The Company's executive officers would not be permitted to choose the grant date for any stock option grants.

During fiscal 2024, none of the Company's named executive officers were awarded stock options, and the Company did not time the disclosure of material nonpublic information for the purpose of affecting the value of executive compensation.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following includes a summary of transactions since January 1, 2022 to which we have been a party, in which the amount involved in the transaction exceeded the lesser of $120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change in control and other arrangements, which are described under "Executive and Director Compensation" elsewhere in this prospectus.

Sponsor Vesting Agreement

In connection with the closing of the business combination, GX Sponsor LLC the sponsor of our Company prior to consummation of the business combination, distributed to its members 708,750 shares of Class A common stock, and 700,000 warrants.

Following the distribution, the sponsor and each member of sponsor that received such shares in the distribution entered into vesting agreements pursuant to which 25% of the shares received by each such holder became subject to a restriction on transfer, with such shares being released from this transfer restriction on the first day that the volume weighted average price of the Class A common stock on Nasdaq is at or above $120.00 for 20 trading days over a 30 consecutive trading day period. On January 12, 2024, we entered into a securities purchase agreement with an existing investor, Dragasac Limited, which triggered the release of the restriction from these shares. See Note 12, "Equity" to our consolidated financial statements included elsewhere in this prospectus for information about the January 12, 2024 security purchase agreement with Dragasac. Any such shares that do not vest by July 15, 2031 will be forfeited.

Each member of sponsor that received shares in the distribution also entered into a lock-up agreement that expired in July 2022.

Related Party Financings

Series B Preferred Stock Financing—Warrants

On March 1, 2022, in order to induce Starr International to cash exercise such warrants in full, we amended and restated the Starr Warrant to, among other things, (i) reduce the exercise price per share to $35.0 per share, subject to adjustment as set forth therein, (ii) remove the transfer restrictions set forth therein, and (iii) make other changes reflecting the Business Combination. Immediately following the amendment and restatement of the Starr Warrant, Starr International exercised such warrants in full, for cash, for approximately $23.2 million, and we issued shares of our Class A common stock in reliance on the exemption from registration provided by Section 4(a)(2) of the Securities Act to Starr International. Accordingly, the Starr Warrant is no longer issued and outstanding.

March 2023 Securities Purchase Agreement

On March 20, 2023, we entered into a securities purchase agreement with two accredited investors, including our Chairman and Chief Executive Officer, Dr. Robert Hariri, providing for the private placement of (i) 938,184 shares of our Class A common stock and (ii) accompanying warrants to purchase up to 938,184 shares of our Class A common stock, or the PIPE Warrants, for $83.43 per share and $1.25 per accompanying PIPE Warrant, for an aggregate purchase price of approximately $9.0 million (of which Dr. Hariri subscribed for $2.0 million). The closing of the private placement occurred on March 27, 2023 and was subject to the satisfaction of customary closing conditions. Each PIPE Warrant has an exercise price of $30.00 per share, is immediately exercisable, will expire on March 27, 2028 (five years from the date of issuance), and is subject to customary adjustments for certain transactions affecting our capitalization. The PIPE Warrants may not be exercised if the aggregate number of shares of Class A common stock beneficially owned by the holder thereof (together with its affiliates) would exceed the specified percentage cap provided therein (which may be adjusted upon 61 days advance notice) immediately after exercise thereof. We also entered into a registration rights agreement with the purchasers (including Dr. Hariri) whereby we agreed to register the resale of the shares of Class A common stock and the shares of Class A common stock issuable upon exercise of the PIPE Warrants, among other shares.

August 2023 Loan Agreement

On August 21, 2023, we entered into a loan agreement with our Chairman and Chief Executive Officer, Dr. Robert Hariri, and two unaffiliated lenders, providing for a loan in the aggregate principal amount of $3.0 million (of which Dr. Hariri contributed $1.0 million). This loan bears interest at a rate of 15% per year, with the first year of interest being paid in kind on the last day of each month and matures on August 21, 2024. In addition, we are required to apply the net proceeds from a subsequent transaction (as defined) in which we receive gross proceeds of $4.5 million or more to repay the loan. We did not repay the loan upon receipt of the letter of credit funds in connection with signing the lease amendment (See Note 9 to our audited consolidated financials appearing elsewhere in this prospectus). The lenders have not demanded repayment as of the issuance date. The carrying amount of this loan was deemed to approximate fair value. On October 12, 2023, in order to further address our immediate working capital requirements, we signed a promissory note with Dr. Hariri for $0.3 million, which bears interest at a rate of 15.0% per year. This promissory note matures together with the outstanding principal amount and accrued and unpaid interest upon the earlier of twelve months from the date of the note or upon a change of control. As of December 31, 2023, the aggregate carrying value of these loans inclusive of accrued interest was $3.5 million of which $1.4 million is shown as other short-term - related party due to Dr. Hariri and $2.1 million is shown as other short-term debt on the consolidated balance sheets.

Short-Term Debt – Related Parties (Senior Secured Bridge Loans)

C.V. Starr & Co., Inc

On March 17, 2023, we entered into a bridge loan agreement with C.V. Starr & Co., Inc., a beneficial owner of more than 5% of our common stock, for an aggregate principal amount of $5.0 million, net of an original issue discount of $0.1 million. The bridge loan bears interest at a rate equal to 12.0% per year or 15.0% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matures on March 17, 2025. In addition, we issued C.V. Starr a 5-year warrant to acquire up to an aggregate 75,000 shares of our Class A common stock at an exercise price of $7.10 per share. In June 2023, we granted C.V. Starr an additional warrants to acquire up to an aggregate 50,000 shares of our Class A common stock at an exercise price of $8.10 per share.

Under the terms of the Starr bridge loan, we agreed to customary negative covenants restricting our ability to repay indebtedness, pay dividends to stockholders, repay or incur other indebtedness other than as permitted, grant or suffer to exist a security interest in any of our assets, other than as permitted, or hold cash and cash equivalents less than $3.0 million for more than five consecutive business days. During the third quarter of 2023, our cash and cash equivalents fell below the $3.0 million minimum liquidity covenant, which per the terms of the loan agreement caused an event of default. Therefore, we reclassified the loan as a current liability reflected within short-term debt - related parties on the consolidated balance sheets as of December 31, 2023. In addition to negative covenants, the Starr bridge loan includes customary events of default and we granted C.V. Starr a senior security interest in all of our assets, pari passu with RWI.

On January 12, 2024, we entered into an amendment, which terminated the minimum $3.0 million liquidity covenant requirement. In addition to the negative covenants, the Starr bridge loan includes customary events of default and we granted C.V. Starr a senior security interest in all of our assets, pari passu with RWI.

On March 13, 2024, we and C.V. Starr, entered into a forbearance agreement, with respect to the Starr bridge loan. Under the forbearance agreement, (i) C.V. Starr agreed not to exercise its rights and remedies upon the occurrence of any default under the Starr bridge loan agreement until our obligations in respect of the Yorkville convertible note have been indefeasibly paid in full, (ii) C.V. Starr consented to our incurrence of indebtedness under the Yorkville convertible note, (iii) C.V. Starr consented to cash payments required to be made under the SEPA and the Yorkville convertible note, (iv) we agreed to increase the interest rate on the Starr bridge loan by 100 basis points and (v) we agreed to amend the exercise price of (x) that certain warrant to acquire 75,000 shares of our Class A common stock for $7.10 per share, expiring March 17, 2028, and (y) that certain warrant to acquire 50,000 shares of our Class A common stock for $8.10 per share expiring June 20, 2028, each of which are held by C.V. Starr, such that the exercise price of each such warrant in (x) and (y) is $5.895 per share. In addition, the interest rate of the Starr bridge loan was increased to 13% per annum.

Resorts World Inc Pte Ltd

On May 16, 2023, we entered into a senior secured bridge loan agreement with RWI providing for an initial loan in the aggregate principal amount of $6.0 million net of an original issue discount of $0.1 million, which bears interest at a rate of 12.5% per year or 15.5% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matured on June 14, 2023. On June 21, 2023, we closed on an amended and restated senior secured bridge loan agreement, which amended and restated the previous senior secured RWI bridge loan agreement, in its entirety. The amended RWI bridge loan provides for an additional loan in the aggregate principal amount of $6.0 million net of an original issue discount of $0.7 million, which bears interest at a rate of 12.5% per year or 15.5% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matures March 17, 2025. The amended RWI bridge loan extended the maturity date of the initial bridge loan to March 17, 2025. In addition, it provides for the issuance of warrants to acquire up to an aggregate of 300,000 shares of our Class A common stock, at an exercise price of $8.10 per share.

Pursuant to the terms of the amended RWI bridge loan, we were required to apply the net proceeds to the trigger payments due to Yorkville pursuant to the PPA. RWI is affiliated with Lim Kok Thay, a former member of our board of directors. In addition, we agreed to customary negative covenants restricting our ability to repay indebtedness, pay dividends to stockholders, repay or incur other indebtedness other than as permitted, grant or suffer to exist a security interest in any of our assets, other than as permitted, or hold cash and cash equivalents less than $3.0 million for more than five consecutive business days, and customary events of default. We granted RWI a senior security interest in all of our assets, pari passu with C.V. Starr pursuant to the Starr bridge loan. We also signed a forbearance agreement on September 14, 2023, whereby RWI agreed to forebear any action under the terms of the initial RWI bridge loan in relation to the minimum $3.0 million liquidity covenant and with respect to any potential default in relation to our outstanding debt owed to Yorkville until December 31, 2023. However, because we were not in compliance with the minimum liquidity covenant at December 31, 2023, we reclassified the loan as a current liability reflected within short-term debt - related parties on the consolidated balance sheets as of December 31, 2023.

On January 12, 2024, we entered into a second amended and restated senior secured loan agreement, to amend and restate the previously announced senior secured loan agreement with RWI dated as of May 16, 2023, as amended on June 20, 2023, in its entirety. The second amended bridge loan provided for an additional loan in the aggregate principal amount of $15.0 million net of an original issue discount of $3.75 million, which bears interest at a rate of 12.5% per year, with the first year of interest being paid in kind on the last day of each month, and matures July 16, 2025. In addition, the RWI second amended bridge loan provides for the issuance of a 5-year immediately exercisable warrant to acquire up to

1,650,000 shares of our Class A common stock, or the Tranche 1 warrant, and a warrant to acquire up to 1,350,000 shares of our Class A common stock, which only became exercisable upon the later of (x) stockholder approval for Nasdaq purposes of its exercise price, (y) CFIUS clearance and (z) six months from issuance date, or the Tranche 2 warrant, and will expire 5 years after it becomes exercisable (e.g., July 17, 2029). The Tranche 1 warrant and Tranche 2 warrant were each issued at closing of the loan on January 16, 2024. The Tranche 1 warrant has an exercise price of $2.4898 per share, and the Tranche 2 warrant has an exercise price equal to $2.988, which was the "Minimum Price" (as determined pursuant to Nasdaq 5635(d)) on July 15, 2024, the date it became exercisable.

Pursuant to the terms of the RWI second amended bridge loan, we were required to apply the proceeds of the additional loan (i) to the payment in full of all outstanding amounts owed to Yorkville under the PPA, (ii) to the payment of invoices of certain critical vendors, (iii) to the first settlement payment owed to Palantir, and (iv) for working capital and other purposes pre-approved by RWI. We also agreed to customary negative covenants restricting our ability to pay dividends to stockholders, repay or incur other indebtedness other than as permitted, or grant or suffer to exist a security interest in any of our assets, other than as permitted. In addition, we agreed to apply net revenues received through the sale of our products/provision of services in connection with or related to its distribution and manufacturing agreement with Genting Innovation as a prepayment towards the loan.

On March 13, 2024, we entered into a second forbearance agreement with RWI whereby (i) RWI agreed not to exercise its rights and remedies upon the occurrence of any default under the RWI loan agreement until our obligations in respect of the Yorkville convertible note have been indefeasibly paid in full or March 13, 2025, whichever occurs first, (ii) RWI consented to our incurrence of indebtedness under the Yorkville convertible note, (iii) RWI consented to cash payments required to be made under the SEPA and the Yorkville convertible note, (iv) we agreed to increase the interest rate on RWI bridge loan by 100 basis points and (v) we agreed to issue RWI a warrant to acquire up to 300,000 shares of our Class A common stock, which expires June 20, 2028 and has an exercise price of $5.895 per share.

License and Other Agreements

Celgene License, Investment Rights and Contingent Value Rights Agreements

In August 2017, in connection with the Anthrogenesis Corporation acquisition, we entered into a license agreement with Celgene and we issued shares of our Series X Preferred Stock to Celgene as merger consideration and also entered into the CVR Agreement and investment rights agreement with Celgene. Celgene is a holder of more than 5% of our capital stock.

Pursuant to the Celgene license agreement, Celgene has (i) a worldwide, royalty-free, fully-paid up, non-exclusive license, without the right to grant sublicenses (other than to its affiliates), to certain of Anthrogenesis' intellectual property for preclinical research purposes in all fields and (ii) a worldwide, royalty-free, fully-paid up, non-exclusive, sublicensable license to certain of Anthrogenesis' intellectual property to develop, manufacture, commercialize and otherwise fully exploit products and services in connection with the construction of any CAR, the modification of any T-cells or NK cells to express such a CAR, and/or the use of such CARs or T-cells or NK cells for any purpose.

In addition, under the investment rights agreement as amended in March 2021, Celgene has the right to participate in any process in connection with a sale of our Company. In addition, if at any time we cease to be subject to the reporting requirements of the Exchange Act (other than as a result of a change of control or other liquidation event), Celgene's prior information rights and board observer rights will be reinstated.

Pursuant to the CVR Agreement, Legacy Celularity issued one CVR in respect of each share of its Series X Preferred Stock issued to Celgene in connection with the Anthrogenesis acquisition. On March 4, 2021, the parties entered into Amendment No. 1 to the CVR Agreement reflecting the parties' agreement to separate the CVRs from the shares of Series X Preferred Stock. Accordingly, in light of the July 2021 consummation of the business combination, the CVRs may be sold, assigned and transferred apart from the shares of Series X Preferred Stock, which converted into Class A common stock at the closing of the business combination.

The CVR Agreement entitles the holders of the CVRs to an aggregate amount, on a per program basis, of $50 million in regulatory milestones and an aggregate $125 million in commercial milestone payments with respect to certain of our investigational therapeutic programs, which would include the current CYNK-001, CYNK-101, and PDA-002 pipeline candidates and the legacy PDA-001 program (certain placenta-derived adherent cells, proprietary to Anthrogenesis, that are formulated for intravenous delivery, with respect to PDA-001 that is no longer in development. Such payments under the CVR Agreement also expressly cover PNK-007 (which includes certain NK cells proprietary to Anthrogenesis, produced by a process proprietary to Anthrogenesis as of the closing of the Anthrogenesis transaction) and certain PNK-007 cells with a genetic modification (but not including NK cells with a chimeric receptor, including a CAR), along with any derivatives, parts, subparts, or progeny of any of the foregoing, or any therapeutic based or derived (in whole or in part) on certain related development programs as they existed as of the closing of the Anthrogenesis transaction. Accordingly, as we expand our NK cell type franchise into new indications and, as a general matter, because these payments are not payable until a later stage of development, we expect to continue to evaluate its present and future therapeutic candidates as they develop and evolve in light of the specific terms in the CVR Agreement to determine the specific products on which such amounts will be payable. In addition, with respect to each such program and calendar year, the CVR holders will be entitled to receive a royalty equal to a mid-teen percentage of the annual net sales for such program's therapeutics from the date of the first commercial sale of such program's therapeutic in a particular country until the latest to occur of the expiration of the last to expire of any valid patent claim covering such program therapeutic in such country, the expiration of marketing exclusivity with respect to such therapeutic in such country, and August 2027 (i.e., the tenth anniversary of the closing of the acquisition of Anthrogenesis).

Consulting Agreements

Effective August 31, 2022, Dr. Pecora resigned as our President, and subsequently entered into a consulting agreement dated September 21, 2022, to receive a $10,000 monthly fee for an initial six-month term, which agreement will be automatically renewed for one additional six-month term if either party does not provide notice of non-renewal. Simultaneously, we entered into a new Scientific Advisory Board Agreement, effective as of September 1, 2022, whereby Dr. Pecora agreed to serve as co-chair of our scientific and clinical advisory board for a $10,000 monthly fee and a one-time grant of RSUs having a value of $125,000 on the grant date and will vest equally over four years. The advisory board agreement has a one-year term and may be renewed for successive one-year terms upon mutual agreement of both parties. We paid Dr. Pecora total fees of $80,000 for the year ended December 31, 2022. The consulting agreement was early terminated effective January 14, 2023.

Advisory Agreement with Robin L. Smith M.D.

In August 2022, we entered into an advisory agreement with Robin L. Smith, M.D., a member of our board of directors, to receive $20,000 per month for advisory fees, an equity grant for a total amount of 105,000 stock options with the initial tranche of 25,000 stock options vesting upon execution of the advisory agreement and the remaining shares subject to vesting upon achievement of certain predefined milestones. On November 1, 2022, the second tranche of 20,000 stock options vested upon achievement of the first milestone. The agreement also provides for a one-time cash bonus of $1,500,000 upon the successful achievement of the trigger event, as defined in the agreement. We paid advisory fees of $20,000 and $80,000 for the years ended December 31, 2023 and December 31, 2022, respectively. The advisory agreement expired pursuant to the terms of the agreement on August 16, 2023 and was not renewed for an additional term.

Employment of an Immediate Family Member

Alexandra Hariri, the daughter of Robert J. Hariri, M.D., Ph.D., our Chairman and Chief Executive Officer, is employed by us as an Executive Director, Corporate Strategy & Business Development. For each of the years ended December 31, 2023 and 2022, Ms. Hariri's base salary was $265,000 and $216,300 per year, respectively. Ms. Hariri has received and continues to be eligible to receive a bonus, equity awards and benefits on the same general terms and conditions as applicable to unrelated employees in similar positions.

Employment Agreements

We entered into amended and restated employment agreements with each of our executive officers upon the closing of the July 2021 business combination, and have further amended and restated certain of these employment agreements in 2022 (and in 2024 for Dragasac). These agreements superseded the prior change in control severance agreements. See "*Executive and Director Compensation — Agreements with Named Executive Officers and Potential Payments Upon Termination of Employment or Change in Control*" for a description of the terms of the employment agreements with our named executive officers.

Stock Options and RSUs Granted to Executive Officers and Directors

We have granted stock options and RSUs to our executive officers and directors, each as more fully described in "*Executive and Director Compensation — Outstanding Equity Awards at Fiscal Year-End*" and "*Executive and Director Compensation — Agreements with Named Executive Officers and Potential Payments Upon Termination of Employment or Change in Control*" respectively.

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers in addition to the indemnification provided for in our bylaws. These agreements, among other things, require us to indemnify each director and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer.

Policies and Procedures for Transactions with Related Parties

We have adopted a written related-person transactions policy that sets forth our policies and procedures regarding the identification, review, consideration and oversight of "related-party transactions." A "related-party transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any "related party" are participants involving an amount that exceeds the lesser of $120,000 and 1% of the average of our total assets at year-end for the last two completed fiscal years. Transactions involving compensation for services provided to us as an employee, consultant or director will be considered pre-approved related-party transactions by the audit committee under this policy. A related person is any executive officer, director, nominee to become a director or a holder of more than 5% of our common stock, including any of their immediate family members and affiliates, including entities owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-party transaction, management must present information regarding the proposed related-party transaction to the audit committee (or, where review by the audit committee would be inappropriate, to another independent body of the board of directors) for review. The presentation must include a description of, among other things, all of the parties thereto, the direct and indirect interests of the related parties, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management's recommendation. To identify related-party transactions in advance, we will rely on information supplied by our executive officers, directors and certain significant stockholders. In considering related-party transactions, our audit committee or another independent body of our board of directors will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event the related party is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties.

In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding the beneficial ownership of shares of Class A common stock as of January 24, 2025 by:

- each person known by us to be the beneficial owner of more than 5% of our Class A common stock;
- each of our named executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares of Class A common stock that may be acquired by an individual or group within 60 days of January 24, 2025, pursuant to the exercise of options or warrants, vesting of Class A common stock, vesting of restricted stock units or conversion of convertible debt, are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Percentage of ownership is based on 30,329,488 shares of Class A common stock issued and outstanding as of January 24, 2025 and prior to the offering. Percentage of ownership is based on 23,807,74 shares of Class A common stock issued and outstanding after the completion of this offering, assuming the sale of 6,521,739 shares of Class A common stock.

This table is based upon information supplied by officers, directors and principal stockholders and a review of Schedules 13G or 13D filed with the SEC. Except as indicated by the footnotes below, we believe, based on information furnished to us, that each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

Name and Address of Beneficial Owner[1]	Number of Shares of Class A Common Stock Beneficially Owned	Percentage of Outstanding Shares of Class A Common Stock Beneficially Owned Prior to the Offering	Percentage of Outstanding Shares of Class A Common Stock Beneficially Owned After the Offering
5% or Greater Stockholders:			
Tan Sri Lim Kok Thay(2)	9,938,161	36.4%	29.3%
Dragasac Limited(3)	6,335,630	26.6%	20.9%
Resorts World Inc Pte Ltd (4)	3,600,000	13.1%	10.6%
Starr International Investments Ltd.(5)	1,653,139	6.9%	5.4%
Celgene Corporation(6)	1,195,327	5.0%	3.9%
Directors and Named Executive Officers:			
Robert J. Hariri, M.D., Ph.D.(7)	3,908,520	15.7%	12.5%
John R. Haines(8)	201,177	*	*
David Beers(9)	125,278	*	*
Richard J. Berman(10)	67,416	*	*
Peter Diamandis, M.D.(11)	529,836	2.2%	1.7%
Dean C. Kehler(12)	564,199	2.3%	1.8%
Geoffrey Ling, M.D. (13)	109,082	*	*
Diane Parks(14)	127,043	*	*
All Directors and Executive Officers as a Group (9 Individuals) (15)	5,715,583	22.0%	17.6%

* Less than 1%.

1. Unless otherwise noted, the business address of each of the executive officers and directors is c/o Celularity Inc., 170 Park Avenue, Florham Park, NJ 07932.
2. Consists of (i) 6,335,630 shares beneficially held by Dragasac Limited, see footnote 3, (ii) 3,600,000 shares beneficially held by Resort World Inc Pte Ltd, see footnote 4 and (iii) 2,531 shares held by Mr. Lim, a former member of our board of directors.
3. Consists of 6,335,630 shares of Class A common stock. Dragasac, which is an indirect wholly-owned subsidiary of Genting Berhad, a public company listed on the Malaysian stock exchange. Tan Sri Lim Kok Thay is an indirect beneficial owner of the largest stockholder of Genting Berhad, where he serves as Chief Executive and Chairman of the Board, and in such capacity may be deemed to beneficially own shares held by Dragasac Limited. The address for Dragasac Limited is c/o 24th Floor, Wisma Genting, 28 Jalan Sultan Ismail, 50250 Kuala Lumpur, Malaysia.

4. Consists of (i) 300,000 shares of Class A common stock issuable upon exercise of certain warrants to purchase shares of Class A common stock at an exercise price of $8.10 per share, (ii) 300,000 shares of Class A common stock issuable upon exercise of certain warrants to purchase shares of Class A common stock at an exercise price of $5.90 per share (iii) 1,650,000 shares of Class A common stock issuable upon exercise of the Tranche 1 warrant to purchase shares of Class A common stock at an exercise price of $2.49 per share and (iv) 1,350,000 shares of Class A common stock issuable upon exercise of the Tranche 2 warrant to purchase shares of Class A common stock at an exercise price of $3.08 per share. These securities are directly held by Resorts Word Inc Pte Ltd, of which Genting Berhad, a public company listed on the Malaysian stock exchange, holds 50%. Lim Kok Thay is an indirect beneficial owner of the largest stockholder of Genting Berhad, where he serves as Chief Executive and Chairman of the Board, and in such capacity may be deemed to beneficially own shares held by RWI. The address for RWI is 3, Lim Teck Kim Road, #09-02, Genting Centre, Singapore, 088934.
5. Consists of (i) 1,528,139 shares of Class A common stock and (ii) 125,000 shares of Class A common stock issuable upon exercise of certain warrants to purchase shares of Class A common stock at per share exercise prices of $5.90. The address for Starr International Investments Ltd. is Bermuda Commercial Bank Building, 19 Par-La-Ville Road, Hamilton, HM 11, BM Bermuda. Starr International Investments Ltd. is a wholly owned subsidiary of Starr International Company, Inc., a Swiss corporation, which, accordingly, may be deemed to beneficially own these securities.
6. The address for Celgene Corporation is 86 Morris Avenue, Summit, New Jersey 07901.
7. Consists of (i) 2,849,327 shares held directly by Dr. Hariri, (ii) 850,708 shares issuable to Dr. Hariri pursuant to options, and (iii) 208,485 shares issuable upon exercise of warrants.
8. Consists of (i) 15,092 shares held directly by Mr. Haines, (ii) 166,085 shares issuable to Mr. Haines pursuant to options and (iii) 20,000 restricted stock units.
9. Consists of (i) 9,432 shares held directly by Mr. Beers, (ii) 103,346 shares issuable to Mr. Beers pursuant to options and (iii) 12,500 restricted stock units.
10. Consists of 67,416 shares held directly by Mr. Berman.
11. Consists of (i) 198,123 shares held directly by Dr. Diamandis and (ii) 331,713 shares issuable to Dr. Diamandis pursuant to options and a deferred compensation award.
12. Consists of (i) 281,938 shares of common stock, (including: (a) 141,477 shares received in a pro rata distribution-in-kind from GX Sponsor, LLC, (b) 39,438 shares of common stock received in a pro rata distribution-in-kind from GX Sponsor, LLC to Elizabeth Kehler 2012 Trust, of which Dean Kehler's spouse serves as a trustee, (c) 10,000 shares retained by GX Sponsor, LLC and (d) 91,023 shares of Class A common stock held directly by Mr. Kehler), (ii) 188,000 shares issuable upon exercise of warrants received in a pro rata distribution-in-kind from GX Sponsor, LLC, (iii) 55,463 shares issuable upon exercise of warrants acquired upon completion of the July 2021 business combination as the repayment of $554,635 in promissory notes in connection with certain working capital loans, and (iv) 38,798 shares issuable pursuant to options. GX Sponsor, LLC is the record holder of the shares described in clause (iii) of the previous sentence and was the sponsor of the special purpose acquisition company with which the company combined its operations in July 2021. Cooper Road, LLC (an entity controlled by Jay R. Bloom, a former director) and Dean C. Kehler are the managing members of GX Sponsor, LLC and as such Messrs. Bloom and Kehler have voting and investment discretion with respect to the securities held of record by GX Sponsor, LLC and may be deemed to have shared beneficial ownership of the securities held directly by GX Sponsor, LLC. Each such entity or person disclaims any beneficial ownership of the reported securities other than to the extent of any pecuniary interest they may have therein, directly or indirectly.
13. Consists of 67,416 shares held directly by Dr. Ling and (ii) 41,666 shares issuable to Dr. Ling pursuant to options.
14. Consists of (i) 91,023 shares held directly by Ms. Parks and (ii) 36,020 shares issuable to Ms. Parks pursuant to options.
15. Consists of (i) 3,587,599 shares, (ii) 451,948 shares issuable upon exercise of warrants, (iii) 1,633,536 shares issuable upon exercise of options and deferred compensation awards and (iv) 42,500 restricted stock units.

DESCRIPTION OF CAPITAL STOCK AND SECURITIES WE ARE OFFERING

Authorized Capital

Our authorized share capital consists of 730,000,000 shares of Class A common stock, $0.0001 par value per share, and 10,000,000 shares of preferred stock, $0.0001 par value, all of which shares of preferred stock are undesignated. As of January 24, 2025 there were 23,807,749 shares of our Class A common stock and no shares of our preferred stock outstanding.

Class A Common Stock

Voting Rights

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of Class A common stock possess all voting power for the election of our directors and all other matters requiring stockholder action. Holders of Class A common stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of Class A common stock will be entitled to receive such dividends, if any, as may be declared from time to time by our board of directors in its discretion out of funds legally available therefor. In no event will any stock dividends or stock splits or combinations of stock be declared or made on Class A common stock unless the shares of Class A common stock at the time outstanding are treated equally and identically.

Liquidation, Dissolution and Winding Up

In the event of our voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the Class A common stock will be entitled to receive an equal amount per share of all of our assets of whatever kind available for distribution to stockholders, after the rights of the holders of the preferred stock have been satisfied.

Preemptive or Other Rights

Our stockholders have no preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to Class A common stock.

Election of Directors

Our board of directors is divided into three classes, Class I, Class II and Class III, with only one class of directors being elected in each year and each class serving a three-year term, except with respect to the election of directors at the special meeting held in connection with our initial business combination, Class I directors were elected to an initial one-year term (and three-year terms subsequently), the Class II directors were elected to an initial two-year term (and three-year terms subsequently) and the Class III directors were elected to an initial three-year term (and three-year terms subsequently). There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares voted for the election of directors can elect all of the directors.

Preferred Stock

Our certificate of incorporation provides that shares of preferred stock may be issued from time to time in one or more series. Our board of directors is authorized to fix the voting rights, if any, designations, powers and preferences, the relative, participating, optional or other special rights, and any qualifications, limitations and restrictions thereof, applicable to the shares of each series of preferred stock. The board of directors is able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of Class A common stock and could have anti-takeover effects. The ability of our board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control or the removal of existing management. There are no shares of preferred stock outstanding.

Public Warrants

Our public warrants are issued under that certain warrant agreement dated May 20, 2019, by and between us and Continental Stock Transfer & Trust Company, as warrant agent. Pursuant to the warrant agreement, each whole public warrant entitles the registered holder to purchase one-tenth of a whole share of our Class A common stock at a price of $115 per share, subject to adjustment as discussed below, at any time commencing after August 15, 2021, which is the later of (a) 30 days after the consummation of our business combination or (b) 12 months from the effective date of the registration statement relating to our initial public offering. The public warrants will expire on July 15, 2026, which is five years after completion of our initial business combination, at 5:00 p.m., New York City time, or earlier upon redemption or liquidation.

We will not be obligated to deliver any shares of Class A common stock pursuant to the exercise of a public warrant and will have no obligation to settle such warrant exercise unless a registration statement under the Securities Act with respect to the shares of Class A common stock underlying the warrants is then effective and a prospectus relating thereto is current, subject to our satisfying our obligations described below with respect to registration. No public warrant will be exercisable and we will not be obligated to issue shares of Class A common stock upon exercise of a public warrant unless Class A common stock issuable upon such warrant exercise has been registered, qualified or deemed to be exempt under the securities laws of the state of residence of the registered holder of the public warrants. In the event that the conditions in the two immediately preceding sentences are not satisfied with respect to a public warrant, the holder of such warrant will not be entitled to exercise such warrant and such warrant may have no value and expire worthless. In no event will we be required to net cash settle any public warrant.

We filed a registration statement covering the shares of Class A common stock issuable upon exercise of the public warrants, and such registration statement was declared effective on August 12, 2021. As specified in the warrant agreement, we are obligated to maintain a current prospectus relating to those shares of Class A common stock until the warrants expire or are redeemed. During any period when we will have failed to maintain an effective registration statement, warrant holders may exercise public warrants on a "cashless basis" in accordance with Section 3(a)(9) of the Securities Act or another exemption. If that exemption, or another exemption, is not available, holders will not be able to exercise their public warrants on a cashless basis.

Once the public warrants become exercisable, we may call the warrants for redemption:

- in whole and not in part;
- at a price of $0.01 per warrant;
- upon not less than 30 days' prior written notice of redemption (the "30-day redemption period") to each warrant holder; and
- if, and only if, the reported last sale price of Class A common stock equals or exceeds $180.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30-trading day period ending three business days before we send the notice of redemption to the warrant holders.

If and when the public warrants become redeemable by us, we may not exercise our redemption right if the issuance of shares of Class A common stock upon exercise of the public warrants is not exempt from registration or qualification under applicable state blue sky laws or we are unable to effect such registration or qualification.

We have established the last of the redemption criteria discussed above to prevent a redemption call unless there is at the time of the call a significant premium to the warrant exercise price. If the foregoing conditions are satisfied and we issue a notice of redemption of the public warrants, each warrant holder will be entitled to exercise its public warrants prior to the scheduled redemption date. However, the price of Class A common stock may fall below the $180.00 redemption trigger price (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) as well as the $115 warrant exercise price after the redemption notice is issued.

If we call the public warrants for redemption as described above, our management will have the option to require any holder that wishes to exercise its warrant to do so on a "cashless basis." In determining whether to require all holders to exercise their public warrants on a "cashless basis," our management will consider, among other factors, our cash position, the number of public warrants that are outstanding and the dilutive effect on our stockholders of issuing the maximum number of shares of Class A common stock issuable upon the exercise of our public warrants. If our management takes advantage of this option, all holders of public warrants would pay the exercise price by surrendering their public warrants for that number of shares of Class A common stock equal to the quotient obtained by dividing (x) the product of the number of shares of Class A common stock underlying the public warrants, multiplied by the difference between the exercise price of the public warrants and the "fair market value" (defined below) by (y) the fair market value. The "fair market value" shall mean the average last reported sale price of the Class A common stock for the 10 trading days ending on the third trading day prior to the date on which the notice of redemption is sent to the holders of warrants. If our management takes advantage of this option, the notice of redemption will contain the information necessary to calculate the number of shares of Class A common stock to be received upon exercise of the public warrants, including the "fair market value" in such case. Requiring a cashless exercise in this manner will reduce the number of shares to be issued and thereby lessen the dilutive effect of a warrant redemption. We believe this feature is an attractive option to us if we do not need the cash from the exercise of the public warrants. If we call our warrants for redemption and our management does not take advantage of this option, our former sponsor, GX Sponsor LLC, and its permitted transferees would still be entitled to exercise their private placement warrants for cash or on a cashless basis using the same formula described above that other warrant holders would have been required to use had all warrant holders been required to exercise their warrants on a cashless basis, as described in more detail below.

A holder of a public warrants may notify us in writing in the event it elects to be subject to a requirement that such holder will not have the right to exercise such public warrants, to the extent that after giving effect to such exercise, such person (together with such person's affiliates), to the warrant agent's actual knowledge, would beneficially own in excess of 4.9% or 9.8% (or such other amount as a holder may specify) of the shares of Class A common stock outstanding immediately after giving effect to such exercise.

If the number of outstanding shares of Class A common stock is increased by a stock dividend payable in shares of Class A common stock, or by a split-up of shares of Class A common stock or other similar event, then, on the effective date of such stock dividend, split-up or similar event, the number of shares of Class A common stock issuable on exercise of each public warrant will be increased in proportion to such increase in the outstanding shares of Class A common stock. A rights offering to holders of Class A common stock entitling holders to purchase shares of Class A common stock at a price less than the fair market value will be deemed a stock dividend of a number of shares of Class A common stock equal to the product of (i) the number of shares of Class A common stock actually sold in such rights offering (or issuable under any other equity securities sold in such rights offering that are convertible into or exercisable for Class A common stock) and (ii) one (1) minus the quotient of (x) the price per share of Class A common stock paid in such rights offering divided by (y) the fair market value. For these purposes (i) if the rights offering is for securities convertible into or exercisable for Class A common stock, in determining the price payable for Class A common stock, there will be taken into account any consideration received for such rights, as well as any additional amount payable upon exercise or conversion and (ii) fair market value means the volume weighted-average price of Class A common stock as reported during the ten trading day period ending on the trading day prior to the first date on which the shares of Class A common stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive such rights.

In addition, if we, at any time while the public warrants are outstanding and unexpired, pay a dividend or make a distribution in cash, securities or other assets to the holders of Class A common stock on account of such shares of Class A common stock (or other shares of our capital stock into which the public warrants are convertible), other than in certain circumstances as described in the warrant agreement, then the warrant exercise price will be decreased, effective immediately after the effective date of such event, by the amount of cash and/or the fair market value of any securities or other assets paid on each share of Class A common stock in respect of such event.

If the number of outstanding shares of our Class A common stock is decreased by a consolidation, combination, reverse stock split or reclassification of shares of Class A common stock or other similar event, then, on the effective date of such consolidation, combination, reverse stock split, reclassification or similar event, the number of shares of Class A common stock issuable on exercise of each public warrant will be decreased in proportion to such decrease in outstanding shares of Class A common stock.

Whenever the number of shares of Class A common stock purchasable upon the exercise of the public warrants is adjusted, as described above, the warrant exercise price will be adjusted by multiplying the warrant exercise price immediately prior to such adjustment by a fraction (x) the numerator of which will be the number of shares of Class A common stock purchasable upon the exercise of the public warrants immediately prior to such adjustment, and (y) the denominator of which will be the number of shares of Class A common stock so purchasable immediately thereafter.

In case of any reclassification or reorganization of the outstanding shares of Class A common stock (other than those described above or that solely affects the par value of such shares of Class A common stock), or in the case of any merger or consolidation of us with or into another corporation (other than a consolidation or merger in which we are the continuing corporation and that does not result in any reclassification or reorganization of our outstanding shares of Class A common stock), or in the case of any sale or conveyance to another corporation or entity of the assets or other property of us as an entirety or substantially as an entirety in connection with which we are dissolved, the holders of the public warrants will thereafter have the right to purchase and receive, upon the basis and upon the terms and conditions specified in the public warrants and in lieu of the shares of our Class A common stock immediately theretofore purchasable and receivable upon the exercise of the rights represented thereby, the kind and amount of shares of stock or other securities or property (including cash) receivable upon such reclassification, reorganization, merger or consolidation, or upon a dissolution following any such sale or transfer, that the holder of the public warrants would have received if such holder had exercised their public warrants immediately prior to such event. If less than 70% of the consideration receivable by the holders of Class A common stock in such a transaction is payable in the form of Class A common stock in the successor entity that is listed for trading on a national securities exchange or is quoted in an

established over-the-counter market, or is to be so listed for trading or quoted immediately following such event, and if the registered holder of the public warrant properly exercises the public warrant within 30 days following public disclosure of such transaction, the warrant exercise price will be reduced as specified in the warrant agreement based on the Black-Scholes value (as defined in the warrant agreement) of the public warrant. The purpose of such exercise price reduction is to provide additional value to holders of the public warrants when an extraordinary transaction occurs during the exercise period of the public warrants pursuant to which the holders of the public warrants otherwise do not receive the full potential value of the public warrants in order to determine and realize the option value component of the public warrant. This formula is to compensate the public warrant holder for the loss of the option value portion of the public warrant due to the requirement that the public warrant holder exercise the public warrant within 30 days of the event. The Black-Scholes model is an accepted pricing model for estimating fair market value where no quoted market price for an instrument is available.

The public warrants have been issued in registered form under the warrant agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. You should review a copy of the warrant agreement, which is filed as an exhibit to this registration statement, for a complete description of the terms and conditions applicable to the public warrants. The warrant agreement provides that the terms of the public warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective provision, but requires the approval by the holders of at least 65% of the then outstanding public warrants to make any change that adversely affects the interests of the registered holders of public warrants.

The public warrants may be exercised upon surrender of the public warrant certificate on or prior to the expiration date at the offices of the warrant agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price (or on a cashless basis, if applicable), by certified or official bank check payable to us, for the number of public warrants being exercised. The warrant holders do not have the rights or privileges of holders of Class A common stock and any voting rights until they exercise their public warrants and receive shares of Class A common stock. After the issuance of shares of Class A common stock upon exercise of the public warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

No fractional shares will be issued upon exercise of the public warrants. If, upon exercise of the public warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round down to the nearest whole number the number of shares of Class A common stock to be issued to the warrant holder.

Pre-funded Warrants

The following is a brief summary of certain terms and conditions of the Pre-funded Warrants being offered in this offering. The following description is subject in all respects to the provisions contained in the Pre-funded Warrants, a form of which is an exhibit to this Registration Statement.

Form

The Pre-funded Warrants will be issued as individual warrant agreements to the purchasers.

Term

The Pre-funded Warrants will not expire until they are fully exercised.

Exercisability

The Pre-funded Warrants are exercisable at any time until they are fully exercised. The Pre-funded Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and payment of the exercise price. No fractional shares of Class A common stock will be issued in connection with the exercise of a Pre-funded Warrant. The holder of the Pre-funded Warrant may also satisfy its obligation to pay the exercise price through a "cashless exercise," in which the holder receives the net value of the Pre-funded Warrants in shares of Class A common stock determined according to the formula set forth in the Pre-funded Warrant.

Exercise Limitations

Under the terms of the Pre-funded Warrants, we may not effect the exercise of any such warrant, and a holder will not be entitled to exercise any portion of any such warrant, if, upon giving effect to such exercise, the aggregate number of shares of Class A common stock beneficially owned by the holder (together with its affiliates, any other persons acting as a group together with the holder or any of the holder's affiliates, and any other persons whose beneficial ownership of Class A common stock would or could be aggregated with the holder's for purposes of Section 13(d) or Section 16 of the Exchange Act) would exceed 4.99% of the number of shares of Class A common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of such warrant, which percentage may be increased or decreased at the holder's election upon 61 days' notice to us subject to the terms of such warrants, *provided that* such percentage may in no event exceed 9.99%.

Exercise Price

The exercise price of our shares of Class A common stock purchasable upon the exercise of the Pre-funded Warrants is $0.001 per share. The exercise price of the Pre-funded Warrants and the number of shares of Class A common stock issuable upon exercise of the Pre-funded Warrants is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our shares of Class A common stock, as well as upon any distribution of assets, including cash, stock or other property, to our stockholders.

Transferability

Subject to applicable laws, the Pre-funded Warrants may be offered for sale, sold, transferred or assigned without our consent.

Exchange Listing

We do not intend to list the Pre-funded Warrants on The Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

Fundamental Transactions

Upon the consummation of a fundamental transaction (as described in the Pre-funded Warrants, and generally including any reorganization, recapitalization or reclassification of our Class A common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding shares of Class A common stock, or any person or group becoming the beneficial owner of 50% of the voting power of our outstanding shares of Class A common stock), the holders of the Pre-funded Warrants will be entitled to receive, upon exercise of the Pre-funded Warrants, the kind and amount of securities, cash or other property that such holders would have received had they exercised the Pre-funded Warrants immediately prior to such fundamental transaction, without regard to any limitations on exercise contained in the Pre-funded Warrants.

No Rights as a Stockholder

Except by virtue of such holder's ownership of shares of Class A common stock, the holder of a Pre-funded Warrant does not have the rights or privileges of a holder of our shares of Class A common stock, including any voting rights, until such holder exercises the Pre-funded Warrant.

Governing Law

The Pre-funded Warrants are governed by New York law.

Registration Rights

Dragasac

On January 12, 2024, we entered into an investor rights agreement with Dragasac which provides Dragasac certain information and audit rights, as well as registration rights with respect to the shares (and shares underlying the January 2024 PIPE Warrant), including both the undertaking to file a registration statement within 45 days of filing of the 2023 Form 10-K, "piggyback" registration rights, as well as the right to request up to three demand rights for underwritten offerings per year; in each case subject to customary "underwriter cutback" language as well as any objections raised by the SEC to inclusion of securities. If the initial registration statement is not filed on or prior to May 15, 2024, the investor rights agreement provides for partial liquidating damages equal to 1% of the subscription amount each month, up to a maximum of 6%, plus interest thereon accruing daily at a rate of 18% per annum. We began to accrue partial liquidating damages and interest as of May 22, 2024 which, as of January 24, 2025, is $0.6 million.

RWI

On January 12, 2024, we entered into an investor rights agreement with RWI which provides RWI certain information and audit rights, as well as registration rights with respect to the shares underlying the Tranche #1 Warrant and Tranche #2 Warrant, including both the undertaking to file a registration statement within 45 days of filing of the 2023 Form 10-K, "piggyback" registration rights, as well as the right to request up to three demand rights for underwritten offerings per year; in each case subject to customary "underwriter cutback" language as well as any objections raised by the SEC to inclusion of securities. If the initial registration statement is not filed on or prior to May 15, 2024, the investor rights agreement provides for partial liquidating damages equal to 1% of the purchase price of the Tranche #1 and Tranche #2 Warrants amount each month, up to a maximum of 6%, plus interest thereon accruing daily at a rate of 18% per annum. We began to accrue partial liquidating damages and interest as of May 22, 2024 which, as of January 24, 2025, is $0.4 million.

Yorkville

On March 13, 2024, we entered into a registration rights agreement with Yorkville, pursuant to which we agreed to file with the SEC no later than May 3, 2024, a registration statement for the resale by Yorkville of the shares of our Class A common stock issued under the SEPA (including the commitment fee shares). We agreed to use commercially reasonable efforts to have such registration statement declared effective within 45 days of such filing and to maintain the effectiveness of such registration statement during the 36-month commitment period. As of the date of this prospectus, we have not filed a registration statement with the SEC. As a result of our failure to file our Annual Report on Form 10-K for the year ended December 31, 2023, by April 30, 2024 (i.e., a deemed Event of Default under the convertible promissory note), we began accruing interest at the default rate of 18% as of May 1, 2024 which, as of January 24, 2025 is $0.1 million. A further event of default occurred as a result of our failure to file a registration statement with the SEC for the resale by Yorkville of the shares of Class A common stock issuable under the SEPA by May 3, 2024.

Palantir

In connection with a settlement and release agreement dated December 21, 2023, as amended, we issued Palantir 60,584 shares of our Class A common stock, which shares carry piggyback registration rights.

March 2023 Private Placement

In connection with our March 2023 private placement of shares of Class A common stock and PIPE Warrants, we entered into a registration rights agreement whereby we agreed to register the resale of the shares of Class A common stock and the shares of Class A common stock issuable upon exercise of the PIPE Warrants, among other shares.

Anti-Takeover Provisions

Special Meetings of Stockholders

Our bylaws provide that special meetings of our stockholders may be called only by a majority vote of the board of directors, by the Chairperson of the board of directors, or by the chief executive officer.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our bylaws provide that stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders, must provide timely notice of their intent in writing. To be timely under our current bylaws and the bylaws, a stockholder's notice will need to be received by the Company Secretary at our principal executive offices not later than the close of business on the 90th day nor earlier than the open of business on the 120th[h] day prior to the first anniversary of the preceding year's annual meeting. Pursuant to Rule 14a-8 of the Exchange Act, proposals seeking inclusion in our annual proxy statement must comply with the notice periods contained therein. Our bylaws also specify certain requirements as to the form and content of a stockholders' meeting. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

Authorized but Unissued Shares

Our authorized but unissued Class A common stock and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved Class A common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Exclusive Forum Selection

Our certificate of incorporation provides that unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (subject to certain limited exceptions) shall be the sole and exclusive forum for any of the following claims (i) any derivative claim or cause of action brought on our behalf, (ii) any claim or cause of action asserting a claim of breach of a fiduciary duty owed by any of our director, officer or other employee or our stockholders, (iii) any claim or cause of action against us, our directors, officers or employees arising pursuant to any provision of the DGCL, our certificate of incorporation or the bylaws, (iv) any claim or cause of action seeking to interpret, apply, enforce or determine the validity of the certificate of incorporation or the bylaws, (v) any claim or cause of action as to which the DGCL confers jurisdiction to the Court of Chancery of the State of Delaware; and (vi) any claim or cause of action against us or any of our current or former director, officer or other employee governed by the internal affairs doctrine, in all cases to the fullest extent permitted by law and subject to the court's having personal jurisdiction over the indispensable parties named as defendants. Any person or entity holding, owning or otherwise acquiring any interest in our shares of capital stock shall be deemed to have notice of and to have consented to such provisions.

Although we believe these provisions benefit us by providing increased consistency in the application of Delaware law in the types of lawsuits to which they apply, a court may determine that these provisions are unenforceable, and to the extent they are enforceable, the provisions may have the effect of discouraging lawsuits against our directors and officers, although our stockholders will not be deemed to have waived our compliance with federal securities laws and the rules and regulations thereunder. Additionally, we cannot be certain that a court will decide that these provisions are either applicable or enforceable, and if a court were to find the choice of forum provisions contained in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, operating results and financial condition.

Our certificate of incorporation provides that the exclusive forum provision will be applicable to the fullest extent permitted by applicable law. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision will not apply to suits brought to enforce any duty or liability created by the Exchange Act or any other claim for which the federal courts have exclusive jurisdiction. Furthermore, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Accordingly, both state and federal courts have jurisdiction to entertain such claims. To prevent having to litigate claims in multiple jurisdictions and the threat of inconsistent or contrary rulings by different courts, among other considerations, our certificate of incorporation provides that the federal district courts of the United States will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

We are subject to provisions of Section 203 of the DGCL regulating corporate takeovers under our certificate of incorporation. This statute prevents certain Delaware corporations, under certain circumstances, from engaging in a "business combination" with:

- a stockholder who owns 15% or more of our outstanding voting stock (otherwise known as an "interested stockholder");
- an affiliate of an interested stockholder; or
- an associate of an interested stockholder, for three years following the date that the stockholder became an interested stockholder.

A "business combination" includes a merger or sale of more than 10% of our assets. However, the above provisions of Section 203 do not apply if:

- our board of directors approves the transaction that made the stockholder an "interested stockholder," prior to the date of the transaction;
- after the completion of the transaction that resulted in the stockholder becoming an interested stockholder, that stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, other than statutorily excluded shares of common stock; or
- on or subsequent to the date of the transaction, our initial business combination is approved by our board of directors and authorized at a meeting of our stockholders, and not by written consent, by an affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

Under certain circumstances, this provision will make it more difficult for a person who would be an "interested stockholder" to effect various business combinations with us for a three-year period. This provision may encourage companies interested in acquiring us to negotiate in advance with our board of directors because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions also may have the effect of preventing changes in our board of directors and may make it more difficult to accomplish transactions which stockholders may otherwise deem to be in their best interests.

Transfer Agent

The transfer agent for our Class A common stock and our public warrants is Continental Stock Transfer & Trust Company. The transfer agent's address is One State Street Plaza, 30th Floor New York, New York 10004.

Listing

Shares of our Class A common stock have traded on The Nasdaq Capital Market under the ticker symbol "CELU". Our ticker symbol for our warrants, which are each exercisable for one-tenth of a share of Class A common stock at an exercise price of $115.00 per share, as adjusted for the reverse stock split, is "CELUW".

CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Dismissal of Independent Registered Public Accounting Firm

On August 2, 2024, the Audit Committee of the Board of Directors of the Company informed Deloitte & Touche LLP ("Deloitte") that Deloitte was dismissed as the Company's independent registered public accounting firm effective on that date. The reports of Deloitte on the Company's consolidated financial statements as of and for the years ended December 31, 2023 and 2022 did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope, or accounting principles. The Company's financial statements as of and for each of the years ended December 31, 2023 and 2022 contained an explanatory paragraph relating to substantial doubt about the ability of the Company to continue as a going concern as described in Note 1 to those financial statements.

During the Company's two most recent fiscal years and the subsequent interim period from January 1, 2024, to August 2, 2024, there were no disagreements with Deloitte on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Deloitte, would have caused it to make a reference to the subject matter of the disagreement in connection with its report covering such period. In addition, no "reportable events," as defined in Item 304(a)(1)(v) of Regulation S-K, occurred within the period of Deloitte's engagement and the subsequent period through August 2, 2024.

The Company provided Deloitte with a copy of the Company's Current Report on Form 8-K in accordance with Item 304(a) of Regulation S-K prior to the filing of such report with the SEC and requested that Deloitte furnish the Company with a letter addressed to the SEC stating whether it agrees with the above statements and, if it does not agree, the respects in which it does not agree. A copy of the letter from Deloitte is included as Exhibit 16.1 to the registration statement of which this prospectus forms a part.

Engagement of New Independent Registered Public Accounting Firm

On August 2, 2024, the Audit Committee approved the engagement of EisnerAmper LLP ("EisnerAmper") as the Company's independent registered public accounting firm to audit the Company's consolidated financial statements for the year ending December 31, 2024.

During the Company's two most recent fiscal years and subsequent interim period through August 2, 2024, the Company did not consult with EisnerAmper with respect to either (i) the application of accounting principles to a specified transaction, either completed or proposed; or the type of audit opinion that might be rendered on the Company's financial statements, and no written report or oral advice was provided to the Company by EisnerAmper that EisnerAmper concluded was an important factor considered by the Company in reaching a decision as to an accounting, auditing or financial reporting issue; or (ii) any matter that was either the subject of a disagreement, as that term is described in Item 304(a)(1)(iv) of Regulation S-K under the Exchange Act and the related instructions to Item 304 of Regulation S-K under the Exchange Act, or a reportable event, as that term is defined in Item 304(a)(1)(v) of Regulation S-K under the Exchange Act.

UNDERWRITING

ThinkEquity LLC is acting as the representative of the underwriters of the offering. We have entered into an underwriting agreement dated , 2025 with the representative. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to each underwriter named below, and each underwriter named below has severally agreed to purchase, at the public offering price less the underwriting discounts set forth on the cover page of this prospectus, the number of shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) listed next to its name in the following table:

Underwriter	Number of Shares of Class A Common Stock	Number of Pre-funded Warrants
ThinkEquity LLC		
Total		

The underwriters are committed to purchase all the shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) offered by the Company, other than those covered by the over-allotment option to purchase additional shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) described below. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, the underwriting agreement provides that the obligations of the underwriters to pay for and accept delivery of the shares offered by us in this prospectus are subject to various representations and warranties and other customary conditions specified in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have granted the underwriters an over-allotment option. This option, which is exercisable for up to 45 days after the date of this prospectus, permits the underwriters to purchase up to an aggregate of additional shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) (equal to 15% of the total number of shares of Class A common stock and/or Pre-funded Warrants sold in this offering), less underwriting discounts and commissions, solely to cover over-allotments, if any. If the underwriters exercise this option in whole or in part, then the underwriters will be severally committed, subject to the conditions described in the underwriting agreement, to purchase the additional shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) in proportion to their respective commitments set forth in the prior table.

Discounts, Commissions and Reimbursement

The representative has advised us that the underwriters propose to offer the shares of Class A common stock (and/or Pre-funded Warrants in lieu thereof) to the public at the initial public offering price per security set forth on the cover page of this prospectus. The underwriters may offer shares to securities dealers at that price less a concession of not more than $ per share or Pre-funded Warrant of which up to $ per share or Pre-funded Warrant may be reallowed to other dealers. After the initial offering to the public, the public offering price and other selling terms may be changed by the representative.

The following table summarizes the underwriting discounts and commissions and proceeds, before expenses, to us assuming both no exercise and full exercise by the underwriters of their over-allotment option:

			Total	
	Per Share	Per Pre-funded Warrant	Without Over-Allotment Option	With Over-Allotment Option
Public offering price	$	$	$	$
Underwriting discount (7%)	$	$	$	$
Non-accountable expense allowance (1%)	$	$	$	$
Proceeds, before expenses, to us	$	$	$	$

We have agreed to pay an expense deposit of $25,000 to the representative of the underwriters, which will be applied against the actual out-of-pocket accountable expenses that will be paid by us to the underwriters in connection with this offering, and will be reimbursed to us to the extent not incurred. As of the date of this prospectus, we have not yet paid the expense deposit of $25,000.

In addition, we have also agreed to pay the following expenses of the underwriters relating to the offering: (a) all fees, expenses and disbursements relating to background checks of our officers and directors in an amount not to exceed $15,000 in the aggregate; (b) all filing fees and communication expenses associated with the review of this offering by FINRA; (c) all fees, expenses and disbursements relating to the registration, qualification or exemption of securities offered under the securities laws of foreign jurisdictions designated by the underwriter; (d) the fees and expenses of the representatives' legal counsel incurred in connection with this offering in an amount up to $125,000; (e) the $29,500 cost associated with the use of Ipreo's book building, prospectus tracking and compliance software for the offering; (h) $10,000 for data services and communications expenses; (f) up to $10,000 of the representative's actual accountable road show expenses for the offering; and (g) up to $30,000 of the representative's market making and trading, and clearing firm settlement expenses for the offering.

We estimate the expenses of this offering payable by us, not including underwriting discounts and commissions, will be approximately $0.5 million.

Representative Warrants

Upon the closing of this offering, we have agreed to issue to the representative warrants, or the Representative's Warrants, to purchase a number of shares of Class A common stock equal to 5% of the total number of shares (and/or Pre-funded Warrants in lieu thereof) sold in this public offering. The Representative's Warrants will be exercisable at a per share exercise price equal to 125% of the public offering price per share of Class A common stock sold in this offering. The Representative's Warrants are exercisable at any time and from time to time, in whole or in part, during the four and one-half year period commencing six months from the effective date of the registration statement related to this offering. The Representative's Warrants also provide for one demand registration right of the shares underlying the Representative's Warrants, and unlimited "piggyback" registration rights with respect to the registration of the shares of Class A common stock underlying the Representative's Warrants and customary antidilution provisions. The demand registration right provided will not be greater than five years from the effective date of the registration statement related to this offering in compliance with FINRA Rule 5110(g)(8)(C). The piggyback registration right provided will not be greater than seven years from the effective date of the registration statement related to this offering in compliance with FINRA Rule 5110(g)(8)(D).

The Representative's Warrants and the shares of Class A common stock underlying the Representative's Warrants have been deemed compensation by the Financial Industry Regulatory Authority, or FINRA, and are therefore subject to a 180-day lock-up pursuant to Rule 5110(e)(1) of FINRA. The representative, or permitted assignees under such rule, may not sell, transfer, assign, pledge, or hypothecate the Representative's Warrants or the securities underlying the Representative's Warrants, nor will the representative engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the Representative's Warrants or the underlying shares for a period of 180 days from the effective date of the registration statement. Additionally, the Representative's Warrants may not be sold transferred, assigned, pledged or hypothecated for a 180-day period following the effective date of the registration statement except to any underwriter and selected dealer participating in the offering and their bona fide officers or partners. The Representative's Warrants will provide for adjustment in the number and price of the Representative's Warrants and the shares of Class A common stock underlying such Representative's Warrants in the event of recapitalization, merger, stock split or other structural transaction, or a future financing undertaken by us.

Right of First Refusal

Until , 2026, the representative shall have an irrevocable right of first refusal to act as sole investment banker, sole book-runner and/or sole placement agent, at the representative's sole discretion, for each and every future public and private equity and debt offering for the Company (except for the Company's restructuring of its current indebtedness or offers and sales to certain identified investors as discussed and agreed between the representative and the Company), or any successor to or any subsidiary of the Company, including all equity linked financings, on terms customary to the representative. The representative shall have the sole right to determine whether or not any other broker-dealer shall have the right to participate in any such offering and the economic terms of any such participation. The representative will not have more than one opportunity to waive or terminate the right of first refusal in consideration of any payment or fee.

Lock-Up Agreements

The Company and each of its directors and officers have agreed for a period of three months after the date of this prospectus, without the prior written consent of the representative, not to directly or indirectly:

- issue (in the case of us), offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of any shares of Class A common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our Class A common stock or other capital stock; or
- in the case of us, file or cause the filing of any registration statement under the Securities Act with respect to any shares of Class A common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our Class A common stock or other capital stock; or
- in the case of us, complete any offering of debt securities, other than entering into a line of credit, term loan arrangement or other debt instrument with a traditional bank; or
- in the case of us, enter into any swap or other agreement, arrangement, hedge or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of our Class A common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our Class A common stock or other capital stock, whether any transaction described in any of the foregoing bullet points is

to be settled by delivery of our Class A common stock or other capital stock, other securities, in cash or otherwise, or publicly announce an intention to do any of the foregoing.

Electronic Offer, Sale and Distribution of Securities

A prospectus in electronic format may be made available on the websites maintained by one or more of the underwriters or selling group members. The representative may agree to allocate a number of securities to underwriters and selling group members for sale to its online brokerage account holders. Internet distributions will be allocated by the underwriters and selling group members that will make internet distributions on the same basis as other allocations. Other than the prospectus in electronic format, the information on these websites is not part of, nor incorporated by reference into, this prospectus or the registration statement of which this prospectus forms a part, has not been approved or endorsed by us, and should not be relied upon by investors.

Stabilization

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate-covering transactions, penalty bids and purchases to cover positions created by short sales.

Stabilizing transactions permit bids to purchase shares so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the shares while the offering is in progress.

Over-allotment transactions involve sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any short position by exercising their over-allotment option and/or purchasing shares in the open market.

Syndicate covering transactions involve purchases of shares in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared with the price at which they may purchase shares through exercise of the over-allotment option. If the underwriters sell more shares than could be covered by exercise of the over-allotment option and, therefore, have a naked short position, the position can be closed out only by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that after pricing there could be downward pressure on the price of the shares in the open market that could adversely affect investors who purchase in the offering.

Penalty bids permit the representative to reclaim a selling concession from a syndicate member when the shares originally sold by that syndicate member are purchased in stabilizing or syndicate covering transactions to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our shares of Class A common stock or preventing or retarding a decline in the market price of our shares of Class A common stock. As a result, the price of our Class A common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our Class A common stock. These transactions may be effected on Nasdaq, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Other Relationships

Certain of the underwriters and their affiliates may in the future provide various investment banking, commercial banking and other financial services for us and our affiliates for which they may in the future receive customary fees.

Offer restrictions outside the United States

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (i) the offer of the securities under this prospectus is only made to persons to whom it is lawful to offer the securities without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (ii) this prospectus is made available in Australia only to those persons as set forth in clause (i) above, and (iii) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (i) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the securities sold to the offeree within 12 months after its transfer to the offeree under this prospectus.

China

The information in this document does not constitute a public offer of the securities, whether by way of sale or subscription, in the People's Republic of China (excluding, for purposes of this paragraph, Hong Kong Special Administrative Region, Macau Special Administrative Region and Taiwan). The securities may not be offered or sold directly or indirectly in the PRC to legal or natural persons other than directly to "qualified domestic institutional investors."

European Economic Area—Belgium, Germany, Luxembourg and Netherlands

The information in this document has been prepared on the basis that all offers of securities will be made pursuant to an exemption under the Directive 2003/71/EC ("Prospectus Directive"), as implemented in Member States of the European Economic Area (each, a "Relevant Member State"), from the requirement to produce a prospectus for offers of securities.

An offer to the public of securities has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity that has two or more of (i) an average of at least 250 employees during its last fiscal year; (ii) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (iii) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statements);
- to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive) subject to obtaining the prior consent of the Company or any underwriter for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall result in a requirement for the publication by the Company of a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (offre au public de titres financiers) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (Code Monétaire et Financier) and Articles 211-1 et seq. of the General Regulation of the French Autorité des marchés financiers ("AMF"). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the securities have not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (i) qualified investors (investisseurs qualifiés) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-1 to D.411-3, D.744-1, D.754-1; and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (ii) a restricted number of non-qualified investors (cercle restreint d'investisseurs) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-4, D.744-1, D.754-1; and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the securities cannot be distributed (directly or indirectly) to the public by the investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of securities in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005 (the "Prospectus Regulations"). The securities have not been offered or sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (i) qualified investors as defined in Regulation 2(l) of the Prospectus Regulations and (ii) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The securities offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority (the ISA), or ISA, nor have such securities been registered for sale in Israel. The shares may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with the offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the securities being offered. Any resale in Israel, directly or indirectly, to the public of the securities offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the securities in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (Commissione Nazionale per le Societa e la Borsa, "CONSOB" pursuant to the Italian securities legislation and, accordingly, no offering material relating to the securities may be distributed in Italy and such securities may not be offered or sold in Italy in a public offer within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 ("Decree No. 58"), other than:

- to Italian qualified investors, as defined in Article 100 of Decree no.58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999 ("Regulation no. 11971") as amended ("Qualified Investors"); and
- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Article 34-ter of Regulation No. 11971 as amended.

Any offer, sale or delivery of the securities or distribution of any offer document relating to the securities in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993 (as amended), Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007 and any other applicable laws; and
- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the securities in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such securities being declared null and void and in the liability of the entity transferring the securities for any damages suffered by the investors.

Japan

The securities have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the "FIEL") pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the securities may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires securities may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of securities is conditional upon the execution of an agreement to that effect.

Portugal

This document is not being distributed in the context of a public offer of financial securities (oferta pública de valores mobiliários) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (Código dos Valores Mobiliários). The securities have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the securities have not been, and will not be, submitted to the Portuguese Securities Market Commission (Comissão do Mercado de Valores Mobiliários) for approval in Portugal and, accordingly, may not be distributed or caused to distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of securities in Portugal are limited to persons who are "qualified investors" (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the securities be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. lag (1991:980) om handel med finansiella instrument). Any offering of securities in Sweden is limited to persons who are "qualified investors" (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the securities may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the securities have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor has the Company received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the securities within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. No services relating to the securities, including the receipt of applications and/or the allotment or redemption of such shares, may be rendered within the United Arab Emirates by the Company.

No offer or invitation to subscribe for securities is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Services Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended ("FSMA") has been published or is intended to be published in respect of the securities. This document is issued on a confidential basis to "qualified investors" (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the securities may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the securities has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply to the Company.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 ("FPO"), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together "relevant persons"). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

Canada

The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws. Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor. Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI33-105 regarding underwriter conflicts of interest in connection with this offering.

LEGAL MATTERS

The validity of the issuance of the shares of Class A common stock offered by us in this offering will be passed upon for us by Sheppard, Mullin, Richter & Hampton LLP, New York, New York. Loeb & Loeb LLP, New York, New York has acted as counsel for the underwriters in connection with certain legal matters related to this offering.

EXPERTS

The financial statements of Celularity Inc. as of December 31, 2023 and 2022, and for each of the two years in the period ended December 31, 2023, included in this prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report. Such financial statements are included in reliance upon the report of such firm given their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement we filed with the SEC. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You should rely only on the information contained in this prospectus. We have not authorized anyone else to provide you with different information. We are not making an offer of these securities in any jurisdiction where the offer is not permitted. You should assume that the information contained in this prospectus, or any document incorporated by reference in this prospectus, is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus or any sale of our securities.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from commercial document retrieval services and over the Internet at the SEC's website at *http://www.sec.gov*.

We maintain a website at *https://celularity.com/*. You may access our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of this prospectus.

CELULARITY INC.
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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Celularity Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Celularity Inc. (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of operations and comprehensive income (loss), stockholders' equity (deficit), and cash flows, for each of the two years in the period ended December 31, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses and net cash outflows from operations and has outstanding debt that is currently due for which the Company does not have sufficient liquidity to repay, which raises substantial doubt about its ability to continue as a going concern. Management's plans regarding these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of these uncertainties.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP
Morristown, New Jersey
July 30, 2024

We began serving as the Company's auditor in 2018. In 2024, we became the predecessor auditor.

CELULARITY INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	December 31, 2023	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	$ 227	$ 13,966
Accounts receivable, net of allowance of $5,837 and $1,789 as of December 31, 2023 and December 31, 2022, respectively	10,046	4,452
Notes receivable	2,072	2,514
Inventory	5,753	5,308
Prepaid expenses and other current assets	1,695	7,262
Total current assets	19,793	33,502
Property and equipment, net	67,828	75,655
Goodwill	7,347	119,694
Intangible assets, net	11,001	120,994
Right-of-use assets - operating leases	10,990	13,060

Restricted cash	9,936	14,836
Inventory, net of current portion	16,657	22,949
Other long-term assets	337	376
Total assets	$ 143,889	$ 401,066
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 14,144	$ 5,810
Accrued expenses and other current liabilities	7,580	9,069
Accrued R&D software	3,500	7,333
Short-term debt - Yorkville ($17,223 at fair value and $16,623 unpaid principal balance at December 31, 2023 and $37,603 at fair value and $37,000 unpaid principal balance at December 31, 2022)	17,223	37,603
Other short-term debt	2,108	—
Short-term debt - related party	1,419	—
Short-term debt - related parties - C.V. Starr and RWI	18,490	—
Deferred revenue	2,834	2,273
Total current liabilities	67,298	62,088
Deferred revenue, net of current portion	3,186	2,219
Acquisition-related contingent consideration	1,606	105,945
Noncurrent lease liabilities - operating	26,177	27,985
Warrant liabilities	4,359	3,598
Deferred income tax liabilities	9	9
Other liabilities	294	321
Total liabilities	102,929	202,165
Commitments and Contingencies (Note 11)		
Stockholders' equity:		
Preferred stock, $0.0001 par value, 10,000,000 shares authorized, none issued and outstanding at December 31, 2023 and December 31, 2022	—	—
Common Stock, $0.0001 par value, 730,000,000 shares authorized, 19,378,192 issued and outstanding as of December 31, 2023; 730,000,000 shares authorized, 14,892,129 issued and outstanding as of December 31, 2022	19	15
Additional paid-in capital	882,732	844,373
Accumulated other comprehensive income	-	9
Accumulated deficit	(841,791)	(645,496)
Total stockholders' equity	40,960	198,901
Total liabilities and stockholders' equity	$ 143,889	$ 401,066

The accompanying notes are an integral part of these consolidated financial statements.

CELULARITY INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(In thousands, except share and per share amounts)

	Year Ended December 31,	
	2023	**2022**
Net revenues:		
Product sales	$ 13,149	$ 3,749
Services	5,441	5,512
License, royalty and other	4,181	8,714
Total revenues	22,771	17,975
Operating expenses:		
Cost of revenues (excluding amortization of acquired intangible assets)		
Product sales	8,628	2,353
Services	1,650	3,536
License, royalty and other	5,738	13,776
Research and development	30,465	78,363
Selling, general and administrative	50,576	66,021
Change in fair value of contingent consideration liability	(104,339)	(126,277)
Goodwill impairment	112,347	3,610
IPR&D impairment	107,800	—
Amortization of acquired intangible assets	2,193	2,193
Total operating expenses	215,058	43,575
Loss from operations	(192,287)	(25,600)
Other income (expense):		
Interest income	320	365
Interest expense	(3,015)	—
Change in fair value of warrant liabilities	6,164	42,109
Change in fair value of debt	(1,177)	(2,522)
Other income (expense), net	(6,290)	(147)
Total other income	(3,998)	39,805
Net (loss) income before income taxes	(196,285)	14,205
Income tax expense	10	13
Net (loss) income	$ (196,295)	$ 14,192
Change in fair value of debt due to change in credit risk, net of tax	146	9
Other comprehensive income	146	9
Comprehensive (loss) income	$ (196,149)	$ 14,201
Share information:		
Net (loss) income per share – basic	$ (11.02)	$ 1.01
Weighted average shares outstanding – basic	17,813,044	13,990,703
Net (loss) income per share – diluted	$ (11.02)	$ 0.95
Weighted average shares outstanding – diluted	17,813,044	14,983,002

The accompanying notes are an integral part of these consolidated financial statements.

CELULARITY INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands, except share amounts)

	Common Stock		Additional Paid-in	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	**Amount**	**Capital**	**Deficit**	**Income (Loss)**	**Equity**
Balances at December 31, 2021	12,430,788	$ 12	$ 763,087	$ (663,681)	$ —	$ 99,418
Cumulative effect adjustment ASU 2016-02	—	—		3,993	—	3,993
Reclassification of previously exercised stock options	13,125	—	441	—	—	441
Exercise of stock options	171,047	—	948	—	—	948
Purchase and retirement of common shares	(1,050)	—	(86)	—	—	(86)
Exercise of warrants	1,328,189	2	46,489	—	—	46,491
Common stock issued pursuant to short-term debt conversion	262,797	1	4,098	—	(11)	4,088
Vesting of restricted stock units	23,252	—	—	—	—	0
Tax withholding on vesting of restricted stock units	(7,067)	—	(132)	—	—	(132)
Stock-based compensation expense	—	—	15,856	—	—	15,856
Issuance of common stock to PIPE investor, net of issuance costs	405,406	—	7,651	—	—	7,651
Issuance of common stock in ATM offering, net of commissions and offering expenses	265,641	—	6,021	—	—	6,021

Change in fair value of debt due to change in credit risk, net of tax	—	—	—	—	20	20
Net income	—	—	—	14,192	—	14,192
Balances at December 31, 2022	14,892,129	$ 15	$ 844,373	$ (645,496)	$ 9	$ 198,901
Issuance of common stock in Registered Direct Offering, net of offering expenses	1,780,220	2	1,320	—	—	1,322
Common stock issued pursuant to short-term debt maturity extension	270,731	—	712	—	—	712
Exercise of stock options	108,637	—	304	—	—	304
Fair value of warrant modification for professional services	-	—	403	—	—	403
Issuance of common stock for stem-cells to be used in research and development	169,492	—	1,000	—	—	1,000
Issuance of warrants on senior secured bridge loans	-	—	2,016	—	—	2,016
Common stock issued pursuant to short-term debt conversion	559,481	1	4,598	—	(155)	4,444
Vesting of restricted stock units	83,759	—	—	—	—	0
Tax withholding on vesting of restricted stock units	(19,130)	—	(101)	—	—	(101)
Stock-based compensation expense	—	—	15,017	—	—	15,017
Issuance of common stock in PIPE Offering, net of offering expenses	1,519,579	1	12,680	—	—	12,681
Issuance of common stock under ATM Agreement	13,296	—	136	—	—	136
Change in fair value of debt due to change in credit risk, net of tax	—	—	-	—	146	146
Issuance of warrants to C.V. Starr	—	—	274	—	—	274
Net loss	—	—	-	(196,295)	—	(196,295)
Balances at December 31, 2023	19,378,192	$ 19	$ 882,732	$ (841,791)	$ —	$ 40,960

The accompanying notes are an integral part of these consolidated financial statements.

CELULARITY INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,	
	2023	**2022**
Cash flow from operating activities:		
Net (loss) income	$ (196,295)	$ 14,192
Adjustments to reconcile net (loss) income to net cash used in operations:		
Depreciation and amortization	9,324	9,436
Non cash lease expense	(13)	(59)
Deferred income taxes	—	(1)
Provision for doubtful accounts	1,233	1,877
Provision for inventory obsolescence	1,328	—
Change in fair value of warrant liabilities	(6,164)	(42,109)
Inventory impairment	5,384	904
Goodwill impairment	112,347	3,610
IPR&D impairment	107,800	—
Stock-based compensation expense	15,017	15,856
Change in fair value of contingent consideration	(104,339)	(126,277)
Acquired in-process research and development	3,000	—
Issuance of common stock for stem-cells to be used in research and development	1,000	—
Issuance of common stock relating to Yorkville debt extension	712	—
Discounts arising from RWI loan arrangement - related party	2,151	—
Fair value of warrant modification for professional services	403	—
Change in fair value of debt	1,177	2,522
Change in fair value of contingent stock consideration	(159)	186
Other, net	4,157	(37)
Changes in assets and liabilities:		
Accounts receivable	(6,827)	(3,584)
Inventory	(865)	(16,891)
Prepaid expenses and other assets	5,606	49
Accounts payable	8,497	(2,948)
Accrued expenses and other liabilities	(1,128)	(2,623)
Accrued R&D software	(3,834)	7,333
Right-of-use assets and lease liabilities	275	263
Deferred revenue	1,528	425
Net cash used in operating activities	(38,685)	(137,876)
Cash flow from investing activities:		
Capital expenditures	(1,048)	(5,236)
Purchase of acquired in-process research and development	(3,000)	—
Net cash used in investing activities	(4,048)	(5,236)
Cash flow from financing activities:		
Proceeds from RWI senior secured bridge loan and warrants - related party	12,375	46,491
Principal payments of Yorkville short-term debt	(16,811)	—
Proceeds from issuance of senior secured C.V. Starr bridge loan and warrants - related party	4,994	—
Proceeds from short-term debt	—	39,200
Proceeds from the sale of common stock in ATM offering	136	6,519
Payments of ATM offering costs and commissions	—	(498)
Proceeds from other short-term debt	2,000	—
Proceeds from other short-term debt - related party	1,000	—
Proceeds from PIPE financing	12,750	30,000
Proceeds from the exercise of stock options	304	862
Tax withholding on vesting of restricted stock units	(101)	(132)
Proceeds from registered direct offerings	9,000	—
Payments of PIPE and other issuance costs	(1,553)	(2,604)
Net cash provided by financing activities	24,094	119,838
Net decrease in cash, cash equivalents and restricted cash	(18,639)	(23,274)
Cash, cash equivalents and restricted cash at beginning of year	28,802	52,076
Cash, cash equivalents and restricted cash at end of year	$ 10,163	$ 28,802
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 1,073	$ —
Supplemental non-cash investing and financing activities:		
Property and equipment included in accounts payable and accrued expenses	$ (223)	$ (683)
Common stock issued for short-term debt conversion	$ 4,599	$ 4,099
Issuance of warrants on senior secured bridge loans	$ 2,002	$ —
Reduction of right-of-use assets and associated lease liability due to lease modification	$ (2,083)	$ —
PIPE related costs included in accrued expenses	$ (69)	$ —
Interest accrued on senior secured loans within long-term debt - related parties	$ (1,770)	$ —
Reclassification of option liabilities to equity	$ —	$ 441

The accompanying notes are an integral part of these consolidated financial statements.

CELULARITY INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(In thousands, except share and per share amounts)

1. Nature of Business

Celularity Inc., ("Celularity" or the "Company"), formerly known as GX Acquisition Corp. ("GX"), was a blank check company incorporated in Delaware on August 24, 2018. The Company was formed for the purpose of effectuating a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or other similar business combination with one or more businesses.

On July 16, 2021 (the "Closing Date"), the Company consummated the previously announced merger pursuant to the Merger Agreement and Plan of Reorganization, dated January 8, 2021 (the "Merger Agreement"), by and among GX, Alpha First Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of GX ("First Merger Sub"), Celularity LLC (f/k/a Alpha Second Merger Sub LLC), a Delaware limited liability company and a direct, wholly owned subsidiary of GX ("Second Merger Sub"), and the entity formerly known as Celularity Inc., incorporated under the laws of the state of Delaware on August 29, 2016 ("Legacy Celularity"). Upon completion of the merger transaction, GX changed its name to Celularity Inc.

At the special meeting held on February 22, 2024, the stockholders of Celularity approved an amendment to Celularity's Second Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of Celularity's Class A common stock, par value $0.0001 per share, at a ratio of 1-for-10. Following the reverse stock split, each 10 shares of Celularity's Class A Common Stock issued and outstanding immediately prior thereto were combined into one new share of Class A Common Stock. Unless specifically provided otherwise herein, all share and per share information has been adjusted to reflect the reverse stock split.

Description of Business

Celularity is a cell therapy and regenerative medicine company focused on addressing aging related diseases including cancer and degenerative diseases. Celularity develops and markets off-the-shelf placental-derived allogeneic advanced biomaterial products including allografts and connective tissue matrices for soft tissue repair and reconstructive procedures in the treatment of degenerative disorders and diseases including those associated with aging. Celularity is developing a pipeline of off-the-shelf placental-derived allogeneic cell therapy product candidates including T cells engineered with a chimeric antigen receptor ("CAR"), natural killer ("NK") cells, and mesenchymal-like adherent stromal cells ("MLASCs") and exosomes. These therapeutic candidates may potentially target indications across cancer, infectious and degenerative diseases. Celularity believes that by harnessing the placenta's unique biology and ready availability, it will be able to develop therapeutic solutions that address a significant unmet global need for effective, accessible and affordable therapeutics. Celularity's biomaterials business today is comprised primarily of the sale of its Biovance 3L products, directly or through its distribution network. Biovance 3L is a tri-layer decellularized, dehydrated human amniotic membrane derived from the placenta of a healthy, full-term pregnancy. It is an intact, natural extracellular matrix that provides a foundation for the wound regeneration process and acts as a scaffold for restoration of functional tissue. Celularity is developing new placental biomaterial products to deepen the commercial pipeline. The Company also plans to leverage its core expertise in cellular therapeutic development and manufacturing to generate revenues by providing contract manufacturing and development services to third parties. The initial focus of this new service offering will be to assist development stage cell therapy companies with the development and manufacturing of their therapeutic candidates for clinical trials.

Celularity is headquartered in Florham Park, NJ. Legacy Celularity acquired Anthrogenesis Corporation ("Anthrogenesis") in August 2017 from Celgene Corporation ("Celgene"), a global biotechnology company that merged with Bristol Myers Squibb Company. Previously, Anthrogenesis operated as Celgene Cellular Therapeutics, Celgene's cell therapy division.

The Celularity IMPACT (***IM***munomodulatory***P***lacenta-derived***A***llogeneic***Cellular therapy***) platform capitalizes on the benefits of placenta-derived cells to target multiple diseases, and provides seamless integration, from bio sourcing through manufacturing cryopreserved and packaged allogeneic cells at its purpose-built U.S.-based 147,215 square foot facility. We believe the use of placental-derived cells, sourced from the placentas of full-term healthy informed consent donors, has potential inherent advantages, from a scientific and an economic perspective. First, relative to adult- derived cells, placental-derived cells demonstrate greater stemness, meaning the ability to expand and persist. Second, placental-derived cells are immunologically naïve, meaning the cells have never been exposed to a specific antigen, and suggesting the potential for less toxicity and for low or no graft-versus-host disease, or GvHD, in transplant. Third, Celularity's placental-derived cells are allogeneic, meaning they are intended for use in any patient, as compared to autologous cells, which are derived from an individual patient for that patient's use. We believe this is a key difference that will enable readily available off-the-shelf treatments that can be delivered faster, more reliably, at greater scale and to more patients.

From a single source material, the postpartum human placenta, the Company derives four allogeneic cell or extracellular vesicle types: T cells, NK cells, MLASCs and exosomes, which have the potential to support multiple therapeutic programs. In 2022, the Company had active and approved clinical trials under development utilizing CYNK-001, a placental derived unmodified NK cell, for the treatment of acute myeloid leukemia, or AML, a blood cancer, and for glioblastoma multiforme, or GBM, a solid tumor cancer. The Company also had an active clinical trial utilizing CYNK-101, a genetically modified NK cell, for the treatment of HER2+ Gastric cancer. Due to a need to prioritize corporate resources, in January 2023 the Company announced its intention to cease recruitment in the GBM and the HER2+ gastric trials. In addition, in April 2023, the Company announced based on the preliminary results of the phase 1 trial data of CYNK-001, the AML trial would be closed to further enrollment and has completed follow up. The Company is currently not actively investigating CYNK-001 for any indication. During the second quarter of 2023, the Company fully impaired the in-process research and development ("IPR&D") assets associated with CYNK-001. In the first quarter of 2022, the Company submitted an IND to investigate CYCART-19, a placental-derived CAR-T cell therapy targeting the cluster of differentiation 19, for the treatment of B-cell malignancies. In late May 2022, the Company received formal written communication from the U.S. Food and Drug Administration requesting additional information before it can proceed with the planned Phase 1/2 clinical trial. After assessing the status of the IND to determine an optional path forward for the CYCART-19 program, the Company elected to terminate development of CYCART-19 for B-cell malignancies during the third quarter of 2023. The Company may continue pre-clinical development of other T-cell candidates. APPL-001 is a placenta-derived MLASC being developed for the treatment of Crohn's disease, and other degenerative diseases. Due to an internal alignment of corporate resources, the Company has paused development in exosomes to focus on other priorities.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with governmental regulations and the ability to secure additional capital to fund operations. Drug candidates currently under development will require significant additional approval prior to commercialization, including extensive preclinical and clinical testing and regulatory approval. These efforts require significant amounts of additional capital, adequate personnel, and infrastructure and extensive compliance-reporting capabilities. Even if the Company's drug development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales.

Going Concern

In accordance with Accounting Standards Update ("ASU") No. 2014-15, Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern (Subtopic 205-40) ("ASU 205-40"), the Company has evaluated whether there are certain conditions and events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the consolidated financial statements are issued.

As an emerging clinical-stage biotechnology company, Celularity is subject to certain inherent risks and uncertainties associated with the development of an enterprise. In this regard, since the Company's inception, substantially all of management's efforts have been devoted to making investments in research and development including basic scientific research into placentally-derived allogeneic cells, pre-clinical studies to support its current and future clinical programs in cellular therapeutics, and clinical development of its cell programs as well as facilities and selling, general and administrative expenses that support its core business operations (collectively the "investments"), all at the expense of the Company's short-term profitability. The Company has historically funded these investments through limited revenues generated from its biobanking and degenerative disease businesses and issuances of equity and debt securities to public and private investors (these issuances are collectively referred to as "outside capital"). Notwithstanding these efforts, management can provide no assurance that the Company's research and development and commercialization efforts will be successfully completed, or that adequate protection of the Company's intellectual property will be adequately maintained. Even if these efforts are successful, it is uncertain when, if ever, the Company will generate significant sales or operate in a profitable manner to sustain the Company's operations without needing to continue to rely on outside capital. Continued decline in the Company's share price could result in impairment of goodwill or long-lived assets in a future period.

As of the date the accompanying consolidated financial statements were issued (the "issuance date"), management evaluated the significance of the following adverse conditions and events in accordance with ASU 205-40:

● Since its inception, the Company has incurred significant operating losses and used net cash outflows from operations. For the year ended December 31, 2023, the Company incurred a net operating loss of $192,287 and used net cash outflows in operations of $38,685. As of December 31, 2023, the Company had an accumulated deficit of $841,791. The Company expects to continue to incur significant operating losses and use net cash in operations for the foreseeable future.

● As of the issuance date, the Company had approximately $593 of unrestricted cash and cash equivalents available to fund the Company's operations and no available additional sources of outside capital to sustain the Company's operations for a period of 12 months beyond the issuance date.

● The Company expects to incur substantial expenditures to fund its investments for the foreseeable future. In order to fund these investments, the Company will need to secure additional sources of outside capital. While the Company is actively seeking to secure additional outside capital (and has historically been able to successfully secure such capital), as of the issuance date, no additional outside capital has been secured or was deemed probable of being secured. In addition, management can provide no assurance the Company will be able to secure additional outside capital in the future or on terms that are acceptable to the Company. Absent an ability to secure additional outside capital in the very near term, the Company will be unable to meet its obligations as they become due over the next 12 months beyond the issuance date.

● As of the issuance date, the Company had approximately $42,700 of debt outstanding, all of which is currently due or due within one year of the issuance date. As disclosed in Note 9 substantially all of the Company's outstanding debt is subject to a forbearance agreement. In the event the terms of the forbearance agreements are not met and/or the outstanding borrowings are not repaid, the lenders may, at their discretion, exercise all of their rights and remedies under the loan agreements which may include, among other things, seizing the Company's assets and/or forcing the Company into liquidation.

● On April 17, 2024, Nasdaq provided formal notice to the Company that as a result of the Company's failure to timely file its 2023 Form 10-K, it no longer complied with the continued listing requirements under the timely filing criteria outlined in Nasdaq Listing Rule 5250(c)(1). The Company was required to submit a plan to Nasdaq to regain compliance within 60 calendar days, or by June 17, 2024. On June 18, 2024, Nasdaq indicated that it had received the Company's plan and granted the Company an extension to file this annual report on Form 10-K and the Company's quarterly report on Form 10-Q for the period ended March 31, 2024 on or before August 30, 2024. If the Company is unable to regain compliance, the Company's securities will be delisted from the Nasdaq, which such delisting would have a materially adverse effect on the Company's ability to continue as a going concern.

● In the event the Company is unable to secure additional outside capital to fund the Company's obligations when they become due, including repayment of the Company's outstanding debt, over the next 12 months beyond the issuance date, management will be required to seek other strategic alternatives, which may include, among others, a significant curtailment of the Company's operations, a sale of certain of the Company's assets, a sale of the entire Company to strategic or financial investors, and/or allowing the Company to become insolvent by filing for bankruptcy protection under the provisions of the U.S. Bankruptcy Code.

These uncertainties raise substantial doubt about the Company's ability to continue as a going concern. The accompanying consolidated financial statements have been prepared on the basis that the Company will continue to operate as a going concern, which contemplates that the Company will be able to realize assets and settle liabilities and commitments in the normal course of business for the foreseeable future. Accordingly, the accompanying consolidated financial statements do not include any adjustments that may result from the outcome of these uncertainties.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). The consolidated financial statements include the accounts of wholly owned subsidiaries, after elimination of intercompany accounts and transactions. The consolidated financial information presented herein reflects all financial information that, in the opinion of management, is necessary for a fair statement of financial position, results of operations and cash flows for the periods presented.

Use of Estimates

The preparation of the Company's consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenue and expenses during the reporting period. Significant estimates and assumptions reflected in these consolidated

financial statements include, but are not limited to, assumptions related to the Company's goodwill and intangible impairment assessment, the valuation of inventory, contingent consideration, short-term debt, determination of incremental borrowing rates, accrual of research and development expenses, and the valuations of stock options and stock warrants. The Company based its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates when there are changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates.

Fair Value Measurements

Certain assets and liabilities of the Company are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

● Level 1 — Quoted prices in active markets for identical assets or liabilities.

● Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.

● Level 3 — Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

Cash and Cash Equivalents

Cash and cash equivalents consist principally of cash held in commercial bank accounts, money market funds and U.S. Treasury securities having an original maturity of less than three months. The Company considers all highly liquid investments with maturities of three months or less at the date of acquisition to be cash equivalents. At December 31, 2023 and 2022, substantially all cash and cash equivalents were held in either commercial bank accounts or money market funds.

Restricted Cash

As of December 31, 2023 and 2022, the Company maintained a letter of credit of $9,936 and $14,836, respectively, for the benefit of the landlord of a leased property, which the Company classified as restricted cash (non-current) on its consolidated balance sheets.

Inventory

Inventory is stated at the lower of cost or market (net realizable value), with cost being determined on a first-in, first-out basis. Prior to initial approval from the FDA or other regulatory agencies, the Company expenses costs relating to the production of inventory in the period incurred. After such time as the product receives initial regulatory approval, the Company capitalizes the inventory costs related to the product. The Company continues to expense costs associated with clinical trial supply costs as research and development expense.

The Company periodically analyzes the inventory levels to determine whether there is any obsolete, expired, or excess inventory. If any inventory is (i) expected to expire prior to being sold, (ii) has a cost basis in excess of its net realizable value, (iii) is in excess of expected sales requirements as determined by internal sales forecasts, or (iv) fails to meet commercial sale specifications, the inventory is written-down through a charge to cost of revenues. The determination of whether inventory costs will be realizable requires estimates by management of future expected inventory requirements, based on sales forecasts. If actual market conditions are less favorable than those projected by management, inventory write-downs may be required. Inventory, net of current portion on the Company's consolidated balance sheets includes inventory expected to remain on hand beyond one year.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Depreciation and amortization expense is recognized using the straight-line method over the estimated useful life of each asset, as follows:

	Estimated Useful Life
Building	26 years
Furniture and fixtures	5 - 7 years
Lab equipment	5 years
Computer equipment	3 years
Software	3 years
Leasehold improvements	shorter of the estimated useful life or the lease term

Estimated useful lives are periodically assessed to determine if changes are appropriate. Maintenance and repairs are charged to expense as incurred. When assets are retired or otherwise disposed of, the cost of these assets and related accumulated depreciation or amortization are eliminated from the consolidated balance sheets and any resulting gains or losses are included in the consolidated statements of operations in the period of disposal. Costs for capital assets not yet placed into service are capitalized as construction-in-progress and depreciated once placed into service.

Impairment of Long-Lived Assets

Long-lived assets consist of property, plant and equipment, operating right-of-use assets, and definite-lived intangible assets. Long-lived assets to be held and used are tested for recoverability whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Factors that the Company considers in deciding when to perform an impairment review include significant underperformance of the business in relation to expectations, significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If an impairment review is performed to evaluate a long-lived asset group for recoverability, the Company compares forecasts of undiscounted cash flows expected to result from the use and eventual disposition of the long-lived asset group to its carrying value. An impairment loss would be recognized in loss from operations when estimated undiscounted future cash flows expected to result from the use of an asset group are less than its carrying amount. The impairment loss would be based on the excess of the carrying value of the impaired asset group over its fair value, determined based on discounted cash flows. Due to the goodwill impairment recognized during the years ended December 31, 2023 and 2022, as discussed below and in Note 7, the Company performed a recoverability test on long-lived assets and concluded no additional impairment to be recognized as result of this test. The Company did not record any impairment losses on long-lived assets during the years ended December 31, 2023 and 2022.

Asset Acquisitions

The Company measures and recognizes asset acquisitions that are not deemed to be business combinations based on the cost to acquire the assets, which includes transaction costs. In an asset acquisition, the cost allocated to acquire IPR&D with no alternative future use is charged to research and development expense at the acquisition date.

In-Process Research and Development

The fair value of IPR&D acquired through a business combination is capitalized as an indefinite-lived intangible asset until the completion or abandonment of the related research and development activities. When the related research and development is completed, the asset is reclassified to a definite-lived asset and amortized over its estimated useful life.

The fair value of an IPR&D intangible asset is typically determined using an income approach whereby management forecasts the net cash flows expected to be generated by the asset over its estimated useful life. The net cash flows reflect the asset's stage of completion, the probability of technical success, the projected costs to complete, expected market competition, and an assessment of the asset's life-cycle. The net cash flows are then adjusted to present value by applying an appropriate discount rate that reflects the risk factors associated with the cash flow streams.

Indefinite-lived IPR&D is not subject to amortization but is tested annually for impairment or more frequently if there are indicators of impairment. The Company tests its indefinite-lived IPR&D annually for impairment during the fourth quarter. In testing indefinite-lived IPR&D for impairment, the Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances would indicate that it is more likely than not that its fair value is less than its carrying amount, or the Company can perform a quantitative impairment analysis to determine the fair value of the indefinite-lived IPR&D without performing a qualitative assessment. Qualitative factors that the Company considers include significant negative industry or economic trends and significant changes or planned changes in the use of the assets. If the Company chooses to first assess qualitative factors and the Company determines that it is more likely than not that the fair value of the indefinite-lived IPR&D is less than its carrying amount, the Company would then determine the fair value of the indefinite-lived IPR&D. Under either approach, if the fair value of the indefinite-lived IPR&D is less than its carrying amount, an impairment charge is recognized in the consolidated statements of operations. During the years ended December 31, 2023 and 2022, the Company recognized an impairment charge related to its indefinite-lived IPR&D of $107,800 and $0, respectively.

Goodwill

Goodwill represents the excess of the fair value of the consideration transferred over the fair value of the net tangible and identifiable intangible assets acquired in a business combination. Goodwill is not subject to amortization but is tested annually for impairment or more frequently if there are indicators of impairment. The Company typically tests its goodwill annually for impairment in the fourth quarter of each year.

The Company manages its operations through an evaluation of three different operating segments: Cell Therapy, Degenerative Disease and BioBanking (see Note 18). The Company determined that the operating segments represented the reporting units.

In testing goodwill for impairment, the Company has the option to first assess qualitative factors to determine whether the existence of events or circumstances would indicate that it is more likely than not that the fair value of the reporting unit was less than its carrying amount, or the Company can perform a quantitative impairment analysis without performing the qualitative assessment. Examples of such events or circumstances considered in the Company's qualitative assessment include, but are not limited to, a significant adverse change in legal or business climate, an adverse regulatory action or unanticipated competition. If the Company chooses to first assess qualitative factors and the Company determines that it is more likely than not that the fair value of its reporting unit is less than its carrying amount, the Company would then perform the quantitative impairment test. The quantitative test starts with comparing the fair

value of the reporting unit to the carrying amount of a reporting unit, including goodwill. If the fair value of the reporting unit exceeds the carrying amount, no impairment loss is recognized. However, if the fair value of the reporting unit is less than its carrying value, the Company would recognize an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value, not to exceed the total amount of goodwill allocated to the reporting unit. During the years ended December 31, 2023 and 2022, the Company recognized goodwill impairment of $112,347 relating to the Cell Therapy reporting unit and $3,610 relating to the Degenerative Disease reporting unit, respectively, (See Note 7) in the Company's consolidated statements of operations.

Warrant Liabilities

The Company accounts for the public warrants, private placement warrants, registered direct warrants, and May 2022 PIPE warrants (collectively, "Liability Warrants") in accordance with the guidance contained in ASC 815-40, "Derivatives and Hedging—Contracts in Entity's Own Equity," under which the Liability Warrants do not meet the criteria for equity treatment and must be recorded as liabilities. Accordingly, the Company classifies the Liability Warrants as liabilities at their fair value and adjusts to fair value at each reporting period. This liability is subject to re-measurement at each balance sheet date until exercised, and any change in fair value is recognized as a component of other (expense) income in the consolidated statements of operations. The Liability Warrants excluding the public warrants were initially and subsequently valued using a Black-Scholes option pricing model, which is considered to be a Level 3 fair value measurement. The public warrants are valued based on the quoted market price as of each relevant reporting date.

Leases

In accordance with ASU No. 2016-02, Leases (Topic 842) ("ASU 2016-02" or "ASC 842"), the Company classifies leases at the lease commencement date. At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the circumstances present. Leases with a term greater than one year will be recognized on the consolidated balance sheets as right-of-use assets ("ROU"), lease liabilities, and if applicable, long-term lease liabilities. The Company includes renewal options to extend the lease in the lease term where it is reasonably certain that it will exercise these options. Lease liabilities and the corresponding ROU are recorded based on the present values of lease payments over the terms. The interest rate implicit in lease contracts is typically not readily determinable. As such, the Company utilizes the appropriate incremental borrowing rates, which are the rates that would be incurred to borrow on a collateralized basis, over similar terms, amounts equal to the lease payments in a similar economic environment. Variable payments that do not depend on a rate or index are not included in the lease liability and are recognized as incurred. Lease contracts do not include residual value guarantees nor do they include restrictions or other covenants. Certain adjustments to ROUs may be required for items such as initial direct costs paid, incentives received, or lease prepayments. If significant events, changes in circumstances, or other events indicate that the lease term or other inputs have changed, the Company would reassess lease classification, remeasure the lease liability using revised inputs as of the reassessment date, and adjust the ROU.

The Company has elected the "package of 3" practical expedients permitted under the transition guidance, which eliminates the requirements to reassess prior conclusions about lease identification, lease classification, and initial direct costs. The Company also adopted an accounting policy which provides that leases with an initial term of 12 months or less and no purchase option that the Company is reasonably certain of exercising will not be included within the lease right-of-use assets and lease liabilities on its consolidated balance sheets.

Refer to Note 10 for further information.

Short-Term Debt- Yorkville

The Company elected the fair value option to account for the financial instrument as per the pre-paid advance agreement with YA II PN, Ltd ("Yorkville") (see Note 9). As of December 31, 2023, due to the short term nature of the debt, the fair value approximates the settlement amount which was fully paid on January 17, 2024. As of December 31, 2022, the estimate of the fair value was determined using a binomial lattice model. The fair value measurement of the debt is determined using Level 3 inputs and assumptions unobservable in the market. Changes in the fair value of debt that is accounted for at fair value, inclusive of related accrued interest expense, are presented as gains or losses in the accompanying consolidated statements of operations and comprehensive loss under change in fair value of debt. The portion of total changes in fair value of debt attributable to changes in instrument-specific credit risk are determined through specific measurement of periodic changes in the discount rate assumption exclusive of base market changes and are presented as a component of comprehensive income (loss) in the accompanying consolidated statements of operations and comprehensive loss. The actual settlement of the short-term debt could differ from current estimates based on the timing of when and if Yorkville elects to convert amounts into common shares, potential cash repayment by us prior to maturity, and movements in the Company's common share price.

Revenue Recognition

The Company generates revenue from its degenerative disease commercial operations (i.e., the sale of Biovance®, Biovance 3L®, CentraFlex®, and Interfyl®), biobanking services (i.e., the collection, processing and storage of umbilical cord and placental blood and tissue after full-term pregnancies), and license, royalty and other revenues.

Product sales and rentals

Biovance® is a decellularized, dehydrated human amniotic membrane with a preserved natural epithelial basement membrane and an intact extracellular matrix structure with its biochemical components, and is intended for use as a biological membrane covering that provides the extracellular matrix while supporting the repair of damaged tissue. Interfyl® is an allogeneic decellularized particulate human placental connective tissue matrix consisting of natural human structural and biochemical extracellular matrix components and is intended for use in both surgical requirements and wound care as the replacement or supplementation of damaged or inadequate integumental tissue.

The Company recognizes revenue when control of the products and services is transferred to its customers in an amount that reflects the consideration it expects to receive from its customers in exchange for those products and services. This process involves identifying the contract with a customer, determining the performance obligations in the contract, determining the contract price, allocating the contract price to the distinct performance obligations in the contract, and recognizing revenue when, or as, the performance obligations have been satisfied. Sales and other taxes collected on behalf of third parties are excluded from revenue.

A performance obligation is considered distinct from other obligations in a contract when it provides a benefit to the customer either on its own or together with other resources that are readily available to the customer and is separately identified in the contract. The Company considers a performance obligation satisfied once it has transferred control of a good or service to the customer, meaning the customer has the ability to use and obtain the benefit of the good or service. Transaction prices of products or services are typically based on contracted rates with customers and to the extent that the transaction price includes variable consideration, the Company estimates the amount of variable consideration that should be included in the transaction price utilizing the expected value method or the most likely amount, depending on the circumstances, to which the Company expects to be entitled.

The Company offers volume-based discounts, rebates and prompt pay discounts and other various incentives which are accounted for under the variable consideration model. If sales incentives may be earned by a customer for purchasing a specified amount of product, the Company estimates whether such incentives will be achieved and recognizes these incentives as a reduction in revenue in the same period the underlying revenue transaction is recognized. The Company primarily uses the expected value method to estimate incentives. Under the expected value method, the Company considers the historical experience of similar programs as well as reviews sales trends on a customer-by-customer basis to estimate what levels of incentives will be earned. At December 31, 2023, the Company had reserves totaling $3,270 included within accounts receivable, net related to direct-customer rebates for Biovance 3L. At December 31, 2022, there were no reserves for customer rebates.

The Company provides for rights of return to customers on its degenerative disease products. To date, the Company has had minimal product returns and therefore does not record a provision for returns.

Services

The Company separately recognizes revenues for services to expectant parents who contract with the Company to collect, process and store umbilical cord blood and placenta derived cells and tissue for private use. The Company recognizes revenue from collection and processing fees at the point in time of the successful completion of processing and recognizes storage fees over time, which is ratably over the contractual storage period. Contracted storage periods are generally 18 years and 25 years. Deferred revenue on the accompanying consolidated balance sheets includes the portion of the 18- and the 25-year storage fees that are being recognized over the contractual storage period. The Company classifies deferred revenue as current if the Company expects to recognize the related revenue over the next 12 months from the balance sheet date.

When determining the transaction price of a contract, an adjustment is made if payment from a customer occurs either significantly before or significantly after performance, resulting in a significant financing component. For all plans (annual, lifetime, 18 years and 25 years), the storage fee is paid at the beginning of the storage period (prepaid plans). Alternatively, the Company offers payment plans for customers to pay over time for a period of one to 24 months (over time plans). The Company concluded that a significant financing component is not present within either the prepaid or overtime payment plans. The Company has determined that the prepaid plans do not include a significant financing component as the payment terms were structured primarily for reasons other than the provision of financing and to maximize profitability.

When considered over a 24-month period for over time plans, the difference between the cash selling price and the consideration paid is nominal. As such, the Company believes that its payment plans do not include significant financing components as they are not significant in the aggregate when considered in the context of all contracts entered into nor significant at the individual contract level.

The Company offers promotional discounts and other various incentives which are accounted for under the variable consideration model. The Company estimates whether such incentives will be achieved and recognizes these incentives as a reduction in revenue in the same period the underlying revenue transaction is recognized. The Company primarily uses the expected value method to estimate incentives. Under the expected value method, the Company considers the historical experience of similar programs as well as reviews sales trends on a customer-by-customer basis to estimate what levels of incentives will be earned.

As the Company's processing and storage agreements contain multiple performance obligations, ASC 606 *Revenue from Contracts with Customers,* requires an allocation of the transaction price based on the estimated relative standalone selling prices of the promised services underlying each performance obligation. The Company has selected an adjusted market assessment approach to estimate the standalone selling prices of the processing services and storage services and concluded that the published list price is the price that a customer in that market would be willing to pay for those goods or services. The Company also considered the fact that all customers are charged the list prices current at the time of their enrollment where the Company has separately stated list prices for processing and storage.

License, royalty and other

Under license agreements, the Company assesses whether the related performance obligation is satisfied at a point in time or over time.

At the inception of each arrangement that includes milestone payments based on certain events, the Company evaluates whether the milestones are considered probable of being achieved and estimates the amount to be included in the transaction price using the most likely amount method. If it is probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the control of the Company or the licensee, such as regulatory approvals, are not considered probable of being achieved until those approvals are received. The Company evaluates factors such as the scientific, clinical, regulatory, commercial, and other risks that must be overcome to achieve the particular milestone in making this assessment. There is considerable judgment involved in determining whether it is probable that a significant revenue reversal would not occur. At the end of each subsequent reporting period, the Company reevaluates the probability of achievement of all milestones subject to constraint and, if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect revenues and earnings in the period of adjustment. If a milestone or other variable consideration relates specifically to the Company's efforts to satisfy a single performance obligation or to a specific outcome from satisfying the performance obligation, the Company generally allocates the milestone amount entirely to that performance obligation once it is probable that a significant revenue reversal would not occur. See Note 15 for further discussion of the Company's license agreements.

While the Company's direct sales of degenerative disease products are included in product sales and rentals, sales through the Company's network of distribution partners are included in license, royalty and other revenues. For certain distribution agreements as described in Note 15, the Company will utilize the practical expedient in ASC 606-10-55-83, whereby an entity may recognize revenue in the amount to which the entity has a right to invoice so long as the consideration from a customer corresponds directly with the value received. Thus, the Company will recognize revenue upon invoicing for these agreements (subsequent to receipt of the related purchase order).

Cost of Revenues

Cost of revenues consists of labor, material and overhead costs associated with the Company's two existing commercial business segments, biobanking and degenerative disease. Biobanking costs, which include the cost of storage and transportation kits for newly banked materials as well as tank and facility overhead costs for cord blood and other units in storage, are included in services in cost of revenues. Degenerative disease costs, which include costs associated with procuring placentas, qualifying the placental material and processing the placental tissue into a marketable product, are included in product sales or license, royalty and other in cost of revenues depending on the class of customer. Costs in the degenerative disease segment include labor and overhead costs associated with the production of the Biovance, Biovance 3L and Interfyl product lines.

Research and Development Costs

The Company has entered into various research and development and other agreements with commercial firms, researchers, universities and others for provisions of goods and services. These agreements are generally cancellable, and the related costs are recorded as research and development expense as incurred. Research and development expenses include costs for salaries, employee benefits, subcontractors, facility-related expenses, depreciation and amortization, stock-based compensation, third-party license fees, laboratory supplies, and external costs of outside vendors engaged to conduct discovery, preclinical and clinical development activities and clinical trials as well as to manufacture clinical trial materials, and other costs. The Company records accruals for estimated ongoing research and development costs. When evaluating the adequacy of the accrued liabilities, the Company analyzes progress of the studies or clinical trials, including the phase or completion of events, invoices received and contracted costs. Significant judgments and estimates are made in determining the accrued balances at the end of any reporting period. Actual results could differ materially from the Company's estimates. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses. Such prepaid expenses are recognized as an expense when the goods have been delivered or the related services have been performed, or when it is no longer expected that the goods will be delivered, or the services rendered.

Upfront payments, milestone payments and annual maintenance fees under license agreements are expensed in the period in which they are incurred.

Advertising and Marketing Costs

Advertising and marketing costs are expensed as incurred. Advertising and marketing costs are included in selling, general and administrative expenses and were $44 and $163 for the years ended December 31, 2023 and 2022, respectively.

Government Grants

From time to time, the Company may be awarded a government research grant. Under these arrangements, the Company recognizes awarded grants as a reduction to research and development expense at the point in time where achievement of related milestones is confirmed by the governmental agency. The Company did not receive grant monies during the years ended December 31, 2023 and 2022.

Patent Costs

All patent-related costs incurred in connection with filing and prosecuting patent applications are expensed as incurred due to the uncertainty about the recovery of the expenditure. Amounts incurred are classified in selling, general and administrative expenses.

Stock-Based Compensation

The Company measures all stock-based awards granted to employees and directors based on the fair value on the date of the grant and recognizes compensation expense for those awards, over the requisite service period, which is generally the vesting period of the respective award. The Company typically issues stock-based awards with only service-based vesting conditions and records the expense for these awards using a straight-line method.

The Company's board of directors may also approve and award performance-based stock options. The performance-based stock options are earned based on the attainment of specified goals achieved over the performance period. The Company recognizes expense for performance-based awards over the related vesting period once it deems the achievement of the performance condition is probable. The Company reassesses the probability of vesting at each reporting period for performance-based awards and adjusts expense accordingly on a cumulative basis.

The fair value of each services and performance-based stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company historically has been a private company and lacks company-specific historical and implied volatility information for its stock. Therefore, it estimates its expected stock price volatility based on the historical volatility of publicly traded peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. The expected term of the Company's stock options granted to employees is determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" options. The expected term of stock options granted to non-employee consultants is equal to the contractual term of the option award or the Company's estimated term based on the underlying agreement. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. The expected dividend yield is zero based on the fact that the Company has never paid cash dividends on common stock and does not expect to pay any cash dividends in the foreseeable future.

The Company classifies stock-based compensation expense in its consolidated statements of operations in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified. The Company elects to account for forfeitures as they occur and compensation cost previously recognized for an award that is forfeited because of a failure to satisfy a service or performance condition is generally reversed in the period of the forfeiture.

Comprehensive Income (Loss)

Comprehensive income (loss) refers to revenues, expenses, gains and losses that under U.S. GAAP are included in comprehensive income (loss) but are excluded from net income (loss) as these amounts are recorded directly as an adjustment to accumulated other comprehensive income (loss). The Company's only component of other comprehensive income (loss) is comprised of the portion of the total change in fair value of indebtedness accounted for under the fair value option that is attributable to changes in instrument-specific credit risk. During the year ended December 31, 2023, the Company recorded instrument-specific credit risk income of $146 and reclassified $155 from accumulated other comprehensive income to other income (expense) on the consolidated statements of operations upon short-term debt conversions. During the year ended December 31, 2022, the Company recorded instrument-specific credit risk income of $20 and reclassified $11 from accumulated other comprehensive income to other income (expense) on the consolidated statements of operations upon short-term debt conversions. These amounts have been recorded as a separate component of stockholders' equity.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the consolidated financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained based on the technical merits of the position. If the tax position is deemed more-likely-than-not to be sustained, the tax position is then assessed to determine the amount of benefit to recognize in the consolidated financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement with the tax authority. The provision for income taxes includes the effects of unrecognized tax benefits, as well as the related interest and penalties (see Note 17).

Net Income (Loss) per Share

Basic net income (loss) per share of common stock is computed by dividing net income (loss) by the weighted-average number of shares of common stock outstanding during each period. Diluted net income (loss) per share of common stock includes the effect, if any, from the potential exercise or conversion of securities, such as convertible debt, stock options, restricted stock units and warrants, which would result in the issuance of incremental shares of common stock. However, potential common shares are excluded if their effect is anti-dilutive. For diluted net income (loss) per share, the weighted-average number of shares of common stock is the same for basic net income (loss) per share due to the fact that when a net loss exists, dilutive securities are not included in the calculation as the impact is anti-dilutive. For the year ended December 31, 2022, the Company was in a net income position and calculated the diluted net income per share by dividing the Company's net income by the dilutive weighted average number of shares outstanding during the year, determined using the treasury stock method. A reconciliation of the numerators and denominators of the basic and diluted net income (loss) per share calculations are as follows:

	Year Ended December 31,	
	2023	**2022**
Numerator:		
Net (loss) income	$ (196,295)	$ 14,192
Denominator:		
Weighted average shares outstanding, basic	17,813,044	13,990,703
Weighted average dilutive stock options	-	958,602
Weighted average restricted stock units	-	33,697
Weighted average shares outstanding, diluted	17,813,044	14,983,002
Net (loss) income, basic	$ (11.02)	$ 1.01
Net (loss) income, diluted	$ (11.02)	$ 0.95

The following potentially dilutive securities have been excluded from the computation of diluted weighted-average shares of common stock outstanding, prior to the use of the two-class method, as they would be anti-dilutive:

	December 31,	
	2023	2022
Stock options	2,820,187	1,239,219
Restricted stock units	823,332	128,590
Warrants	7,070,627	3,345,836
Convertible debt	549,681	629,101
	11,263,827	5,342,746

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources in assessing performance. The Company manages its operations through an evaluation of three distinct businesses segments: Cell Therapy, Degenerative Disease and BioBanking. These segments are presented for the years ended December 31, 2023 and 2022 in Note 18.

Allowance for Credit Losses and Concentrations of Credit Risk

With the adoption of ASU 2016-13 *Financial Instruments — Credit Losses* ("ASU 2016-13"), as noted below, the Company recognizes credit losses based on a forward-looking current expected credit losses. The Company makes estimates of expected credit losses based upon its assessment of various factors, including historical collection experience, the age of accounts receivable balances, credit quality of its customers, current economic conditions, reasonable and supportable forecasts of future economic conditions, and other factors that may affect its ability to collect from customers.

Concentrations of Credit Risk and Significant Customers

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash, cash equivalents and restricted cash. The Company generally maintains balances in various operating accounts at financial institutions that management believes to be of high credit quality, in amounts that may exceed federally insured limits. The Company has not experienced any losses related to its cash and cash equivalents or restricted cash and does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company is subject to credit risk from trade accounts receivable related to both degenerative disease product sales and biobanking services. All trade accounts receivables are a result from product sales and services performed in the United States. As of December 31, 2023, one of the Company's customers comprised 23% of the Company's outstanding gross accounts receivable and one other customer (Customer A) comprised 18% of the outstanding gross accounts receivable. As of December 31, 2022, Customer A comprised of 38% of the Company's outstanding gross accounts receivable, and two other customers comprised 33% of the outstanding gross accounts receivable. During the year ended December 31, 2023, the Company had one customer provide for 14% of revenue and another customer provided for 13% of revenue. During the year ended December 31, 2022, the Company had two customers provide for 37% of revenue and Customer A provided for 11% of revenue.

In November 2017, the FDA provided guidance that established an updated framework for regulation of Human Cell & Tissue Products ("HCT/P"). The Company's Interfyl products meet the criteria for minimal manipulation and homologous use as outlined within the applicable guidance and has an official designation from the FDA as an HCT/P product. As a result, the Company did not stop selling its Interfyl products when the FDA ended its enforcement discretion on May 31, 2021. However, the Center for Medicare and Medicaid Services ("CMS") began rejecting claims for Interfyl submitted by Customer A. The Company believes that CMS is not distinguishing the Interfyl products from its competitors' products. While the Company and Customer A continue to work with CMS to resolve the rejected claims, a full reserve of $2,349 and $1,762 was recorded on Customer A's accounts receivable balance as of December 31, 2023 and 2022, respectively.

Emerging Growth Company

Section 102(b)(1) of the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act") exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Securities Exchange Act of 1934, as amended) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that an emerging growth company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such an election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard.

This may make comparison of the Company's financial statements with another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Reclassifications

Certain prior period amounts have been reclassified to conform with current year presentation on the consolidated balance sheets and consolidated statements of cash flows between accrued expenses and accrued research and development ("R&D") software to separately present the Palantir liability recorded during the year ended December 31, 2023 (See Note 11 for further information).

Recently Adopted Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-13, which changes the accounting for recognizing impairments of financial assets. Under the new guidance, credit losses for certain types of financial instruments will be estimated based on expected losses. ASU 2016-13 also modifies the impairment models for available-for-sale debt securities and for purchased financial assets with credit deterioration since their origination. ASU 2016-13 is effective for annual periods beginning after December 15, 2022 (fiscal year 2023 for the Company), and interim periods within those periods, with early adoption permitted. The Company adopted ASU 2016-13 effective January 1, 2023. The standard did not have a material impact on the consolidated financial statements.

Recently Issued Accounting Pronouncements

In November 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"), which requires disclosure of incremental segment information on an annual and interim basis. This ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024 on a retrospective basis. The Company is currently evaluating the effect of this pronouncement on its disclosures.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"), which expands the disclosures required for income taxes. This ASU is effective for fiscal years beginning after December 15, 2024, with early adoption permitted. The amendment should be applied on a prospective basis while retrospective application is permitted. The Company is currently evaluating the effect of this pronouncement on its disclosures.

3. Fair Value of Financial Assets and Liabilities

The following tables present information about the Company's financial assets and liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy used to determine such fair values:

	Fair Value Measurements as of December 31, 2023			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents - money market funds	$ —	$ —	$ —	$ —
Convertible note receivable	—	—	2,072	2,072
	$ —	$ —	$ 2,072	$ 2,072
Liabilities:				
Acquisition-related contingent consideration obligations	$ —	$ —	$ 1,606	$ 1,606
Contingent stock consideration	—	—	27	27
Short-term debt - Yorkville	—	—	17,223	17,223
Warrant liability - July 2023 Registered Direct Warrants	—	—	1,529	1,529
Warrant liability - April 2023 Registered Direct Warrants	—	—	1,487	1,487
Warrant liability - May 2022 PIPE Warrants	—	—	708	708
Warrant liability - Sponsor Warrants	—	—	60	60
Warrant liability - Public Warrants	575	—	—	575
	$ 575	$ —	$ 22,640	$ 23,215

	Fair Value Measurements as of December 31, 2022			
	Level 1	Level 2	Level 3	Total
Assets:				
Cash equivalents – money market funds	$ 12,174	$ —	$ —	$ 12,174
Convertible note receivable	—	—	2,514	2,514
	$ 12,174	$ —	$ 2,514	$ 14,688

Liabilities:				
Acquisition-related contingent consideration obligations	$ —	$ —	$ 105,945	$ 105,945
Contingent stock consideration	—	—	186	186
Short-term debt - Yorkville	—	—	37,603	37,603
Warrant liability - May 2022 PIPE Warrants	—	—	1,402	1,402
Warrant liability - Sponsor Warrants	—	—	1,190	1,190
Warrant liability - Public Warrants	1,006	—	—	1,006
	$ 1,006	$ —	$ 146,326	$ 147,332

During the years ended December 31, 2023 and 2022, there were no transfers between Level 1, Level 2 and Level 3.

The Company's cash equivalents consisted of a money market funds. The money market fund was valued using inputs observable in active markets for similar securities, which represents a Level 1 measurement in the fair value hierarchy. The carrying values of accounts receivable, accounts payable, deferred revenue and other current liabilities approximate fair value in the accompanying consolidated financial statements due to the short-term nature of those instruments.

Valuation of Contingent Consideration

The fair value measurement of the contingent consideration obligations is determined using Level 3 inputs and is based on a probability-weighted income approach. The measurement is based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions.

The following table presents a reconciliation of contingent consideration obligations measured on a recurring basis using Level 3 inputs as of December 31, 2023 and 2022:

	Balance as of December 31, 2022	Net transfers in to (out of) Level 3	Purchases, settlements and other net	Fair value adjustments	Balance as of December 31, 2023
Liabilities:					
Acquisition-related contingent consideration obligations	$ 105,945	$ —	$ —	$ (104,339)	$ 1,606

	Balance as of December 31, 2021	Net transfers in to (out of) Level 3	Purchases, settlements and other net	Fair value adjustments	Balance as of December 31, 2022
Liabilities:					
Acquisition-related contingent consideration obligations	$ 232,222	$ —	$ —	$ (126,277)	$ 105,945

The fair value of the liability to make potential future milestone and earn-out payments was estimated by the Company at each reporting date based, in part, on the results of a third-party valuation using a discounted cash flow analysis based on various assumptions, including the probability of achieving specified events, discount rates, and the period of time until earn-out payments are payable and the conditions triggering the milestone payments are met. The actual settlement of contingent consideration could differ from current estimates based on the actual occurrence of these specified events.

At each reporting date, the Company revalues the contingent consideration obligation to estimated fair value and records changes in fair value as income or expense in the Company's consolidated statements of operations. Changes in the fair value of the contingent consideration obligations may result from changes in discount periods and rates, changes in the timing and amount of revenue estimates and changes in probability assumptions with respect to the likelihood of achieving the various contingent consideration obligations. The Company has classified all of the contingent consideration as a long-term liability in the consolidated balance sheets as of December 31, 2023 and 2022. See Note 11, "Commitment and Contingencies", for more information on contingent consideration.

Valuation of Warrant Liability

The warrant liability at December 31, 2023 is composed of the fair value of warrants to purchase shares of Class A Common Stock. The Liability Warrants were recorded at their respective closing date fair values based on a Black-Scholes option pricing model that utilizes inputs for: (i) value of the underlying asset, (ii) the exercise price, (iii) the risk-free rate, (iv) the volatility of the underlying asset, (v) the dividend yield of the underlying asset and (vi) maturity. The Black-Scholes option pricing model's primary unobservable input utilized in determining the fair value of the Liability Warrants is the expected volatility of the Class A Common Stock. Prior to the Mergers, Legacy Celularity was historically a private company and lacks company-specific historical and implied volatility information for its stock. Therefore, it estimates its expected stock price volatility based on the historical volatility of publicly traded peer companies. Inputs to the Black-Scholes option pricing model for the warrants are updated each reporting period to reflect fair value. The public warrants (the "Public Warrants") were recorded at the closing date fair value based on the close price of such warrants. Each subsequent reporting period, the Public Warrants are marked-to-market based on the period-end close price.

As of December 31, 2023 and 2022, the fair value of the warrant liabilities was $4,359 and $3,598, respectively. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the estimated remaining term of the warrants.

The following table provides a roll-forward of the aggregate fair values of the Company's warrant liabilities for which fair values are determined using Level 3 inputs:

Balance as of December 31, 2021	$ 25,962
May 2022 PIPE warrant issuance	19,745
Gain recognized in earnings from change in fair value	(42,109)
Balance as of December 31, 2022	$ 3,598
Balance as of December 31, 2022	$ 3,598
April 2023 Registered Direct warrant issuance	4,280
July 2023 Registered Direct warrant issuance	2,645
Gain recognized in earnings from change in fair value	(6,164)
Balance as of December 31, 2023	$ 4,359

The fair value of the Liability Warrants are as follows:

	December 31, 2023	December 31, 2022
Public Warrants	$ 575	$ 1,006
Sponsor Warrants	60	1,190
2023 Registered Direct Warrants	3,016	—
May 2022 PIPE Warrants	708	1,402
Total	$ 4,359	$ 3,598

Significant inputs for the Sponsor Warrants are as follows:

	December 31, 2023	December 31, 2022
Common share price	$ 2.47	$ 12.90
Exercise price	$ 115.00	$ 115.00
Dividend yield	0%	0%
Term (years)	2.5	3.5
Risk-free interest rate	4.12%	4.16%
Volatility	100.7%	75.0%

Significant inputs for the May 2022 PIPE Warrants and the 2023 Registered Direct Warrants are as follows:

	December 31, 2023	December 31, 2022
Common share price	$ 2.47	$ 12.90
Exercise price	$ 3.50 - 7.50	$ 82.5
Dividend yield	0%	0%
Term (years)	5.03 - 5.34	4.4
Risk-free interest rate	4.60%	3.99%
Volatility	97.0%	81.2%

Valuation of the Note Receivable

The convertible note receivable was received in connection with the disposition of the UltraMIST/MIST business in 2020. At any time on or after January 1, 2021, at the sole discretion of the Company, amounts outstanding under the convertible note receivable (including accrued interest) may be converted into Sanuwave common stock at a defined rate. The convertible promissory note was to be paid on or before August 6, 2021, however, remains outstanding in full as of December 31, 2023 and 2022. The fair value of this note was based on a bond valuation which employs a credit default model. The Company utilized Level 3 inputs on a probability weighted model based on outcomes of a default, repayment and conversion of the note. The measurement is based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions.

Significant inputs for the convertible note valuation model are as follows:

	December 31, 2023	December 31, 2022
Face value	$ 4,000	$ 4,000
Coupon rate	12% - 17%	12% - 17%
Stock price	$ 0.2	$ 0.2
Term (years)	0.51-2.45	1.01 - 3.45
Risk-free interest rate	5.47%	4.73%
Volatility	n/a	n/a

On December 18, 2023, the Company entered into a forbearance agreement with Sanuwave ("Sanuwave Forbearance Agreement"). Per the agreement, from the period from December 18, 2023 to the earliest of (i) February 28, 2024, (ii) the commencement of bankruptcy proceeds for Sanuwave pursuant to the U.S. Bankruptcy Code, (iii) the occurrence of an event of default other than payment default, (iv) the failure of Sanuwave to comply with any term, condition or covenant set forth in the agreement, the Company agrees that it will not, exercise any remedy available to it under the Convertible Note Receivable, excluding the right to increase the interest rate. As collateral for payments owed to Palantir, the Company assigned the Sanuwave convertible note in the event of default (see Note 11). On May 10, 2024, the Company entered into a letter agreement with Sanuwave to extend the forbearance period from February 28, 2024 to June 3, 2024. The letter agreement increased the total note payments to $2,175. Upon executing the letter agreement, Sanuwave made an initial note payment of $100 and on June 3, 2024 made a second note payment of $2,075 fully discharging all outstanding indebtedness under the note.

Valuation of the Contingent Stock Consideration

The contingent stock consideration liability at December 31, 2023, is comprised of the fair value of potential future issuance of Class A Common Stock to CariCord participating shareholders pursuant to a settlement agreement signed during the year ended December 31, 2021 (see Note 11). The fair value measurement of the contingent stock consideration obligation is determined using Level 3 inputs and is based on a probability-weighted expected return methodology ("PWERM"). The measurement is largely based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions. As of December 31, 2021, the applicable procurement targets were not probable of being achieved.

The following table presents a reconciliation of the contingent stock consideration obligation measured on a recurring basis using Level 3 inputs as of December 31, 2023 and 2022:

	Balance as of December 31, 2022	Net transfers in to (out of) Level 3	Purchases, settlements and other net	Fair value adjustments	Balance as of December 31, 2023
Liabilities:					
Contingent stock consideration	$ 186	$ —	$ —	$ (159)	$ 27

The fair value of the liability to issue future shares of Class A Common Stock was estimated by the Company at each reporting date using a PWERM based on various inputs and assumptions, including the Company's common share price, discount rates, and the probability of achieving specified future operational targets. The actual settlement of contingent stock consideration could differ from current estimates based on the actual achievement of these specified targets and movements in the Company's common share price.

At each reporting date, the Company revalues the contingent stock consideration obligation to estimated fair value and records changes in fair value as income or expense in the Company's consolidated statements of operations. Changes in the fair value of the contingent stock consideration obligation may result from changes in discount rates, changes in the Company's common share price, and changes in probability assumptions with respect to the likelihood of achieving specified operational targets. The Company has classified all of the contingent stock consideration within accrued expenses and other current liabilities in the consolidated balance sheets as of December 31, 2023. See Note 11, "Commitments and Contingencies", for more information on contingent stock consideration.

Valuation of Short-Term Debt - Yorkville

The Company elected the fair value option to account for the financial instrument with Yorkville signed on September 15, 2022 (see Note 9). As of December 31, 2023, due to the short term nature of the debt, the fair value approximates the settlement amount which was fully paid on January 17, 2024. As of December 31, 2022, the estimate of the fair value was determined using a binomial lattice model. The fair value measurement of the debt is determined using Level 3 inputs and assumptions unobservable in the market. Changes in the fair value of debt that is accounted for at fair value, inclusive of related accrued interest expense, are presented as gains or losses in the accompanying consolidated statements of operations and comprehensive income (loss) under change in fair value of debt. The portion of total changes in fair value of debt attributable to changes in instrument-specific credit risk are determined through specific measurement of periodic changes in the discount rate assumption exclusive of base market changes and are presented as a component of comprehensive income (loss) in the accompanying consolidated statements of operations and comprehensive income (loss). The actual settlement of the short-term debt could differ from current estimates based on the timing of when and if Yorkville elects to convert amounts into common shares, potential cash repayment by the Company prior to maturity, and movements in the Company's common share price.

The following table presents a reconciliation of the Yorkville debt measured on a recurring basis using Level 3 inputs as of the initial valuation date of September 15, 2022 and as of December 31, 2023:

Liabilities:	
Balance as of December 31, 2022	$ 37,603
Conversion of debt into common shares	(4,599)
Principal repayments	(16,811)
Fair value adjustment through earnings	354
Fair value adjustment through accumulated other comprehensive income	(146)
Fair value adjustment through interest accrual	822
Balance as of December 31, 2023	$ 17,223

The Yorkville debt was settled on January 17, 2024, the loan was paid in full. Due to the short term nature, the fair value of the debt as of December 31, 2023 was deemed to be settlement amount.

Significant inputs for the Yorkville short-term debt valuation model as of December 31, 2022 were as follows:

	December 31, 2022
Common share price	$ 12.90
Credit spread	13.71%
Dividend yield	0%
Term (years)	0.71
Risk-free interest rate	4.75%
Volatility	45.0%
Discount yield	18.46%

4. Inventory

The Company's major classes of inventories were as follows:

	December 31, 2023	December 31, 2022
Raw materials	$ 3,081	$ 7,719
Work in progress	10,696	12,381
Finished goods	10,922	9,256
Inventory, gross	24,699	29,356
Less: inventory reserves	(2,289)	(1,099)
Inventory, net	$ 22,410	$ 28,257
Balance Sheet Classification:		
Inventory	5,753	5,308
Inventory, net of current portion	16,657	22,949
	$ 22,410	$ 28,257

Inventory, net of current portion includes inventory expected to remain on-hand beyond one year from each balance sheet date presented.

The Company recognized a $5,384 inventory impairment charge during the year ended December 31, 2023 in the consolidated statements of operations due to lower of cost or market adjustments of $2,129 for finished goods and $3,255 for work in progress. No inventory impairment was recognized during the year ended December 31, 2022.

A schedule of the activity in the inventory reserves is as follows:

Balance at January 1, 2022	$ 48
Additions for obsolete inventory	1,051
Balance at December 31, 2022	1,099
Additions for obsolete inventory	7,627
Write-offs	(6,437)
Balance at December 31, 2023	$ 2,289

5. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following:

	December 31,	
	2023	2022
Prepaid clinical expenses	$ 688	$ 5,836
Prepaid insurance expense	678	377
Other	329	1,049
	$ 1,695	$ 7,262

6. Property and Equipment, Net

Property and equipment, net consisted of the following:

	December 31,	
	2023	2022
Leasehold improvements	$ 73,211	$ 70,113
Laboratory and production equipment	14,093	14,433
Machinery, equipment and fixtures	7,781	7,780
Construction in progress	21	3,660
Property and equipment	95,106	95,986
Less: Accumulated depreciation and amortization	(27,278)	(20,331)
Property and equipment, net	$ 67,828	$ 75,655

Depreciation expense was $7,131 and $7,243 for the years ended December 31, 2023 and 2022 respectively.

7. Goodwill and Intangible Assets, Net

The Company performs its annual goodwill impairment test in the fourth quarter of every year for all of our reporting units, and more frequently if events or circumstances indicate a potential impairment. During the quarter ended December 31, 2023, management identified various qualitative and quantitative factors which collectively indicated a triggering event had occurred and performed an impairment test. Based on the results of the impairment analysis, the Degenerative Disease reporting unit had a carrying amount that exceeded its fair value due to lower forecasted sales and growth and it was determined that all of the goodwill for the Degenerative Disease reporting unit was impaired as of December 31, 2023.

The Company tests its goodwill for impairment on an annual basis in the fourth quarter of each year for all of its reporting units, or more frequently if events or circumstances indicate a potential impairment. The Company manages its operations through an evaluation of three different operating segments: Cell Therapy, Degenerative Disease and BioBanking (see Note 18). The Company determined that the operating segments represented the reporting units.

During annual impairment tests and for any period in which the Company identifies an impairment trigger, the Company's methodology includes internally generated separate cash flow projections for each reporting unit based on the different drivers that affect each reporting unit. The Company compares the fair values of each of its reporting units to their respective carrying amounts. If the carrying value of the reporting unit exceeds its estimated fair value, a goodwill impairment charge is recorded for the difference, with the impairment loss limited to the total amount of goodwill allocated to that reporting unit. The fair values of each of the Company's reporting units were derived using the income approach, specifically the discounted cash flow method. The use of a discounted cash flow analysis requires significant judgment to estimate the future cash flows and the period of time over which those cash flows will be realized, as well as to determine the appropriate discount rate. The discounted cash flow model reflects management's assumptions regarding revenue growth rates, risk-adjusted discount rates, terminal period growth rates, economic and market trends, and other expectations about the anticipated operating results of the Company's reporting units. As part of the goodwill impairment test, the Company also considers its market capitalization in assessing the reasonableness of the combined fair values estimated for its reporting units. Substantial changes in the cash flows assumptions of the different reporting units may lead to a future impairment or may alter the implied distribution of value between the different reporting units. A material decline in the Company's stock price may affect the imputed discount rate and the distribution of value between the reporting units, which may also lead to a future impairment.

For the year ended December 31, 2023, the Company recognized $112,347 goodwill impairment charges.

During the first quarter 2023, as a result of a sustained decrease in its stock price and market capitalization, and its decision to cease recruitment in its GBM and HER2+ gastric trials, the Company tested for impairment due to these triggering events. Based on the results of the impairment analysis, the carrying value exceeded the fair value on the Cell Therapy reporting unit. The Company recognized a $29,633 goodwill impairment charge during the first quarter of 2023 in its condensed consolidated statements of operations.

During the second quarter of 2023, the Company's stock price and market capitalization continued to decline, and the Company also determined to cease active recruitment in its AML trial and halted all NK programs. The AML trial was the Company's most advanced clinical program with a relatively large addressable patient population given the high unmet medical need in relapsed and refractory AML. After the Company ceased recruitment, it removed all associated cash flows relating to that program including all other NK related programs as well. As a result of these triggering events, the Company fully impaired the IPR&D assets associated with these product candidates, and performed a goodwill impairment test on its Cell Therapy reporting unit. At June 30, 2023, the estimated fair value of the Cell Therapy reporting unit was determined to be at breakeven compared to the carrying value using a discount rate commensurate with the risks associated with the cash flows for preclinical product candidates. The Company also performed a reconciliation of the aggregate fair value of each reporting unit to the market capitalization of the Company. The analysis showed the fair value of the reporting units approximated our market capitalization, indicating an insignificant control premium. Based on the results of the impairment analysis, the Company did not recognize a goodwill impairment charge during the second quarter of 2023.

During the third quarter of 2023, the Company's stock price and market capitalization continued to further decline. The Company also elected to terminate development of CYCART-19 for B-cell malignancies during the quarter, as well as paused development in exosomes. Therefore, the Company tested for impairment due to these triggering events. Based on the results of the impairment analysis, the carrying value exceeded the fair value on the Cell Therapy reporting unit. The Company recognized a goodwill impairment charge for the remaining goodwill balance on the Cell Therapy reporting unit of $82,714 during the three months ended September 30, 2023 in its condensed consolidated statements of operations.

At December 31, 2023, the estimated fair value of the Biobanking reporting unit was substantially in excess of its book value. The relative stability of the expected cash flows of the Biobanking reporting unit makes an impairment of goodwill in the future less likely.

During the quarter ended December 31, 2022, management identified various qualitative and quantitative factors which collectively indicated a triggering event had occurred and performed an impairment test. Based on the results of the impairment analysis, the Degenerative Disease reporting unit had a carrying amount that exceeded its fair value due to lower forecasted sales and growth and it was determined that all of the goodwill, $3,610, for the Degenerative Disease reporting unit was impaired as of December 31, 2022.

The carrying values of goodwill assigned to the Company's reporting units are as follows:

	Cell Therapy	Degenerative Disease	Biobanking	Total
Balance at December 31, 2021	$ 112,347	$ 3,610	$ 7,347	$ 123,304
Impairment	—	(3,610)	—	(3,610)
Balance at December 31, 2022	$ 112,347	$ —	$ 7,347	$ 119,694
Impairment	(112,347)	—	—	(112,347)
Balance at December 31, 2023	$ —	$ —	$ 7,347	$ 7,347

Intangible Assets, Net

Intangible assets, net consisted of the following:

	December 31, 2023	December 31, 2022	Estimated Useful Lives
Amortizable intangible assets:			

Developed technology	$ 16,810	$ 16,810	11 – 16 years
Customer relationships	2,413	2,413	10 years
Trade names & trademarks	570	570	10 – 13 years
Reacquired rights	4,200	4,200	6 years
	23,993	23,993	
Less: accumulated amortization			
Developed technology	(7,722)	(6,549)	
Customer relationships	(1,700)	(1,435)	
Trade names & trademarks	(330)	(275)	
Reacquired rights	(3,940)	(3,240)	
	(13,692)	(11,499)	
Amortizable intangible assets, net	10,301	12,494	
Non-amortized intangible assets			
Acquired IPR&D product rights	700	108,500	indefinite
	$ 11,001	$ 120,994	

Amortization expense for intangible assets was $2,193 and $2,193 for the years ended December 31, 2023 and 2022, respectively.

Aggregate amortization expense for each of the five succeeding years related to intangible assets held as of December 31, 2023 is estimated as follows:

2024	$ 1,753
2025	$ 1,493
2026	$ 1,356
2027	$ 1,258
2028	$ 1,208

8. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following:

	December 31,	
	2023	2022
Accrued clinical trial expense	$ 189	$ 2,659
Accrued professional fees	573	880
Accrued wages, bonuses, commissions and vacation	3,011	2,576
Accruals for construction in progress	214	322
Accrued compliance fee	1,145	—
Other	2,448	2,632
	$ 7,580	$ 9,069

9. Debt

Short-Term Debt - Yorkville

On September 15, 2022, the Company entered into a Pre-Paid Advance Agreement ("PPA") with Yorkville, pursuant to which the Company may request advances of up to $ 40,000 in cash from Yorkville (or such greater amount that the parties may mutually agree) (each, a "Pre-Paid Advance") over an 18-month period, with an aggregate limitation of $150,000. Pre-Paid Advances are issued at a 2% discount, bear interest at an annual rate equal to 6% (increased to 15% in the event of default as described in the PPA) and may be offset by the issuance of shares of common stock, at Yorkville's option, at a price per share calculated pursuant to the PPA, which in no event will be less than $ 7.50 per share. The issuance of the shares under the PPA is subject to certain limitations, including that the aggregate number of shares of common stock issued pursuant to the PPA cannot exceed 19.9% of the Company's outstanding stock as of September 15, 2022, as well as a beneficial ownership limitation of 4.99%. Further, Yorkville agreed not to purchase any shares of common stock for 60 days following entry into the PPA, nor may Yorkville purchase more than $ 6,000 of shares of common stock during a 30-day period, in each case at a price per share less than the Fixed Price, as defined in the PPA. In the event the daily volume weighted average price ("VWAP") of the Class A common stock is below $7.50 (the "floor price") for any five of seven consecutive trading days, the Company will pay Yorkville a monthly cash payment of $6,000, plus any accrued and unpaid interest along with a 5.0% redemption premium until such time as the daily VWAP for five consecutive trading days immediately prior to the due date of the next monthly payment is at least 10% greater than $7.50.

In connection with the entry into the PPA, the Company received the initial Pre-Paid Advance of $40,000 gross or $39,200 net of discount. Each Pre-Paid Advance has a maturity of 12 months. Further Pre-Paid Advances will be based upon the mutual agreement of the parties. Direct costs and fees related to the PPA were recognized in earnings. At issuance, the Company concluded that certain features of the PPA would be considered a derivative that would require bifurcation. In lieu of bifurcation, the Company elected the fair value option for this financial instrument and will record changes in fair value within the statements of operations and comprehensive income (loss) at the end of each reporting period. Under the fair value option, upon derecognition the Company will include in net income the cumulative amount of the gain or loss on the debt that resulted from changes in instrument-specific credit risk.

During the year ended December 31, 2023, Yorkville elected to convert $3,889 of principal and $400 of accrued interest into 559,481 shares of common stock and $155 was recognized in earnings from changes in instrument-specific credit risk. As of December 31, 2023, the fair value of the debt was $17,223 and the principal balance was $16,623. As of December 31, 2022, the fair value of the debt was $37,603 and the principal balance was $37,000. Refer to Note 3 for additional details regarding the fair value measurement.

On February 22, 2023, Yorkville provided notice to the Company that a "triggering event" under the terms of the PPA occurred on February 21, 2023 and approximately $6,500 was due to Yorkville consisting of principal, accrued interest, and redemption premium of 5% of the principal amount being paid (collectively the "repayment amount").

On March 24, 2023, the Company paid $1,950 of the repayment amount owed to Yorkville towards the first trigger payment.

In April 2023, the Company and Yorkville agreed that Yorkville would not accelerate any amounts outstanding under the PPA provided that (i) the Company pays the remaining balance on the first trigger payment of approximately $4,600 within two business days of closing a financing transaction, but in any event no later than April 14, 2023; and (ii) the Company pays in full the payment due on the second trigger payment of approximately $6,500 within two business days of closing a financing transaction, but in any event no later than May 14, 2023. On April 11, 2023, the Company used the net proceeds of $5,500 from a registered direct offering to pay in full the remaining balance on the first trigger payment and approximately $900 was applied towards the second trigger payment.

On May 16, 2023, the Company used the net proceeds from the RWI Bridge Loan (as defined below) to repay the remaining balance on the second trigger payment for approximately $5,600.

Further, on June 21, 2023, the Company used the net proceeds from the Amended RWI Loan (as defined below) to repay $5,700 towards the third trigger payment at which point payments due under the triggering event were satisfied. During the year December 31, 2023, total repayments to Yorkville were $18,724 which consisted of (i) $16,811 applied to the principal amount; (ii) $1,073 towards accrued interest; and (iii) $840 of redemption premium. In connection with the Company's 2023 annual stockholder meeting held in June 2023, the Company and Yorkville agreed to lower the floor price to $0.50 (the "amended floor price"). The Company also received stockholder approval of the proposal for the issuance of more than 20% of its pre-transaction Class A common stock outstanding at a price below the minimum price pursuant to the PPA. Further, absent prior written consent from Yorkville, the Company agreed it will not increase the size or amount borrowed under the C.V. Starr loan facility nor will not incur other borrowings or liens of any kind as long as any amounts are due and remain outstanding to Yorkville until paid in full. The Company agreed that all obligations due and owing to Yorkville will become secured obligations upon any violation under the PPA.

On August 2, 2023, Yorkville provided notice to the Company that a "triggering event" under the term of the PPA occurred on August 1, 2023. The Company was not able to make the August trigger payment of $6,340 when due.

On September 18, 2023, the Company and Yorkville entered into a letter agreement to extend the maturity date of the PPA to December 31, 2023, and Yorkville agreed not to declare an event of default, as defined in the PPA, until January 1, 2024. The Company further agreed to issue 270,730 shares of the Company's Class A common stock to Yorkville, and recognized an expense of $ 712 within other income (expense) on the consolidated statements of operations. Additionally, the Company was required to pay Yorkville $2,000 on or prior to October 5, 2023 and an additional $500 on or before October 31, 2023. The Company was not able to make the required payments.

On January 12, 2024, the Company and Yorkville entered into a forbearance agreement ("Forbearance Agreement") in which Yorkville agreed to restrain from enforcing its rights and remedies as a result of the event of default during the forbearance period. The forbearance period shall continue until the earliest of the January 19, 2024 or the date the Company fully repaid all amounts outstanding under the PPA ("Forbearance Period"). During the Forbearance Period, interest shall accrue at 15% per annum. In addition, the Company shall make a cash payment of $17,348 plus per diem interest of $7 for each day after January 12, 2024 until payment is made and shall issue Yorkville a total of 100,000 shares of its common stock. The PPA loan was paid in full on January 17, 2024. On January 12, 2024, the Company issued Yorkville 100,000 of its common stock.

On March 13, 2024, the Company entered into a Standby Equity Purchase Agreement ("SEPA") with Yorkville (Note 12).

Upon entry into the SEPA, the Company issued Yorkville a $3.15 million convertible promissory note for $2.99 million in cash (after a 5% original issue discount). The note bears interest at an annual rate equal to 8.0% (increased to 18.0% in the event of default as provided in the note), and matures March 13, 2025. Yorkville may convert the note into common stock at a price per share equal to $6.3171, provided however, on the earlier of (a) the fifth trading day following the effective date of the resale shelf, or (b) August 13, 2024, the conversion price will be the volume weighted average price ("VWAP") of the common stock on Nasdaq during the five consecutive trading days immediately prior to the conversion price reset date, subject to a floor price of $2.4898 per share. Upon the occurrence and during the continuation of an event of default (as defined in the note), the note (including accrued interest) will become immediately due and payable. The issuance of the common stock upon conversion of the note and otherwise under the SEPA is capped at 19.9% of the outstanding common stock as of March 13, 2024. Further, the note and SEPA include a beneficial ownership blocker for Yorkville such that Yorkville may not be deemed the beneficial owner of more than 4.99% of the Common Stock.

Short-Term Debt - Other and Related Party

On August 21, 2023, the Company entered into a loan agreement with its Chairman and Chief Executive Officer, Dr. Robert Hariri, and two unaffiliated lenders, providing for a loan in the aggregate principal amount of $3,000 (of which Dr. Hariri contributed $1,000), or the "Loan". The Loan bears interest at a rate of 15% per year, with the first year of interest being paid in kind on the last day of each month and matures on August 21, 2024. Pursuant to the terms of the Loan, the Company is required to apply the net proceeds from a subsequent transaction (as defined) in which the Company receives gross proceeds of $4,500 or more to repay the Loan. The Company did not repay the Loan upon receipt of the letter of credit funds which was defined as a subsequent transaction in connection with signing the lease amendment (See Note 10). The lenders have not demanded repayment as of the issuance date. The carrying amount of the Loan was deemed to approximate fair value.

On October 12, 2023, in order to further address the Company's immediate working capital requirements, Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, and the Company signed a promissory note ("CEO Promissory Note") for $285 which bears interest at a rate of 15.0% per year. The CEO Promissory Note matures together with the outstanding principal amount and accrued and unpaid interest upon the earlier of twelve months from the date of the note or upon a change of control. The carrying amount of the Loan was deemed to approximate fair value.

As of December 31, 2023, the carrying value of the Loan and the CEO Promissory Note inclusive of accrued interest is $3,527 of which $1,419 is shown as other short-term - related party due to Dr. Hariri and $2,108 shown as other short-term debt on the consolidated balance sheets.

Short-Term Debt – Related Parties - C.V. Starr and RWI

C.V. Starr & Co., Inc

On March 17, 2023, the Company entered into a loan agreement (the "Starr Bridge Loan") with C.V. Starr & Co., Inc. ("C.V. Starr"), a stockholder of the Company, for an aggregate principal amount of $ 5,000 net of an original issue discount of $100. The loan bears interest at a rate equal to 12.0% per year or 15.0% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matures on March 17, 2025. In addition, the parties entered into a warrant agreement to acquire up to an aggregate 75,000 shares of Class A common stock ("Starr Warrant"), at a purchase price of $ 1.25 per whole share underlying the Starr Warrant or $94. The Starr Warrant has a five-year term and an exercise price of $7.10 per share.

In June 2023, in connection with the Amended RWI Loan (as defined below), the Company granted C.V. Starr additional warrants to acquire up to an aggregate 50,000 shares of its Class A common stock, which additional warrants have a 5-year term and an exercise price of $8.10 per share. The Company applied the guidance for this transaction in accordance with *ASC 470-20, Debt with Conversion and Other Options* and *ASC 815, Derivatives and Hedging*. The net proceeds of the Starr Bridge Loan and Starr Warrants were recorded at fair value. The fair value of the Starr Warrants was determined using a Black-Scholes option pricing model. The Starr Warrants met the requirements for a derivative scope exception under *ASC 815-10-15-74(a)* for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. The carrying amount of the Starr Bridge Loan was deemed to approximate fair value. As of December 31, 2023, the carrying value of Starr Bridge Loan inclusive of accrued interest is $5,523 on the consolidated balance sheets.

Under the terms of the Starr Bridge Loan, the Company agreed to customary negative covenants restricting its ability to repay indebtedness, pay dividends to stockholders, repay or incur other indebtedness other than as permitted, grant or suffer to exist a security interest in any of the Company's assets, other than as permitted, or hold cash and cash equivalents less than $3,000 for more than five consecutive business days. During the year ended December 31, 2023, the Company's cash and cash equivalents fell below the $3,000 minimum liquidity covenant, which per the terms of the loan agreement caused an event of default. Therefore, the Company reclassified the loan as a current liability reflected within short-term debt - related parties on the consolidated balance sheets as of December 31, 2023.

On January 12, 2024, the Company entered into an amendment ("Starr Bridge First Amendment"), which terminated the minimum $3,000 liquidity covenant requirement. In addition to the negative covenants in the Starr Bridge Loan, the Starr Bridge Loan includes customary events of default and the Company granted C.V. Starr a senior security interest in all of its assets, pari passu with RWI (as defined below).

On March 13, 2024, the Company and C.V. Starr, entered into a forbearance agreement ("Starr Forbearance Agreement"), with respect to the Starr Bridge Loan. Under the Starr Forbearance Agreement, (i) Starr agreed not to exercise its rights and remedies upon the occurrence of any default under the Starr Loan Agreement until the Company's obligations in respect of the Yorkville convertible note have been indefeasibly paid in full, (ii) Starr consented to the Company's incurrence of indebtedness under the Yorkville convertible note, (iii) Starr consented to cash payments required to be made under the SEPA and the Yorkville convertible note, (iv) the Company agreed to increase the interest rate on the loan outstanding under the Starr Bridge Loan by 100 basis points and (v) the Company agreed to amend the exercise price of (x) that certain warrant to acquire 75,000 shares of the Company's common stock for $7.10 per share, expiring March 17, 2028, and (y) that certain warrant to acquire 50,000 shares of Common Stock for $8.10 per share expiring June 20, 2028, each of which are held by Starr, such that the exercise price of each such warrant in (x) and (y) is $5.895 per share. In addition, the interest rate of the Starr Bridge Loan was increased to 13% per annum.

Resorts World Inc Pte Ltd

On May 16, 2023, with written consent provided by Yorkville, the Company entered into a senior secured loan agreement ("RWI Bridge Loan") with Resorts World Inc Pte Ltd, ("RWI") providing for an initial loan in the aggregate principal amount of $6,000 net of an original issue discount of $120, which bears interest at a rate of 12.5% per year or 15.5% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matured on June 14, 2023.

On June 21, 2023, the Company closed on an amended and restated senior secured loan agreement ("Amended RWI Loan"), to amend and restate the previous senior secured loan agreement, in its entirety. The Amended RWI Loan provided for an additional loan in the aggregate principal amount of $6,000 net of an original issue discount of $678, which bears interest at a rate of 12.5% per year or 15.5% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matures March 17, 2025. The Amended RWI Loan extended the maturity date of the initial loan to March 17, 2025. In addition, the Amended RWI Loan provided for the issuance of warrants to acquire up to an aggregate of 300,000 shares of the Company's Class A common stock ("RWI Warrants"), at a purchase price of $ 1.25 per whole share underlying the RWI Warrant (or an aggregate purchase price of $375). The RWI Warrant has a 5-year term and an exercise price of $8.10 per share.

The Company applied the guidance for this transaction in accordance with *ASC 470-20, Debt with Conversion and Other Options* and *ASC 815, Derivatives and Hedging*. The net proceeds of the Amended RWI Loan and RWI Warrants were recorded at fair value, which resulted in a total discount of $2,151 based on the difference between the proceeds and fair value which were recorded as a loss within other income (expense) on the consolidated statements of operations. The fair value of the RWI Warrants was determined using a Black-Scholes option pricing model. The RWI Warrants met the requirements for a derivative scope exception under *ASC 815-10-15-74(a)* for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. The carrying amount of the Amended RWI Loan was deemed to approximate fair value. As of December 31, 2023, the carrying value of Amended RWI Loan inclusive of accrued interest is $12,967 on the consolidated balance sheets.

Pursuant to the terms of the Amended RWI Loan, the Company was required to apply the net proceeds to the trigger payments due to Yorkville pursuant to the PPA. RWI is affiliated with Lim Kok Thay, a former member of the Company's board of directors. In addition, the Company agreed to customary negative covenants restricting its ability to repay indebtedness, pay dividends to stockholders, repay or incur other indebtedness other than as permitted, grant or suffer to exist a security interest in any of its assets, other than as permitted, or hold cash and cash equivalents less than $3,000 for more than five consecutive business days, and includes customary events of default. The Company granted RWI a senior security interest in all of its assets, pari passu with C.V. Starr pursuant to the Starr Bridge Loan. The Company and RWI signed a forbearance agreement on September 14, 2023, whereby RWI agreed to forebear any action under the terms of the RWI Bridge Loan in relation to the minimum $3,000 liquidity covenant and with respect to any potential default in relation to the Company's outstanding debt owed to Yorkville until December 31, 2023. The Company reclassified the loan as a current liability reflected within short-term debt - related parties - C.V. Starr and RWI on the consolidated balance sheets as of December 31, 2023.

Pursuant to the amendment on January 12, 2024, see below, the amendment terminated the minimum $3,000 liquidity covenant requirement.

On January 12, 2024, the Company entered into a second amended and restated senior secured loan agreement ("RWI Second Amended Bridge Loan"), to amend and restate the previously announced senior secured loan agreement with RWI dated as of May 16, 2023, as amended on June 20, 2023, in its entirety. The RWI Second Amended Bridge Loan provided for an additional loan in the aggregate principal amount of $15,000 net of an original issue discount of $3,750, which bears interest at a rate of 12.5% per year, with the first year of interest being paid in kind on the last day of each month, and matures July 16, 2025. In addition, the RWI Second Amended Bridge Loan provides for the issuance of a 5-year immediately exercisable warrant to acquire up to 1,650,000 shares of Class A common stock ("Tranche 1 Warrant"), and a warrant to acquire up to 1,350,000 shares of Class A common stock, which will only be exercisable upon the later of (x) stockholder approval for Nasdaq purposes of its exercise price, (y) CFIUS clearance and (z) six months from issuance date ("Tranche 2 Warrant") and will expire 5 years after it becomes exercisable. The Tranche 1 Warrant and Tranche 2 Warrant were each issued on January 16, 2024, and the Tranche 1 Warrant has an exercise price of $2.4898 per share, and the Tranche 2 Warrant will have an exercise price equal to "Minimum Price" (as determined pursuant to Nasdaq 5635(d)) on the date it becomes exercisable. The Company closed the RWI Second Amended Bridge Loan and the sale and purchase of the Tranche 1 Warrant and Tranche 2 Warrant on January 16, 2024.

Pursuant to the terms of the RWI Second Amended Bridge Loan, the Company was required to apply the proceeds of the additional loan (i) to the payment in full of all outstanding amounts owed to Yorkville under the PPA, (ii) to the payment of invoices of certain critical vendors, (iii) to the first settlement payment owed to Palantir Technologies, Inc., and (iv) for working capital and other purposes pre-approved by RWI. Pursuant to the terms of the RWI Second Amended Bridge Loan, the Company agreed to customary negative covenants restricting its ability to pay dividends to stockholders, repay or incur other indebtedness other than as permitted, or grant or suffer to exist a security interest in any of the Company's assets, other than as permitted. In addition, the Company agreed to apply net revenues received through the sale of our products/provision of services in connection with or related to its distribution and manufacturing agreement with Genting Innovation Pte Ltd ("Genting Innovation"), a related party, as a prepayment towards the loan.

On March 13, 2024, the Company and RWI entered into a second forbearance agreement ("RWI 2nd Forbearance Agreement"). Under the RWI 2nd Forbearance Agreement, (i) RWI agreed not to exercise its rights and remedies upon the occurrence of any default under the RWI Loan Agreement until the Company's obligations in respect of the Yorkville convertible note have been indefeasibly paid in full or March 13, 2025, whichever occurs first, (ii) RWI consented to the Company's incurrence of indebtedness under the Yorkville convertible note, (iii) RWI consented to cash payments required to be made under the SEPA and the Yorkville convertible note, (iv) the Company agreed to increase the interest rate on the loan outstanding under the RWI Loan Agreement by 100 basis points and (v) the Company agreed to issue RWI a warrant to acquire up to 300,000 shares of Common Stock ("RWI New Warrant"), which expires June 20, 2028 and has an exercise price of $5.895 per share.

10. Leases

Lease Agreements

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The Company's lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. In determining the present value of lease payments, the Company uses its incremental borrowing rate based on the information available at the lease commencement date to determine the appropriate discount rate by multiple asset classes. Variable lease payments that are not based on an index or that result from changes to an index subsequent to the initial measurement of the corresponding lease liability are not included in the measurement of lease ROU assets or liabilities and instead are recognized in earnings in the period in which the obligation for those payments is incurred. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise any such options. Lease expense is recognized on a straight-line basis over the expected lease term. Lease expense was $3,750 and $3,803 for the years ended December 31, 2023 and 2022, respectively.

On March 13, 2019, Legacy Celularity entered into a lease agreement for a 147,215 square foot facility consisting of office, manufacturing and laboratory space in Florham Park, New Jersey, which expires in 2036. The Company has the option to renew the term of the lease for two additional five-year terms so long as the lease is then in full force and effect. The lease term commenced on March 1, 2020 subject to an abatement of the fixed rent for the first 13 months following the lease commencement date. The initial monthly base rent is approximately $230 and will increase annually. The Company is obligated to pay real estate taxes and costs related to the premises, including costs of operations, maintenance, repair, replacement and management of the new leased premises. In connection with entering into this lease agreement, Legacy Celularity issued a letter of credit of $14,722 which is classified as restricted cash (non-current) on the consolidated balance sheets as of December 31, 2023 and 2022. The lease agreement allows for a landlord provided tenant improvement allowance of $14,722 to be applied to the costs of the construction of the leasehold improvements.

On September 14, 2023, the Company entered into a lease amendment on the Company's Florham Park, New Jersey facility to reduce the letter of credit by approximately $4,900 for a new letter of credit in the amount of $9,883 in exchange for higher base rental payments of approximately $400 per year, effective October 1, 2023. The new letter of credit account settled on October 17, 2023, and reduced the Company's restricted cash allowing for funds to be used for general corporate purposes. The Company evaluates changes to the terms and conditions of a lease contract to determine if they result in a new lease or a modification of an existing lease. The Company accounted for the lease amendment as a modification since the change in lease payments did not represent additional ROU assets. The Company reassessed the IBR, remeasured the lease liability and ROU asset on the modification date of September 14, 2023. As a result, the Company recorded a decrease to the ROU asset and related lease liability in the amount of $2,083 on the consolidated balance sheets reflecting a higher IBR due to lower Company credit rating.

The components of the Company's lease costs are classified on its consolidated statements of operations as follows:

	Year Ended December 31,	
	2023	2022
Operating lease cost	$ 3,256	$ 3,038
Variable lease cost	1,132	1,598
Total operating lease cost	$ 4,388	$ 4,636
Short term lease cost	$ -	$ 126

The table below shows the cash and non-cash activity related to the Company's lease liabilities during the year ended December 31, 2023:

	Year Ended December 31,	
	2023	2022
Cash paid related to lease liabilities:		
Operating cash flows from operating leases	$ 2,995	$ 2,834
Non-cash lease liability activity:		
Right-of-use assets obtained in exchange for lease obligations:		
Operating leases	$ -	$ -

As of December 31, 2023, the maturities of the Company's operating lease liabilities were as follows:

2024	$ 3,378
2025	3,452
2026	3,526
2027	3,599
2028	3,673
Thereafter	84,568
Total lease payments	102,196
Less imputed interest	(76,019)
Total	$ 26,177

As of December 31, 2023, the weighted average remaining lease term of the Company's operating lease was 22.3 years, and the weighted average discount rate used to determine the lease liability for the operating lease was 14.24%.

11. Commitments and Contingencies

Contingent Consideration Related to Business Combinations

In connection with the Company's acquisition of HLI Cellular Therapeutics, LLC and Anthrogenesis, the Company has agreed to pay future consideration to the sellers upon the achievement of certain regulatory and commercial milestones. As a result, the Company recorded $1,606 and $105,945 as contingent consideration as of December 31, 2023 and 2022, respectively. During 2023, the Company discontinued its unmodified NK cell and AML Cell Therapy clinical trials subject to the contingent consideration agreement under the Anthrogenesis acquisition, and as a result the fair value of the contingent consideration obligation has decreased significantly as of December 31, 2023. Due to the contingent nature of these milestone and royalty payments, there is a high degree of management estimates that determine the fair value of the contingent consideration. See Note 3 for further discussion.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors and its executive officers that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not currently aware of any indemnification claims and has not accrued any liabilities related to such obligations in its consolidated financial statements as of December 31, 2023 and 2022.

Agreement with Palantir Technologies Inc.

On May 5, 2021, Legacy Celularity executed a Master Subscription Agreement ("MSA") with Palantir under which it will pay $40,000 over five years for access to Palantir's Foundry platform along with certain professional services. The Company intended to utilize Palantir's Foundry platform to secure deeper insights into data obtained from the Company's discovery and process development, as well as manufacturing and biorepository operations. In January 2023, the Company ceased use of the software and provided a notice of dispute to Palantir on the basis that the software had not performed as promised and that Palantir had failed to provide the Company with the professional services necessary to successfully implement, integrate and enable the Foundry platform. As a result, in accordance with ASC 420 Exit or Disposal Costs, during the quarter ended March 31, 2023, the Company recognized the remaining related cease-use costs liability estimated based on the discounted future cash flows of contract payments for $24,402 which was included as software cease-use costs in the consolidated statements of operations. On May 6, 2024, the Company entered into an amended letter agreement with Palantir such that if the Company paid Palantir the settlement fees of $3,500, less any amounts previously paid, no later than June 3, 2024, the parties would cease the arbitration and deem the original MSA terminated. The Company made the required payments prior to June 3, 2024, and on June 4, 2024, the parties dismissed all claims and counterclaims. Accordingly, the Company reversed previously recognized costs in excess of the final settlement amount. The Company has a current liability for accrued R&D software on the consolidated balance sheets of $3,500 and $7,333 as of December 31, 2023 and 2022, respectively. For the year ended December 31, 2022, the Company recorded $8,000, which was on a straight-line basis, which was included as a component of research and development expense in the consolidated statements of operations.

Sirion License Agreement

In December 2021, the Company entered into a license agreement ("Sirion License") with Sirion Biotech GmbH ("Sirion"). Under the Sirion License, Sirion granted the Company a license related to patent rights and know-how associated with poloxamers ("Licensed Product"). As part of the Sirion License, the Company paid Sirion $136 as an upfront fee, a $113 annual maintenance fee and may owe up to $5,099 million related to clinical and regulatory milestones for each Licensed Product during the term. The Company also agreed to pay Sirion low-single digit royalties on net sales on a Licensed Product-by-Licensed Product and country-by-country basis and until the later of: (i) expiration of the last to expire valid claim of the patents covering such Licensed Product, and (ii) 10 years after first Commercial Sale of a Licensed Product. In addition, the Sirion License is subject to termination rights including for termination for material breach and by the Company for convenience upon 30 days written notice. During the year ended December 31, 2023, no milestones have been achieved.

Legal Proceedings

At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses as incurred the costs related to such legal proceedings.

Civil Investigative Demand

The Company received a Civil Investigative Demand (the "Demand") under the False Claims Act, 31 U.S.C. § 3729, dated August 14, 2022, from the U.S. Attorney's Office for the Eastern District of Pennsylvania. The Demand requests documents and information relating to claims submitted to Medicare, Medicaid, or other federal insurers for services or procedures involving injectable human tissue therapy products derived from amniotic fluid or birth tissue and includes Interfyl. The Company is cooperating with the request and is engaged in an ongoing dialogue with the Assistant U.S. Attorneys handling the Demand. The matter is still in preliminary stages and there is uncertainty as to whether the Demand will result in any liability.

Arbitration Demand from Palantir Technologies Inc.

On April 20, 2023, Palantir Technologies Inc. ("Palantir"), commenced an arbitration with JAMS Arbitration asserting claims for declaratory relief and breach of contract relating to the May 5, 2021 Master Service Agreement (the "Palantir MSA"), seeking damages in an amount equal to the full value of the contract. The Company has responded to the arbitration demand and asserted counterclaims for breach of contract, breach of warranty, fraudulent inducement, violation of California's Unfair Competition Law, amongst others, in relation to the Palantir MSA.

On December 21, 2023, the Company and Palantir entered into a settlement and release agreement pursuant to the JAMS arbitration proceeding asserting claims for declaratory relief and breach of contract relating to the Palantir MSA. Both parties agreed to dismiss the arbitration proceeding and dispute and provide for mutual releases upon the Company's satisfaction of a settlement payment obligation. Through June 3, 2024, the Company made total settlement payments of $3.5 million and issued Palantir an aggregate of 60,584 shares of the Company's Class A common stock as consideration for further amendments to the settlement and release agreement. On June 4, 2024, the parties dismissed all claims and counterclaims. The MSA with Palantir is now fully terminated and neither party has any further rights or obligations thereunder. The shares of the Company's Class A common stock issued to Palantir were issued with piggyback registration rights. Resale of such shares by Palantir shall be included on any future registration statement filed by the Company.

Celularity Inc. v. Evolution Biologyx, LLC, et al.

On April 17, 2023, the Company filed a complaint against Evolution Biologyx, LLC, Saleem S. Saab, individually, and Encyte, LLC (collectively, "Evolution") in the United States District Court for the District of New Jersey to recover unpaid invoice amounts for the sale of its biomaterial products in the amount of approximately $2.35 million, plus interest. In September 2021, the Company executed a distribution agreement with Evolution, whereupon Evolution purchased biomaterial products from the Company for sale through Evolution's distribution channels. The Company fulfilled Evolution's orders and otherwise performed each of its obligations under the distribution agreement. Despite attempts to recover the outstanding invoices and Evolution's promise to pay, Evolution has refused to pay any of the invoices and has materially breached its obligations under the distribution agreement. The Company's complaint asserts claims of breach of contract and fraudulent inducement, amongst others. The Company intends to vigorously pursue the matter to recover the outstanding payments owed by Evolution, as well as interest and reasonable attorney's fees, but there can be no assurance as to the outcome of the litigation.

12. Equity

Common Stock

As of December 31, 2023 and 2022, the Company's certificate of incorporation, as amended and restated, authorized the Company to issue 730,000,000 shares of $0.0001 par value Class A common stock.

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of common stock possess all voting power for the election of the Company's directors and all other matters requiring stockholder action. Holders of common stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of Class A Common Stock will be entitled to receive such dividends, if any, as may be declared from time to time by the Company's board of directors in its discretion out of funds legally available therefor. In no event will any stock dividends or stock splits or combinations of stock be declared or made on common stock unless the shares of common stock at the time outstanding are treated equally and identically.

Liquidation, Dissolution and Winding Up

In the event of the Company's voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the common stock will be entitled to receive an equal amount per share of all of the Company's assets of whatever kind available for distribution to stockholders, after the rights of the holders of the preferred stock have been satisfied.

Preemptive or Other Rights

The Company's stockholders have no preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to common stock.

Election of Directors

The Company's board of directors is divided into three classes, Class I, Class II and Class III, with only one class of directors being elected in each year and each class serving a three-year term, except with respect to the election of directors at the special meeting held in connection with the merger with GX. Class I directors are elected to an initial one-year term (and three-year terms subsequently), the Class II directors are elected to an initial two-year term (and three-year terms subsequently) and the Class III directors are elected to an initial three-year term (and three-year terms subsequently). There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares voted for the election of directors can elect all of the directors.

Preferred Stock

The Company's Certificate of Incorporation authorized 10,000,000 shares of preferred stock and provides that shares of preferred stock may be issued from time to time in one or more series. The Company's board of directors is authorized to fix the voting rights, if any, designations, powers and preferences, the relative, participating, optional or other special rights, and any qualifications, limitations and restrictions thereof, applicable to the shares of each series of preferred stock. The Company's board of directors is able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of common stock and could have anti-takeover effects. The ability of the Company's board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of Celularity or the removal of existing management. As of December 31, 2023 and 2022, the Company does not have any outstanding preferred stock.

May 2022 PIPE

On May 18, 2022, the Company entered into a securities purchase agreement with an institutional accredited investor providing for the private placement of (i) 405,405 shares of Class A common stock and (ii) accompanying warrants to purchase up to 405,405 shares of Class A common stock (the "May 2022 PIPE Warrants"), for $74.0 per share and accompanying warrant, or an aggregate purchase price of approximately $30,000 gross, or $27,396 net of related costs of $2,604 which were recorded as a reduction to additional paid-in-capital. The net proceeds were allocated to the warrant liability as noted below with the remainder of $7,651 recorded in additional paid-in capital. Each warrant has an exercise price of $82.50 per share, is immediately exercisable, will expire on May 20, 2027 (five years from the date of issuance) (the "May 2022 PIPE Financing"). The closing of the May 2022 PIPE Financing occurred on May 20, 2022. In the event of certain fundamental transactions involving the Company, the holders of May 2022 PIPE Warrants may require the Company to make a payment based on a Black-Scholes valuation, using specified inputs that are not considered indexed to the Company's stock in accordance with ASC 815. Therefore, the Company accounted for the May 2022 PIPE Warrants as liabilities and were recorded at the Closing Date fair value $ 19,745 which was based on a Black-Scholes option pricing model. The remainder of the proceeds were allocated to the Class A common stock issued and recorded as a component of equity.

On April 10, 2023, upon the closing of a registered direct offering (see further discussion below), the Company amended the existing May 2022 PIPE Warrants, to reduce the exercise price from $82.50 to $7.50 per share and extended the expiration date to five and one-half years following the closing of the offering or October 10, 2028. The modification resulted in the recognition of additional warrant liability of $1,389 based on the Black-Scholes option pricing model as of the modification date. A further modification occurred in connection with the July 2023 registered direct offering to further reduce the exercise price to $3.50 on warrants to purchase up to 892,857 shares of Class A common stock which included the May 2022 PIPE Warrants of 405,405 and a partial modification on the April 2023 Registered Direct Warrants of 487,451. The modification resulted in an increase to the warrant liability of $511 based on the Black-Scholes option pricing model as of the July 31, 2023 modification date.

ATM Agreement

On September 8, 2022, the Company entered into an At-the-Market Sales Agreement (the "ATM Agreement") with BTIG, LLC, Oppenheimer & Co. Inc. and B. Riley Securities, Inc., acting as sales agents and/or principals, pursuant to which the Company may offer and sell, from time to time in its sole discretion, shares of its common stock, having an aggregate offering price of up to $150,000, subject to certain limitations as set forth in the ATM Agreement. The Company is not obligated to make any sales of shares under the ATM Agreement.

Any shares offered and sold in the at-the-market offering will be issued pursuant to the Company's effective shelf registration statement on Form S-3 and the related prospectus supplement. Under the ATM Agreement, the sales agents may sell shares of common stock by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act. The Company will pay the sales agents a commission rate of up to 3% of the gross sales proceeds of any shares sold and has agreed to provide the sales agents with customary indemnification, contribution and reimbursement rights. The ATM Agreement contains customary representations and warranties and conditions to the placements of the shares pursuant thereto.

During the year ended December 31, 2023, the Company received gross and net proceeds of $141 and $136 respectively, from the sale of 13,296 shares of its common stock at an average price of $10.60 per share under the ATM Agreement.

March 2023 PIPE

On March 20, 2023, the Company entered into a securities purchase agreement with two accredited investors, including its Chairman and Chief Executive Officer, Dr. Robert Hariri, providing for the private placement of (i) 938,183 shares of its Class A common stock, and (ii) accompanying warrants to purchase up to 938,183 shares of Class A common stock (the "March 2023 PIPE Warrants"), for $83.43 per share and $1.25 per accompanying March 2023 PIPE Warrant, for an aggregate purchase price of $9,000 (of which Dr. Hariri subscribed for $2,000). The closing of the private placement occurred on March 27, 2023. Each March 2023 PIPE Warrant has an exercise price of $30.00 per share, is immediately exercisable, will expire on March 27, 2028 (five years from the date of issuance), and is subject to customary adjustments for certain transactions affecting the Company's capitalization. The March 2023 PIPE Warrants may not be exercised if the aggregate number of shares of Class A common stock beneficially owned by the holder thereof (together with its affiliates) would exceed the specified percentage cap provided therein (which may be adjusted upon 61 days advance notice) immediately after exercise thereof.

The Company accounted for the March 2023 PIPE Warrants and common stock as a single non-arm's length transaction. The Company applied the guidance for this transaction in accordance with ASU 2020-06, (Subtopic 470-20): *Debt - Debt with Conversion and Other Options, ASC 815 Derivatives and Hedging,* and *ASC 480 Distinguishing Liabilities from Equity*. Accordingly, the net proceeds were allocated between common stock and the March 2023 PIPE warrants at their respective fair value, which resulted in a net premium of $1,650 based on the difference between the proceeds and fair value of the common stock and March 2023 PIPE warrants, which was recorded as additional paid-in capital within stockholders' equity on the consolidated balance sheets. The fair value of the March 2023 PIPE Warrants was determined using a Black-Scholes option pricing model and the common stock based on closing date share price. The Company evaluated the March 2023 PIPE warrants under ASC 815 and determined that they did not require liability classification and met the requirements for a derivative scope exception under *ASC 815-10-15-74(a)* for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. The warrants were recorded in additional paid-in capital within stockholders' equity on the consolidated balance sheets.

On September 14, 2023, the Company entered into a warrant amendment on the March 2023 PIPE Warrants with the unaffiliated investor to reduce the exercise price from $30.00 per share to $10.00 per share for warrants to purchase 729,698 shares of Class A common stock. The warrant amendment was executed as consideration for professional services rendered to the Company. As a result, the Company accounted for the transaction in accordance with *ASC 718 Stock-Based Compensation* based on the calculated incremental fair value attributable to the modified warrant compared to the original warrant immediately prior to the modification and recognized an expense of $402 within selling, general

and administrative on the consolidated statements of operations for the year ended December 31, 2023.

Registered Direct Offerings

On April 10, 2023, the Company closed on a registered direct offering of 923,076 shares of its Class A common stock together with warrants ("April 2023 Registered Direct Warrants") to purchase up to 923,076 shares of its Class A common stock at a combined purchase price of $6.50 per share and accompanying warrant, resulting in total gross proceeds of approximately $6,000 before deducting placement agent commissions and other estimated offering expenses. The April 2023 Registered Direct Warrants have an exercise price of $7.50, became exercisable beginning six months after the date of issuance and will expire five years thereafter. The Company used the $5,505 net proceeds from the offering to repay its obligations to Yorkville under the PPA. The Company considered the appropriate accounting guidance and concluded that the April 2023 Registered Direct Warrants qualified for liability treatment, and therefore, recorded the warrant liability at fair value $4,280 which was based on a Black-Scholes option pricing model. The remainder of the net proceeds were allocated to the Class A common stock issued and recorded as a component of equity.

On July 31, 2023, the Company closed on a registered direct offering of 857,142 shares of its Class A common stock together with warrants ("July 2023 Registered Direct Warrants") to purchase up to 857,142 shares of its Class A common stock at a combined purchase price of $3.50 per share and accompanying warrant, resulting in total gross proceeds of approximately $3,000 before deducting placement agent commissions and other estimated offering expenses. The July 2023 Registered Direct Warrants have an exercise price of $3.50, became exercisable beginning six months after the date of issuance and will expire five years thereafter. The Company used the $2,740 net proceeds for working capital and general corporate purposes. The Company considered the appropriate accounting guidance and concluded that the July 2023 Registered Direct Warrants qualified for liability treatment, and therefore, recorded the warrant liability at fair value $2,645 which was based on a Black-Scholes option pricing model. The remainder of the net proceeds were allocated to the Class A common stock issued and recorded as a component of equity.

In connection with the July 31, 2023 registered direct offering described above, the Company also entered into an amendment to certain existing warrants to purchase up to an aggregate of 892,856 shares at an exercise price of $7.50 (consisting of all of the warrants originally issued in May 2022 and a portion of which were issued in April 2023), and such amended warrants have a reduced exercise price of $3.50 per share. As noted above, the modification resulted in an increase to the warrant liability of $511 based on the Black-Scholes option pricing model as of the July 31, 2023 modification date.

May 2023 PIPE

On May 18, 2023, the Company closed on a securities purchase agreement with a group of accredited investors, providing for the private placement of an aggregate (i) 581,394 shares of its Class A common stock and (ii) accompanying warrants to purchase up to 581,394 shares of Class A common stock (the "May 2023 PIPE Warrants"), for $5.20 per share and $1.25 per accompanying May 2023 PIPE Warrant, for an aggregate gross purchase price of $3,750. Each May 2023 PIPE Warrant has an exercise price of $10.00 per share, is immediately exercisable, will expire on May 18, 2028 (five years from the date of issuance), and is subject to customary adjustments for certain transactions affecting the Company's capitalization. The May 2023 PIPE Warrants may not be exercised if the aggregate number of shares of Class A common stock beneficially owned by the holder thereof (together with its affiliates) would exceed the specified percentage cap provided therein (which may be adjusted upon 61 days advance notice) immediately after exercise thereof. The Company evaluated the May 2023 PIPE Warrants under ASC 815 and determined that they did not require liability classification and met the requirements for a derivative scope exception under *ASC 815-10-15-74(a)* for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. Accordingly, the proceeds were allocated between common stock and the May 2023 PIPE Warrants at their respective relative fair value basis to stockholders' equity on the consolidated balance sheets. The fair value of the May 2023 PIPE Warrants was determined using a Black-Scholes option pricing model and the common stock based on the closing date share price and were recorded in additional paid-in capital within stockholders' equity on the consolidated balance sheets.

Warrants

On March 1, 2022, Celularity and certain of the related party investors amended and restated the investors' respective Legacy Celularity Warrants to (i) reduce the exercise price per share from $75.30 per share to $35.00 per share, subject to adjustment as set forth in the A&R Warrants, (ii) remove the transfer restrictions set forth in the A&R Warrants, and (iii) make other changes reflecting the impact of the business combination. In conjunction with the amendment, those investors exercised 1,328,138 of the A&R Warrants in exchange for 1,328,138 shares of Class A Common Stock for gross proceeds of $46,485. The Company accounted for the amendment as a cost to issue equity with the incremental fair value of $15,985 related to the amendment recognized as an offset to the proceeds received. However, because these were equity classified warrants, the net impact to the consolidated statements of convertible preferred stock and stockholders' equity (deficit) was zero.

As of December 31, 2023, the Company had outstanding warrants to purchase 7,070,627 shares of Class A common stock. A summary of the warrants is as follows:

	Number of shares	Exercise price	Expiration date
Dragasac Warrant(1)	652,981	$ 67.70	March 16, 2025
Public Warrants(2)	1,437,447	$ 115.00	July 16, 2026
Sponsor Warrants(2)	849,999	$ 115.00	July 16, 2026
May 2022 PIPE Warrants	405,405	$ 3.50	October 10, 2028
March 2023 PIPE Warrants	208,485	$ 30.00	March 27, 2028
March 2023 PIPE Warrants (modified)	729,698	$ 10.00	March 27, 2028
March 2023 Loan Warrants	75,000	$ 7.10	March 17, 2028
April 2023 Registered Direct Warrants	435,625	$ 7.50	October 10, 2028
April 2023 Registered Direct Warrants (modified)	487,451	$ 3.50	October 10, 2028
May 2023 PIPE Warrants	581,394	$ 10.00	May 17, 2028
June 2023 Warrants	50,000	$ 8.10	June 20, 2028
June 2023 Loan Warrants	300,000	$ 8.10	June 20, 2028
July 2023 Registered Direct Warrants	857,142	$ 3.50	January 31, 2029
	7,070,627		

(1) The exercise price is the lesser of $67.70 per share or 80% of either (i) the value attributed to one share of Legacy Celularity Series B Preferred Stock upon consummation of a change in control or the closing of a strategic transaction or (ii) the price at which one share of common stock is sold to the public market in an initial public offering.

(2) The number of Public Warrants and Sponsor Warrants outstanding was not adjusted for the reverse stock split. There are 14,374,478 Public Warrants and 8,499,999 Sponsor Warrants outstanding. After the reverse stock split, the number of warrants outstanding remains the same. However, each outstanding warrant is now exercisable for one-tenth of a share of Class A common stock, and the exercise price per share was adjusted to $115.00 as a result of the split.

2024 Warrant Repricing

In connection with the execution of the private placement on January 12, 2024 described below, the Company agreed to reprice 652,981 legacy warrants held by Dragasac with a previous exercise price of $67.70 to a new exercise price of $2.4898. The term of the warrant was unchanged.

January 2024 PIPE Warrants

On January 12, 2024, the Company entered into a securities purchase agreement with an existing investor, Dragasac Limited, providing for the private placement of (i) 2,141,098 shares of its Class A common stock, par value $0.0001 per share, or the Class A common stock, and (ii) accompanying warrants to purchase up to 535,274 shares of Class A common stock ("January 2024 PIPE Warrants"), for $2.4898 per share and $1.25 per accompanying January 2024 PIPE Warrant, for an aggregate purchase price of approximately $6,000. The closing of the private placement occurred on January 16, 2024. The securities were issued pursuant to an exemption from registration provided for under Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder. The offer and sale of the shares and January 2024 PIPE Warrants (including the shares underlying the January 2024 PIPE Warrants) has not been registered under the Act or any state securities laws. The securities may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements. Each 2024 PIPE Warrant has an exercise price of $2.4898 per share, is immediately exercisable, and will expire on January 16, 2029 (five years from the date of issuance).

Effective February 16, 2024, in order to comply with Section 4.15(a) of the securities purchase agreement, the Company entered into an amended employment agreement with its Chief Administrative Officer ("CAO"), whereby the CAO agreed to decrease his base salary from $500 to $425 per year through December 31, 2024.

Warrant Modifications

On March 13, 2024, in connection with the RWI Forbearance Agreement (See Note 10), the Company agreed to issue RWI a warrant to acquire up to 300,000 shares of Common Stock, which expires June 20, 2028 and has an exercise price of $5.895 per share. Additionally, on March 13, 2024, in connection with the Starr Forbearance Agreement (See Note 10), the Company agreed to amend the exercise price of the 75,000 March 2023 Loan Warrants expiring March 17, 2028 from $7.10 per share to $5.895 per share (the "Minimum Price" as determined pursuant to Nasdaq 5635(d) on March 13, 2024) and the 50,000 June 2023 Warrants expiring June 20, 2028 from $8.10 per share to $5.895 per share, each of which are held by C.V. Starr.

Standby Equity Purchase Agreement

On March 13, 2024, the Company and Yorkville entered into a SEPA. Under the SEPA, the Company has the right to sell to Yorkville up to $ 10,000,000 of its Class A common stock, par value $0.0001 per share subject to certain limitations and conditions set forth in the SEPA, from time to time, over a 36-month period. Sales of the common stock to Yorkville under the SEPA, and the timing of any such sales, are at the Company's option, and the Company is under no obligation to sell any shares of common stock to Yorkville under the SEPA except in connection with notices that may be submitted by Yorkville, in certain circumstances as described below.

Upon the satisfaction of the conditions precedent in the SEPA, which include having a resale shelf for shares of common stock issued to Yorkville declared effective, the Company has the right to direct Yorkville to purchase a specified number of shares of common stock by delivering written notice ("Advance"). An Advance may not exceed 100% of the average of the daily trading volume of the common stock on Nasdaq, during the five consecutive trading days immediately preceding the written notice.

Yorkville will generally purchase shares pursuant to an Advance at a price per share equal to 97% of the VWAP, on Nasdaq during the three consecutive trading days commencing on the date of the delivery of the written notice (unless the Company specifies a minimum acceptable price or there is no VWAP on the subject trading day).

The SEPA will automatically terminate on the earliest to occur of (i) the first day of the month next following the 36-month anniversary of the date of the SEPA or (ii) the date on which Yorkville shall have made payment of for shares of common stock equal to $10.0 million. The Company has the right to terminate the SEPA at no cost or penalty upon five trading days' prior written notice to Yorkville, provided that there are no outstanding advances for which shares of

Common Stock need to be issued and the convertible note (Initial Advance) has been paid in full. The Company and Yorkville may also agree to terminate the SEPA by mutual written consent.

As consideration for Yorkville's commitment to purchase the shares of common stock pursuant to the SEPA, the Company paid Yorkville a $25 cash due diligence fee and a commitment fee equal to 16,964 shares of common stock

In connection with the entry into the SEPA, on March 13, 2024, the Company entered into a registration rights agreement with Yorkville, pursuant to which the Company agreed to file with the Securities and Exchange Commission ("SEC") no later than May 3, 2024, a registration statement for the resale by Yorkville of the shares of Common Stock issued under the SEPA (including the commitment fee shares). The Company agreed to use commercially reasonable efforts to have such registration statement declared effective within 45 days of such filing and to maintain the effectiveness of such registration statement during the 36-month commitment period. The Company will not have the ability to request any Advances under the SEPA (nor may Yorkville convert the Initial Advance into Common Stock) until such resale registration statement is declared effective by the SEC.

Delaware Section 205 Proceeding

On July 14, 2021, Celularity, then operating as GX Acquisition Corp. ("Pre-Merger Company"), held a special meeting of stockholders (the "Special Meeting") to approve certain matters related to the business combination between the Pre-Merger Company and Celularity Operations, Inc. ("Legacy Celularity"), including a proposal to adopt a certificate of amendment to the Pre-Merger Company's amended and restated certificate of incorporation (the "Pre-Merger Charter") to increase the number of authorized shares of its common stock from 110,000,000 to 730,000,000 (the "Increase Amendment"). The Increase Amendment received approval from the holders of a majority of the Pre-Merger Company's outstanding shares of Class A common stock and Class B common stock, voting together as a single class, that were outstanding as of the record date for such Special Meeting. Following the Special Meeting, the business combination closed, the Pre-Merger Company changed its name to "Celularity Inc." and the Pre-Merger Charter, as amended to give effect to the Authorized Share Amendment (the "New Charter"), became effective.

A recent decision by the Court of Chancery of the State of Delaware (the "Court") *in Garfield v. Boxed, Inc.*, 2022 WL 17959766 (Del. Ch. Dec. 27, 2022), created uncertainty as to whether Section 242(b)(2) of the Delaware General Corporation Law ("DGCL") would have required the Celularity to seek and obtain a vote of a majority of the shares of Class A common stock to approve the Increase Amendment to the Pre-Merger Charter. Thus, to resolve any potential uncertainty, on March 14, 2023, Celularity filed a petition (the "Petition") in the Court under Section 205 of the DGCL seeking validation and a declaration of effectiveness of the New Charter and actions taken in reliance thereon, including the Increase Amendment and the shares issued pursuant thereto, captioned *In re Celularity, Inc.*, C.A. No. 2023-0317-LWW (Del. Ch.) (the "Section 205 Action"). Section 205 of the DGCL permits the Court, in its discretion, to ratify and validate potentially validate corporate acts and stock after considering a variety of factors.

On March 29, 2023, the Court of Chancery held a hearing in the Section 205 Action and orally granted the Petition, and, later that same day, the Court issued an order in the Section 205 Action, in which it validated and declared effective the Increase Amendment and the Certificate of Incorporation as of 10:00 a.m. (EDT) on July 16, 2021, and all shares of capital stock of the Company issued in reliance on the effectiveness of the Increase Amendment and the Certificate of Incorporation as of the date and time of the original issuance of such shares. The Courts order has addressed and eliminated the uncertainty created by the *Garfield* Court's decision.

13. Stock-Based Compensation

2021 Equity Incentive Plan

In July 2021, the Company's board of directors adopted and the Company's stockholders approved the 2021 Equity Incentive Plan (the "2021 Plan"). The 2021 Plan provides for the grant of incentive stock options ("ISOs") to employees and for the grant of nonstatutory stock options ("NSOs"), stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other forms of stock awards to employees, directors and consultants.

The number of shares of Class A Common Stock initially reserved for issuance under the 2021 Plan is 2,091,528. As of December 31, 2023, 821,789 shares remain available for future grant under the 2021 Plan. The number of shares reserved for issuance will automatically increase on January 1 of each year, for a period of 10 years, from January 1, 2022 through January 1, 2031, by 4% of the total number of shares of Celularity capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by the Company's board of directors. Shares subject to stock awards granted under the 2021 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under the 2021 Plan. Additionally, shares issued pursuant to stock awards under the 2021 Plan that are repurchased or forfeited, as well as shares that are reacquired as consideration for the exercise or purchase price of a stock award or to satisfy tax withholding obligations related to a stock award, will become available for future grant under the 2021 Plan.

The 2021 Plan is administered by the Company's board of directors. The Company's board of directors, or a duly authorized committee thereof, may delegate to one or more officers the authority to (i) designate employees other than officers to receive specified stock awards and (ii) determine the number of shares to be subject to such stock awards. Subject to the terms of the 2021 Plan, the plan administrator has the authority to determine the terms of awards, including recipients, the exercise price or strike price of stock awards, if any, the number of shares subject to each stock award, the fair market value of a share, the vesting schedule applicable to the awards, together with any vesting acceleration, the form of consideration, if any, payable upon exercise or settlement of the stock award and the terms and conditions of the award agreements for use under the 2021 Plan. The plan administrator has the power to modify outstanding awards under the 2021 Plan. Subject to the terms of the 2021 Plan and in connection with a corporate transaction or capitalization adjustment, the plan administrator may not reprice or cancel and regrant any award at a lower exercise price, strike price or purchase price or cancel any award with an exercise price, strike price or purchase price in exchange for cash, property or other awards without first obtaining the approval of the Company's stockholders.

2017 Equity Incentive Plan

The 2017 Equity Incentive Plan (the "2017 Plan") adopted by Legacy Celularity's board of directors and approved by Legacy Celularity's stockholders provided for Legacy Celularity to grant stock options to employees, directors and consultants of Legacy Celularity. In connection with the closing of the Business Combination and effectiveness of the 2021 Plan, no further grants will be made under the 2017 Plan.

The total number of stock options that could have been issued under the 2017 Plan was 3,234,204. Shares that expired, forfeited, canceled or otherwise terminated without having been fully exercised were available for future grant under the 2017 Plan.

The 2017 Plan is administered by the Company's board of directors or, at the discretion of the Company's board of directors, by a committee of the board of directors. The exercise prices, vesting and other restrictions were determined at the discretion of Legacy Celularity's board of directors, or its committee if so delegated, except that the exercise price per share of stock options could not be less than 100% of the fair market value of the share of common stock on the date of grant and the term of stock option could not be greater than ten years. Stock options granted to employees, officers, members of the board of directors and consultants typically vested over a three or four year period.

Stock Option Valuation

Awards with Service Conditions

The fair value of each option is estimated on the date of grant using a Black-Scholes option pricing model that takes into account inputs such as the exercise price, the estimated fair value of the underlying common stock at grant date, expected term, expected stock price volatility, risk-free interest rate, and dividend yield. The fair value of each grant of stock options was determined by the Company using the methods and assumptions discussed below. Certain of these inputs are subjective and generally require judgment to determine.

- The expected term of employee stock options with service-based vesting is determined using the "simplified" method, whereby the expected life equals the arithmetic average of the vesting term and the original contractual term of the option due to the Company's lack of sufficient historical data. The expected term of non-employee options is equal to the contractual term or its estimated term based on the underlying agreement.

- The expected stock price volatility is based on historical volatilities of comparable public entities within the Company's industry.

- The risk-free interest rate is based on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the respective expected term or contractual term.

- The expected dividend yield is 0% because the Company has not historically paid, and does not expect, for the foreseeable future, to pay a dividend on its common stock.

The following table presents, on a weighted average basis, the assumptions used in the Black-Scholes option-pricing model to determine the grant-date fair value of stock options granted during the years ended December 31, 2023 and 2022:

	Year Ended December 31,	
	2023	2022
Risk-free interest rate	4.1%	2.7%
Expected term (in years)	5.6	5.9
Expected volatility	86.5%	77.1%
Expected dividend yield	—%	—%

The weighted average grant-date fair value per share of stock options granted during the years ended December 31, 2023 and 2022 was $5.35 and $5.43, respectively.

The following table summarizes option activity with service conditions under the 2021 Plan and the 2017 Plan:

	Options	Weighted Average Exercise Price	Weighted Average Contract Term (years)	Aggregate Intrinsic Value
Outstanding at December 31, 2022	2,514,452	$ 49.08	6.1	$ 7,851
Granted	741,634	5.35		
Exercised	(108,637)	2.80		
Forfeited/Expired	(327,262)	42.23		
Outstanding at December 31, 2023	2,820,187	$ 40.16	5.6	$ —

Vested and expected to vest December 31, 2023	2,820,187	$ 40.16	5.6	$	—
Exercisable at December 31, 2023	2,025,287	$ 46.01	4.5	$	—

The aggregate intrinsic value of options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's Class A Common Stock for those options that had exercise prices lower than the fair value of the Company's Class A Common Stock.

The Company recorded stock-based compensation expense relating to awards with service conditions of $9,293 and $10,702 during the years ended December 31, 2023 and 2022, respectively. During the years ended December 31, 2023 and 2022, the aggregate intrinsic value was $0 and $7,997 for the stock options exercised, respectively. As of December 31, 2023, unrecognized compensation cost for options issued with service conditions was $13,449 and will be recognized over an estimated weighted-average amortization period of 2.59 years.

Awards with Performance Conditions

In connection with the advisory agreement signed with Robin L. Smith, MD (see Note 19), the Company awarded options to acquire a total of 105,000 shares with an exercise price of $29.90 to Dr. Smith, a former member of the Company's board of directors. The initial tranche of 25,000 stock options vested upon execution of the advisory agreement on August 16, 2022. The remaining 80,000 stock options are subject to vesting upon achievement of certain predefined milestones in relation to the expansion of the degenerative disease business. On November 1, 2022, the second tranche of 20,000 stock options vested upon achievement of the first milestone. The fair value of the award was determined based on a Black-Scholes option-pricing model. The Company's grant date fair value assumptions were 79.9% expected volatility, 2.95% risk-free interest rate, 5 year expected term, and 0% expected dividend yield. There were no milestones achieved and accordingly there was no stock-based compensation recorded during the year ended December 31, 2023. The remaining 60,000 stock options were forfeited on August 16, 2023 upon termination of the advisory agreement. The Company recorded stock-based compensation expense of $0 and $881 for the years ended December 31, 2023 and 2022, respectively. As of December 31, 2023, the remaining unrecognized compensation cost was $1,175, and will be recognized upon probable achievement of the milestones.

Awards with Market Conditions

In September 2021, the Company awarded options to acquire a total of 246,928 shares with an exercise price of $63.20 to the Company's former President in connection with the commencement of his employment. The grant was comprised of four equal tranches, and would vest in up to five equal installments in respect of achieving certain share price targets between the third and fourth anniversary of the effective date, subject to his continued employment with the Company. The Company recognized stock-based compensation expense of $1,167 in 2022 and after the Company's President resigned effective August 31, 2022, and the President's award was terminated at such time, all previously recognized stock-based compensation expense of $1,681 was reversed in 2022, and a consulting agreement was signed thereafter, refer to Note 19 for further details.

Restricted Stock Units

The Company issues RSUs to employees that generally vest over a two-year period with 50% of awards vesting after 1 year and then the remaining 50% vesting after 2 years. Any unvested shares will generally be forfeited upon termination of services. The fair value of an RSU is equal to the fair market value price of the Company's common stock on the date of grant. RSU expense is amortized straight-line over the vesting period.

The following table summarizes activity related to RSU stock-based payment awards:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2022	227,013	$ 73.35
Granted	954,931	$ 6.29
Released	(83,759)	$ 65.05
Forfeited	(274,853)	$ 21.37
Outstanding at December 31, 2023	823,332	$ 13.77

The Company recorded stock-based compensation expense of $5,724 and $4,787 for the years ended December 31, 2023 and 2022, related to RSUs. As of December 31, 2023, the total unrecognized expense related to all RSUs was $7,732, which the Company expects to recognize over a weighted-average period of 2.06 years.

Performance Stock Units

In July 2023, the Company granted 174,500 performance stock unit awards ("PSUs") to certain members of management, with a grant date fair value of $5.00 per unit based on the market closing share price on the date of grant. The awards are scheduled to vest over a period of one to three years from the grant date based on continuous employment and if a specified market performance is achieved. As of December 31, 2023, all of the PSUs were unvested and total unrecognized stock-based compensation expense was $871, which is expected to be recognized over a weighted average period of 1.79 years if the underlying awards are deemed probably of being earned. As of December 31, 2023, the specified market based performance metric was deemed not probable of achievement, therefore no stock-based compensation was recognized during the year ended December 31, 2023.

Stock-Based Compensation Expense

The Company recorded stock-based compensation expense in the following expense categories of its consolidated statements of operations:

	Year Ended December 31,	
	2023	2022
Cost of revenues	$ 580	$ 410
Research and development	1,832	2,118
Selling, general and administrative	12,605	13,328
	$ 15,017	$ 15,856

14. Revenue Recognition

The following table provides information about disaggregated revenue by product and services:

	Year Ended December 31,	
	2023	2022
Product sales and rentals	$ 13,149	$ 3,749
Services	5,441	5,512
License, royalty and other	4,181	8,714
Net revenues	$ 22,771	$ 17,975

The following table provides changes in deferred revenue from contract liabilities:

	2023	2022
Balance at January 1	$ 4,492	$ 4,067
Deferral of revenue*	6,266	5,004
Recognition of unearned revenue	(4,738)	(4,579)
Balance at December 31	$ 6,020	$ 4,492

*Deferral of revenue resulted from payments received in advance of performance under the biobanking services storage contracts that are recognized as revenue under the contract as performance is completed. Also includes up-front payment incurred in connection with signing of the Regeneron Services Agreement in August 2023 (see Note 15 below).

15. License and Distribution Agreements

Regeneron Research Collaboration Services Agreement

On August 25, 2023, the Company entered into a multi-year research collaboration services agreement with Regeneron Pharmaceuticals, Inc. ("Regeneron"), pursuant to which the Company will support the research effort of Regeneron's allogeneic cell therapy candidates (the "Regeneron Services Agreement"). The Regeneron Services Agreement's initial focus is the research on a targeted allogeneic gamma delta chimeric antigen receptor (CAR) T-cell therapy owned by Regeneron designed to enhance proliferation and potency against solid tumors. Payments to the Company under the Regeneron Services Agreement included a nonrefundable up-front payment and payments based upon the achievement of defined milestones according to written statements of work. The Regeneron Services Agreement will expire five years from the effective date and may be terminated immediately by either party for the uncured material breach, bankruptcy, or insolvency of the other party. Regeneron may also terminate for convenience upon 30 days' written notice.

The Regeneron Services Agreement grants Regeneron a royalty-free, fully-paid up, worldwide, non-exclusive license, with the right to grant sublicenses, to the Company's intellectual property ("IP") to the extent that any such license is necessary for Regeneron to fully use the Company's research services. The Company determined that the (1) research licenses and (2) the research activities performed by the Company represent a single combined performance obligation under the Regeneron Services Agreement. The Company determined that Regeneron cannot benefit from the licenses separately from the research activities because these services are specialized and rely on the Company's expertise such that these activities are highly interrelated and therefore not distinct. Accordingly, the promised goods and services represent one combined performance obligation and the entire transaction price was allocated to that single combined performance obligation. The performance obligation will be satisfied over the research term as the Company performs the research activities.

The upfront payment of $750 was recorded as deferred revenue and within accounts receivable as of December 31, 2023, and will be recognized as revenue as the combined performance obligation is satisfied. The Company recognizes revenue using the cost-to-cost method, which it believes best depicts the transfer of control to the customer over time. Under the cost-to-cost method, the extent of progress towards completion is measured based on the ratio of actual costs incurred to the total estimated costs expected upon satisfying the identified performance obligation. Under this method, revenue is recorded as a percentage of the estimated transaction price based on the extent of progress towards completion. As of December 31, 2023, the potential research milestone payments that the Company is eligible to receive and have not been achieved, and were excluded from the transaction price as they were fully constrained by uncertain events. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and if necessary, the Company will adjust its estimate of the transaction price. Any additions to the transaction price would be reflected in the period as a cumulative revenue catch-up based on the ratio of costs incurred to the total estimated costs expected applied to the revised transaction price

Sorrento Therapeutics, Inc. License and Transfer Agreement

The Company and Sorrento Therapeutics, Inc. ("Sorrento"), a related party through September 30, 2023, are party to a License and Transfer Agreement for the exclusive worldwide license to CD19 CAR-T constructs for use in placenta-derived cells and/or cord blood-derived cells for the treatment of any disease or disorder (the "2020 Sorrento License Agreement"). The Company retains the right to sublicense the rights granted under the agreement with Sorrento's prior written consent. As consideration for the license, the Company is obligated to pay Sorrento a royalty equal to low single-digit percentage of net sales (as defined within the agreement) and a royalty equal to low double-digit percentage of all sublicensing revenues (as defined within the agreement). The 2020 Sorrento License Agreement will remain in effect until terminated by either the Company or Sorrento for uncured material breach upon 90 days written notice or, after the first anniversary of the effective date of the 2020 Sorrento License Agreement, by the Company for convenience upon six months' written notice to Sorrento. On October 19, 2023, Sorrento filed a Plan of Reorganization under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of Texas which plan contemplates a liquidation of the debtor. If the Plan is confirmed by the Bankruptcy Court, the Company believes that Sorrento will not be able to perform under the license and that any rights the Company might have under the license would be unenforceable. After assessing the status of the IND to determine an optional path forward for the program, the Company has elected to terminate development of CYCART-19 for B-cell malignancies during the third quarter of 2023. The Company may continue pre-clinical development of other T-cell candidates.

Genting Innovation PTE LTD Distribution Agreement

On May 4, 2018, concurrently with Dragasac's equity investment in Legacy Celularity, Legacy Celularity entered into a distribution agreement with Genting Innovation pursuant to which Genting Innovation was granted supply and distribution rights to certain Company products in select Asia markets (the "Genting Agreement"). The Genting Agreement grants Genting Innovation limited distribution rights to the Company's then-current portfolio of degenerative disease products and provides for the automatic rights to future products developed by or on behalf of the Company.

The term of the Genting Agreement was renewed on January 31, 2023, and automatically renews for successive twelve month terms unless: Genting provides written notice of its intention not to renew at least three months prior to a renewal term or the Genting Agreement is otherwise terminated by either party for cause.

Genting Innovation and Dragasac are both direct subsidiaries of Genting Berhad, a public limited liability company incorporated and domiciled in Malaysia.

On June 14, 2023, the Genting Agreement was amended and restated to include manufacturing rights in the territories covered under the agreement, expanded to include two new countries, and a commitment by the Company to provide technology transfer pursuant to the plan established by a Joint Steering Committee. On January 17, 2024, the Company further amended the Genting Agreement to distribution and manufacturing rights to certain of the Company's cell therapy products, including PSC-100, PDA-001, PDA-002, pEXO-001, APPL-001 and CYNK-001.

Celgene Corporation License Agreement

The Company is party to a license agreement with Celgene (the "Celgene Agreement") pursuant to which the Company granted Celgene two separate licenses to certain intellectual property. The Celgene Agreement grants Celgene a royalty-free, fully-paid up, worldwide, non-exclusive license to the certain intellectual property ("IP") for pre-clinical research purposes in all fields and a royalty-free, fully-paid up, worldwide license, with the right to grant sublicenses, for the development, manufacture, commercialization and exploitation of products in the field of the construction of any CAR, the modification of any T-lymphocyte or NK cell to express such a CAR, and/or the use of such CARs or T-lymphocytes or NK cells for any purpose, including prophylactic, diagnostic, and/or therapeutic uses thereof. The Celgene Agreement will remain in effect until its termination by either party for cause.

Exclusive Supply and Distribution Agreements

On May 7, 2021, the Company entered into a six-year supply and distribution agreement with Arthrex, Inc. ("Arthrex") that includes (i) an exclusive Biovance, Interfyl, and Centaflex license for distribution and commercialization within the United States for the orthopedic surgery and (ii) an exclusive Interfyl and Centaflex license for commercialization and distribution within the United States for the acute and chronic non-healing wound market (the "Arthrex Supply and Distribution Agreement"). The Arthrex Supply and Distribution Agreement will automatically renew for terms of two-year periods unless either party gives notice of non-renewal at least twelve months advance of the end of the then current term. At least ninety days prior to the start of each calendar quarter, the Company and Arthrex will agree in good faith to a minimum binding forecast based upon projected sales volume by Arthrex for said upcoming calendar quarter for each of the products. Upon agreement, Arthrex shall submit to the Company a purchase order to purchase products for the minimum forecasted quantities. The Company shall invoice Arthrex after the product has been issued and payments for such invoices will be 2%, ten net forty-five days from the date of the invoice. Upon material breach of the Arthrex Supply and Distribution Agreement either party may deliver such breach to the other party and the notified party will have thirty days to cure such breach. If the notified party fails to cure the material breach of the Arthrex Supply and Distribution Agreement the non-breaching party may terminate the respective agreement. Under the Arthrex Supply and Distribution Agreement, the Company and Arthrex will establish a joint steering committee to oversee commercialization activities of the products. Membership of the joint steering committee will be comprised of an equal number of employees of each respective party.

On September 1, 2021, the Company entered into a three-year supply and distribution agreement with Evolution Biologyx, LLC ("Evolution") that includes an exclusive Interfyl license for the distribution and commercialization within the United States within any medical specialty where Interfyl is administered in an in-office or in-patient setting and is reimbursed through Medicare Part B or any successor, equivalent or similar category established by the Center for Medicare Services or other Government Authority, except in the medical specialty of orthopedic surgery excluding trauma or spine applications in the medical specialty or orthopedic or neurologic surgery (the "Evolution Supply and Distribution Agreement"). On April 13, 2023, the Company terminated the Evolution Supply and Distribution Agreement for uncured material breach resulting from Evolution's refusal to pay outstanding invoices in the amount of approximately $2.35 million. On April 17, 2023, we filed a complaint against Evolution in the U.S. District Court for the District of New Jersey to recover unpaid invoice amounts, plus interest (See Note 11).

Pulthera, LLC Binding Term Sheet

Concurrent with the entry into the securities purchase agreement for the private placement described in Note 9 above, the Company executed a binding term sheet to negotiate and enter into a sublicense agreement of certain assets from an affiliate of Pulthera, LLC (the "sublicensor"). Pursuant to the binding term sheet, the Company paid sublicensor $3,000 option fee in cash and issued $1,000 of shares of its Class A common stock (169,492 shares based on the closing price on March 17, 2023) as consideration for stem-cells inventory to be used in research and development. The option fee paid by the Company will be applied towards an initial license fee as outlined in the sublicense agreement. The Company is required to use diligent and reasonable efforts to develop and obtain regulatory approval to market at least one licensed product contingent upon a firm written commitment to provide further financing to the Company. The $3,000 option fee was recorded as acquired IPR&D expense included in research and development expense on the consolidated statements of operations for the year ended December 31, 2023, as the acquired IPR&D had no alternative future use.

License Agreement with BioCellgraft, Inc.

On December 11, 2023, the Company and BioCellgraft, Inc. ("BioCellgraft") entered into a license agreement whereby the Company granted an exclusive license to BioCellgraft, with the right to sublicense, to develop and commercialize certain licensed products to the dental market in the United States over an initial four year term and will automatically renew for an additional two years unless either party provides written notice of termination. BioCellgraft will pay to the Company total license fees of $5,000 over a two year period, as defined. Upon execution of the agreement, the Company received a $300 payment towards the first year payment.

16. Benefit Plan

The Company established a defined contribution savings plan under Section 401(k) of the Internal Revenue Code. This plan covers all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Matching contributions to the plan may be made at the discretion of the Company's board of directors. During the year ended December 31, 2023, the Company made contributions of $198. During the year ended December 31, 2022, the Company accrued $1,159, but has not made the matching contribution to the plan.

17. Income Taxes

A summary of the Company's current and deferred tax provision is as follows:

	Year Ended December 31,	
	2023	2022
Current income tax expense:		
Federal	$ -	$ -
State	10	13
Total current income tax expense	10	13
Deferred income tax expense (benefit):		
Federal	1	1
State	(1)	(1)
Total deferred tax expense	—	—
Total expense from income taxes	$ 10	$ 13

A reconciliation of the U.S. federal statutory income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,	
	2023	2022
Federal statutory income tax rate	21.0%	21.0%

State income taxes, net of federal benefits	1.4%	(38.9)%
Interest accretion expense	11.0%	(186.9)%
Change in valuation allowance	(20.0)%	269.1%
Mark to market warrant	0.5%	(58.5)%
Deferred true-up	(2.4)%	0.2%
Stock-based compensation	(0.0)%	(8.2)%
Impairment	(12.0)%	5.3%
Other permanent items	0.5%	(3.1)%
Effective income tax rate	(0.0)%	(0.0)%

Net deferred tax liabilities as of December 31, 2023 and 2022 consisted of the following:

	Year Ended December 31,	
	2023	2022
Deferred tax assets:		
Net operating loss carryforwards	$ 109,544	$ 102,723
Research and development tax credit carryforwards	5,674	5,674
Stock-based compensation expense	16,539	14,321
Startup costs	498	588
Intangible assets	3,442	3,905
Deferred revenue	1,441	1,135
Unicap	5	6
Imputed interest on contingent payments	110	5,654
Legal fee capitalization and amortization	1,171	1,342
Capitalized research and development	26,613	19,318
Other	4,751	3,121
Total deferred tax assets	169,788	157,787
Deferred tax liabilities:		
In-process research and development	—	(27,271)
Total deferred tax liabilities	—	(27,271)
Valuation allowance	(169,797)	(130,525)
Net deferred tax liabilities	$ (9)	$ (9)

A reconciliation of the beginning and ending amounts of unrecognized tax benefits is as follows:

	Unrecognized Tax Benefits
Balance at December 31, 2021	$ 1,270
Decrease related to current year tax provisions	(242)
Balance at December 31, 2022	$ 1,028
Decrease related to current year tax provisions	—
Balance at December 31, 2023	$ 1,028

As of December 31, 2023 and 2022, the Company had U.S. federal and state net operating loss carryforwards of $109,544 and $102,723, respectively, which may be available to offset future taxable income and begin to expire in 2040. As of December 31, 2023 and 2022, the Company also had U.S. federal and state research and development tax credit carryforwards of $5,674, which may be available to offset future tax liabilities and begin to expire in 2032.

Utilization of the U.S. federal and state net operating loss carryforwards and research and development tax credit carryforwards may be subject to an annual limitation under Sections 382 and 383 of the Internal Revenue Code of 1986, and corresponding provisions of state law, due to ownership changes that have occurred previously or that could occur in the future. These ownership changes may limit the amount of carryforwards that can be utilized annually to offset future taxable income or tax liabilities. In general, an ownership change, as defined by Section 382, results from transactions increasing the ownership of certain stockholders in the stock of a corporation by more than 50% over a three-year period. A corporation that experiences an ownership change is subject to an annual limitation under Section 382, which is determined by first multiplying the value of the Company's stock at the time of the ownership change by the applicable long-term tax-exempt rate subject to additional adjustments, as required. The Company experienced an ownership change on August 15, 2017. The annual limitation from the ownership change is not expected to result in the expiration of net operating losses or research and development credits before utilization.

The realization of deferred tax assets is dependent upon the Company's ability to generate taxable income in future years. ASC 740-10, *Income Taxes,* requires a valuation allowance to be applied against deferred tax assets when it is considered "more likely than not" that some or all of the gross deferred tax assets will not be realized. The Company considers all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial performance.

At December 31, 2023, based upon the weight of available evidence, the Company concluded that it is not more likely than not that the benefits of the federal and state deferred tax assets will be realized. Accordingly, the Company has recorded valuation allowance against its federal and state gross deferred tax assets. The valuation allowance increased by $39,272 during the year ended December 31, 2023.

The impact of an uncertain income tax position is recognized at the largest amount that is "more likely than not" to be sustained upon audit by the relevant taxing authority. An uncertain tax position will not be recognized if it has less than a 50% likelihood of being sustained.

As of December 31, 2023 and 2022, the Company had gross unrecognized tax benefits of $1,028. The Company does not expect that there will be a significant change in the unrecognized tax benefits over the next 12 months. The Company's policy is to record interest and penalties related to income taxes as part of its income tax provision. As of December 31, 2023 and 2022, the Company had no accrued interest or penalties related to uncertain tax positions and no amounts had been recognized in the Company's consolidated statements of operations. The Company files income tax returns in the U.S. and numerous states, as prescribed by the tax laws of the jurisdictions in which it operates. In the normal course of business, the Company is subject to examination by federal and state jurisdictions, where applicable. There are currently no pending tax examinations. The Company is open to future tax examination under statute from 2017 to the present; however, carryforward attributes that were acquired may still be adjusted upon examination by federal, state or local tax authorities if they either have been or will be used in a future period.

18. Segment Information

The Company regularly reviews its segments and the approach used by management to evaluate performance and allocate resources. Prior to the third quarter of 2020, Legacy Celularity managed operations as one segment. In the third quarter of 2020, the Company began to manage its operations through an evaluation of three distinct business segments: Cell Therapy, Degenerative Disease, and BioBanking. This change was prompted by certain organizational and personnel changes. The chief operating decision maker uses the revenues and earnings of the operating segments, among other factors, for performance evaluation and resource allocation among these segments.

The reportable segments were determined based on the distinct nature of the activities performed by each segment. Cell Therapy broadly refers to therapies the Company is researching and developing. Therapies being researched are unproven and in various phases of development. Degenerative Disease produces, sells and licenses products used in surgical and wound care markets. Biobanking collects stem cells from umbilical cords and placentas and provides storage of such cells on behalf of individuals for future use.

The Company manages its assets on a total company basis, not by operating segment. Therefore, the chief operating decision maker does not regularly review any asset information by operating segment and, accordingly, asset information is not reported by operating segment. Total assets were approximately $143,889 and $401,066 as of December 31, 2023 and 2022, respectively.

Financial information by segment is as follows:

	Year Ended December 31, 2023				
	Cell Therapy	BioBanking	Degenerative Disease	Other	Total
Net revenues	$ —	$ 5,441	$ 17,330	$ —	$ 22,771
Gross profit	—	3,791	2,964	—	6,755
Direct expenses	28,694	1,752	9,720	40,876	81,041
Segment contribution	(28,694)	2,039	(6,756)	(40,876)	(74,286)
Indirect expenses				118,001 (a)	118,001
Loss from operations					$ (192,287)
(a) Components of other					
Change in fair value of contingent consideration liability				(104,339)	
Goodwill impairment				112,347	
IPR&D impairment				107,800	
Amortization				2,193	
Total other				$ 118,001	

	Year Ended December 31, 2022	
	Cell	Degenerative

	Therapy	BioBanking	Disease	Other		Total
Net revenues	$ —	$ 5,512	$ 12,463	$ —		$ 17,975
Gross profit	—	1,976	(3,666)	—		(1,690)
Direct expenses	75,379	1,699	10,859	56,261		144,198
Segment contribution	(75,379)	277	(14,525)	(56,261)		(145,888)
Indirect expenses				(120,288)	(b)	(120,288)
Loss from operations						$ (25,600)
(b) Components of other						
Change in fair value of contingent consideration liability				(126,277)		
Change in fair value of contingent stock consideration				186		
Goodwill impairment				3,610		
Amortization				2,193		
Total other				$ (120,288)		

19. Related Party Transactions

The related party transactions described below do not have any associated balances on the consolidated balance sheets as of December 31, 2023 and 2022.

Amended and Restated Employment Agreement with Dr. Robert Hariri

On January 25, 2023, in order to address the Company's current working capital requirements, Dr. Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, agreed to temporarily reduce payment of his salary pursuant to his employment agreement to minimum wage level with the remaining salary deferred until December 31, 2023. As of December 31, 2023, $1,088 was recorded to accrued expenses on the consolidated balance sheets.

In order to comply with the Securities Purchase Agreement dated January 12, 2024 with Dragasac Limited that Dr. Hariri not be paid the $1,088 in base salary that was otherwise due to him for the 2023 calendar year unless the Company raises additional cash through offerings of equity securities with aggregate net proceeds equal or greater to $21.0 million at a valuation at least equal to the valuation, cost per security or exercise/conversion price, as applicable, of the Class A common stock and PIPE Warrant purchased by Dragasac Limited in January 2024. In compliance with the requirements of Internal Revenue Code Section 409A, the compensation committee of the Company's board of directors approved a cash bonus program, or bonus program, effective February 16, 2024, pursuant to which Dr. Hariri will be paid 125% of his unpaid base salary upon the satisfaction of the foregoing performance conditions. Accordingly, the Company entered into a second amendment to Dr. Hariri's employment agreement implementing the 85% base salary reduction effective as of February 16, 2024 and documenting the bonus program. As a result of the reduction, Dr. Hariri's annual rate of base salary for the 2024 year will be $180. Payment of Dr. Hariri's base salary at the rate in effect prior to the reduction will resume on January 1, 2025.

March 2023 PIPE

On March 20, 2023, the Company entered into a securities purchase agreement with two accredited investors, including its Chairman and Chief Executive Officer, Dr. Robert Hariri, for an aggregate purchase price of $9,000 (of which Dr. Hariri subscribed for $2,000). See Note 12, Equity under March 2023 PIPE caption for further details.

Loan Agreement with Dr. Robert Hariri

On August 21, 2023, the Company entered into a $1,000 loan agreement with Dr. Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, which bears interest at a rate of 15% per year, with the first year of interest being paid in kind on the last day of each month and matures on August 21, 2024 (Note 9).

On October 12, 2023, in order to further address the Company's immediate working capital requirements, Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, and the Company signed a promissory note ("CEO Promissory Note") for $285 which bears interest at a rate of 15.0% per year (Note 9).

Consulting & Advisory Agreements with Dr. Andrew Pecora

On August 31, 2022, Dr. Pecora resigned as the Company's President, and subsequently entered into a consulting agreement with the Company dated September 21, 2022, to receive a $10 monthly fee for an initial six-month term and will be automatically renewed for one additional six- month term if either party does not provide notice of non-renewal. Simultaneously, the Company entered into a scientific and clinical advisor agreement (the "SAB Agreement"), effective as of September 1, 2022, whereby Dr. Pecora agreed to serve as co-chair of the Company's scientific and clinical advisory board for a $10 monthly fee and a one-time grant of RSUs having a value of $125 on the grant date and will vest equally over four years. The SAB Agreement has a one-year term and may be renewed for successive one-year terms upon mutual agreement of both parties. The consulting agreement was early terminated effective January 14, 2023. Dr. Pecora continues to serve on the Company's scientific and clinical advisory board.

Advisory Agreement with Robin L. Smith MD

On August 16, 2022, the Company entered into an advisory agreement with Robin L. Smith, MD, a then member of the Company's board of directors, to receive $20 per month for advisory fees, an equity grant for a total amount of 105,000 stock options with the initial tranche of 25,000 stock options vesting upon execution of the advisory agreement and the remaining shares subject to vesting upon achievement of certain predefined milestones. On November 1, 2022, the second tranche of 20,000 stock options vested upon achievement of the milestone. The agreement also provides for a one-time cash bonus of $1,500 upon the successful achievement of the trigger event, as defined in the agreement. The Company paid advisory fees of $20 and $80 for the years ended December 31, 2023 and 2022, respectively. The advisory agreement expired pursuant to the terms of the agreement on August 16, 2023 and was not renewed for an additional term. Dr. Smith resigned from the Company's board effective December 24, 2023.

COTA, Inc

In November 2020, Legacy Celularity and COTA, Inc. ("COTA") entered into an Order Schedule (the "Order Schedule No. 2"), to the Master Data License Agreement between Legacy Celularity and COTA, dated October 29, 2018, pursuant to which COTA will provide the licensed data in connection with AML patients. The COTA Order Schedule No. 2 will terminate on the one-year anniversary following the final licensed data deliverable described therein. Andrew Pecora, M.D., Celularity's former President, is the Founder and Chairman of the Board of COTA and Dr. Robin L. Smith, a former member of the Company's board of directors, is an investor in COTA. The Company did not make any payments to COTA during the year ended December 31, 2023, and made payments of $86 during the year ended December 31, 2022.

Cryoport Systems, Inc

The Company made payments totaling $33 and $70 to Cryoport Systems, Inc ("Cryoport") for transportation of cryopreserved materials during the years ended December 31, 2023 and 2022, respectively. The Company's Chief Executive Officer and director, Dr. Robert Hariri, M.D, Ph.D., has served on Cryoport's board of directors since September 2015.

C.V. Starr Loan

On March 17, 2023, the Company entered into a $5,000 loan agreement with C.V. Starr. C.V. Starr is a significant stockholder of the Company, holding 75,000 warrants issued in March 2023 and another 50,000 issued in June 2023, for a total of 125,000 warrants to purchase Class A common stock and 764,069 shares of Class A common stock as of December 31, 2023.

Resorts World Inc Pte Ltd

On May 16, 2023, the Company entered into a $12,000 loan agreement, as amended on June 21, 2023, with RWI. RWI is affiliated with Lim Kok Thay, a significant stockholder and former member of the Company's board of directors, holding 300,000 warrants to purchase Class A common stock as of December 31, 2023.

Sorrento Therapeutics, Inc.

In September 2020, the Company entered into the 2020 Sorrento Agreement, with Sorrento. Henry Ji, Ph.D., a former member of Legacy Celularity's board of directors, previously served as President and Chief Executive Officer of Sorrento. Sorrento was also a significant stockholder and invested in the July 2021 PIPE Financing. During the year ended December 31, 2023, the Company did not make any payments to Sorrento. During the year ended December 31, 2022, the Company made payments totaling $1,821, to Sorrento for supply of products pursuant to the supply agreement.

Employment of an Immediate Family Member

Alexandra Hariri, the daughter of Robert J. Hariri, M.D., Ph.D., Celularity's Chairman and Chief Executive Officer, is employed by Celularity as an Executive Director, Corporate Strategy & Business Development. For each of the years ended December 31, 2023 and 2022, Ms. Hariri's base salary was $265 and $216 per year, respectively. Ms. Hariri has received and continues to be eligible to receive a bonus, equity awards and benefits on the same general terms and conditions as applicable to unrelated employees in similar positions.

20. Subsequent Events

The Company has evaluated subsequent events through the date of issuance and there are no additional items that have not previously been mentioned elsewhere requiring disclosure (see Notes 1, 2, 3, 9, 11, 12, 15, and 19).

Celularity Inc.
Condensed Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	September 30, 2024 (unaudited)	December 31, 2023
Assets		
Current assets:		
Cash and cash equivalents	$ 133	$ 227
Accounts receivable, net of allowance of $6,059 and $5,837 as of September 30, 2024 and December 31, 2023, respectively	8,770	10,046
Notes receivable	-	2,072
Inventory	3,963	5,753
Prepaid expenses and other current assets	1,636	1,695
Total current assets	14,502	19,793
Property and equipment, net	63,208	67,828
Goodwill	7,347	7,347
Intangible assets, net	9,624	11,001
Right-of-use assets - operating leases	10,865	10,990
Restricted cash	10,163	9,936
Inventory, net of current portion	12,844	16,657
Other long-term assets	287	337
Total assets	$ 128,840	$ 143,889
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 15,400	$ 14,144
Accrued expenses and other current liabilities	14,466	7,580
Accrued R&D software	-	3,500
Short-term debt - unaffiliated (includes debt measured at fair value of $3,695 at September 30, 2024 and $17,223 at December 31, 2023, respectively)	3,695	19,331
Short-term debt - related parties	38,915	19,909
Deferred revenue	3,693	2,834
Total current liabilities	76,169	67,298
Deferred revenue, net of current portion	2,639	3,186
Acquisition-related contingent consideration	1,606	1,606
Noncurrent lease liabilities - operating	26,451	26,177
Warrant liabilities	4,403	4,359
Deferred income tax liabilities	9	9
Other liabilities	283	294
Total liabilities	111,560	102,929
Commitments and contingencies (Note 9)		
Stockholders' equity		
Preferred stock, $0.0001 par value, 10,000,000 shares authorized, none issued and outstanding at September 30, 2024 and December 31, 2023	-	-
Common Stock, $0.0001 par value, 730,000,000 shares authorized, 21,984,614 and 19,378,192 issued and outstanding as of September 30, 2024 and December 31, 2023, respectively	2	2
Additional paid-in capital	903,670	882,749
Accumulated other comprehensive loss	(2)	-
Accumulated deficit	(886,390)	(841,791)
Total stockholders' equity	17,280	40,960
Total liabilities and stockholders' equity	$ 128,840	$ 143,889

The accompanying notes are an integral part of these condensed consolidated financial statements.

Celularity Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss (Unaudited)
(In thousands, except share and per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Revenues				
Product sales, net	$ 3,393	$ 1,684	$ 26,199	$ 3,633
Services	1,292	1,427	3,857	4,062
License, royalty and other	4,611	675	6,032	2,964
Total net revenues	9,296	3,786	36,088	10,659
Operating expenses				
Cost of revenues (excluding amortization of acquired intangible assets)				
Product sales	547	557	2,888	1,486
Services	238	398	952	1,355
License, royalty and other	3,098	2,647	3,806	3,566
Research and development	3,915	5,182	13,558	30,737
Software cease-use costs	-	243	-	24,161
Selling, general and administrative	12,650	10,748	42,585	37,508
Change in fair value of contingent consideration liability	-	-	-	(104,339)
Goodwill impairment	-	82,714	-	112,347
IPR&D impairment	-	-	-	107,800
Amortization of acquired intangible assets	375	553	1,377	1,640
Total operating expenses	20,823	103,042	65,166	216,261
Loss from operations	(11,527)	(99,256)	(29,078)	(205,602)
Other income (expense):				
Interest income	77	23	254	205
Interest expense	(1,752)	(971)	(4,452)	(2,352)
Change in fair value of warrant liabilities	714	5,187	(1,156)	6,788
Change in fair value of debt	(708)	2,003	(694)	(354)
Loss on debt extinguishment	-	-	(3,908)	-
Other expense, net	(2,902)	(862)	(5,565)	(4,527)
Total other income (expense)	(4,571)	5,380	(15,521)	(240)
Loss before income taxes	(16,098)	(93,876)	(44,599)	(205,842)
Income tax expense (benefit)	-	-	-	-
Net loss	$ (16,098)	$ (93,876)	$ (44,599)	$ (205,842)
Change in fair value of debt due to change in credit risk, net of tax	(2)	-	(2)	2,541
Other comprehensive (loss) income	(2)	-	(2)	2,541
Comprehensive loss	$ (16,100)	$ (93,876)	$ (44,601)	$ (203,301)
Share information:				
Net loss per share - basic and diluted	$ (0.73)	$ (4.98)	$ (2.05)	$ (11.86)
Weighted average shares outstanding - basic and diluted	21,976,339	18,831,713	21,756,498	17,353,605

The accompanying notes are an integral part of these condensed consolidated financial statements.

Celularity Inc.
Condensed Consolidated Statements of Stockholders' Equity (Unaudited)
(In thousands, except share amounts)

	Common Stock		Additional Paid-in		Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Capital	Accumulated Deficit	Income (Loss)	Equity

Balances at January 1, 2024	19,378,192	$ 2	$ 882,749	$ (841,791)	$ -	$ 40,960
Issuance of common stock to Yorkville for debt extension and SEPA commitment fee	116,964	-	317	-	-	317
Issuance and modification of warrants to RWI and C.V. Starr	-	-	3,322	-	-	3,322
Issuance of common stock and warrants in PIPE Offering, net of offering expenses	2,141,098	-	6,000		-	6,000
Vesting of restricted stock units	233,361	-	-		-	-
Tax withholding on vesting of restricted stock units	(80,672)	-	(357)	-	-	(357)
Issuance of common stock to Palantir as consideration for settlement agreement	20,000	-	50	-	-	50
Retirement of shares in connection with reverse stock split	(191)	-	-	-	-	-
Stock-based compensation expense	-	-	2,966	-	-	2,966
Net loss	-	-	-	(22,013)	-	(22,013)
Balances at March 31, 2024	21,808,752	2	895,047	(863,804)	-	31,245
Issuance of warrants to Palantir as consideration for settlement agreement	40,584	-	125	-	-	125
Issuance and modification of warrants to RWI and C.V. Starr	-	-	(61)	-	-	(61)
Vesting of restricted stock units	87,180	-	-	-	-	-
Tax withholding on vesting of restricted stock units	(2,655)	-	-	-	-	-
Stock-based compensation expense	-	-	2,990	-	-	2,990
Net loss	-	-	-	(6,488)	-	(6,488)
Balances at June 30, 2024	21,933,861	2	898,101	(870,292)	-	27,811
Vesting of restricted stock units	75,472	-	-	-	-	-
Tax withholding on vesting of restricted stock units	(24,719)	-	(73)	-	-	(73)
Change in fair value of debt due to change in credit risk, net of tax	-	-	-	-	(2)	(2)
Reclassification of warrants from liability classified to equity classified	-	-	2,970	-	-	2,970
Stock-based compensation expense	-	-	2,672	-	-	2,672
Net loss	-	-	-	(16,098)	-	(16,098)
Balances at September 30, 2024	21,984,614	$ 2	$ 903,670	$ (886,390)	$ (2)	$ 17,280
Balances at January 1, 2023	14,892,129	$ 1	$ 844,387	$ (645,496)	$ 9	$ 198,901
Exercise of stock options	107,100	-	300	-	-	300
Common stock issued pursuant to short-term debt conversion	365,612	-	3,510	-	(152)	3,358
Issuance of common stock in PIPE Offering, net of offering expenses	938,183	-	8,931	-	-	8,931
Issuance of common stock for stem-cells to be used in research and development	169,492	-	1,000	-	-	1,000
Vesting of restricted stock units	25,339	-	-	-	-	-
Tax withholding on vesting of restricted stock units	(8,110)	-	(53)	-	-	(53)
Issuance of common stock under ATM Agreement	13,296	-	136	-	-	136
Issuance of warrants on senior secured bridge loan	-	-	274	-	-	274
Stock-based compensation expense	-	-	3,988	-	-	3,988
Change in fair value of debt due to change in credit risk, net of tax	-	-	-	-	2,810	2,810
Net loss	-	-	-	(64,017)	-	(64,017)
Balances at March 31, 2023	16,503,041	1	862,473	(709,513)	2,667	155,628
Exercise of stock options	1,537	-	4	-	-	4
Common stock issued pursuant to short-term debt conversion	38,085	-	282	-	(10)	272
Issuance of common stock in PIPE Offering, net of offering expenses	581,395	-	3,750	-	-	3,750
Issuance of common stock in Registered Direct Offering, net of offering expenses	923,077	1	1,225	-	-	1,226
Vesting of restricted stock units	39,178	-	-	-	-	-
Tax withholding on vesting of restricted stock units	(4,589)	-	(33)	-	-	(33)
Issuance of warrants (C.V. Starr & RWI)	-	-	2,016	-	-	2,016
Stock-based compensation expense	-	-	3,856	-	-	3,856
Change in fair value of debt due to change in credit risk, net of tax	-	-	-	-	(269)	(269)
Net loss	-	-	-	(47,949)	-	(47,949)
Balances at June 30, 2023	18,081,724	2	873,573	(757,462)	2,388	118,501
Common stock issued pursuant to short-term debt conversion	155,785	-	807	-	7	814
Common stock issued pursuant to short-term debt maturity extension	270,731	-	712	-	-	712
Issuance of common stock in Registered Direct Offering, net of offering expenses	857,143	-	96	-	-	96
Vesting of restricted stock units	805	-	-	-	-	-
Tax withholding on vesting of restricted stock units	(275)	-	(1)	-	-	(1)
Fair value of warrant modification for professional services	-	-	403	-	-	403
Stock-based compensation expense	-	-	3,598	-	-	3,598
Net loss	-	-	-	(93,876)	-	(93,876)
Balances at September 30, 2023	19,365,913	$ 2	$ 879,188	$ (851,338)	$ 2,395	$ 30,247

The accompanying notes are an integral part of these condensed consolidated financial statements.

Celularity Inc.
Condensed Consolidated Statements of Cash Flows (Unaudited)
(in thousands)

	Nine Months Ended September 30,	
	2024	**2023**
Cash flow from operating activities:		
Net loss	$ (44,599)	$ (205,842)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	6,046	7,028
Non cash lease expense	125	(62)
Provision for credit losses	222	456
Provision for inventory obsolescence	(50)	-
Change in fair value of warrant liabilities	1,156	(6,788)
Goodwill impairment	-	112,347
IPR&D impairment	-	107,800
Stock-based compensation expense	8,628	11,442
Change in fair value of contingent consideration	-	(104,339)
Acquired in-process research and development	-	3,000
Issuance of common stock for stem-cells to be used in research and development	-	1,000
Issuance of common stock to Palantir as consideration for settlement agreement	175	-
Issuance of common stock to Yorkville for debt extension and SEPA commitment fee	317	712
Discounts arising from RWI loan arrangement - related party	-	2,151
Fair value of warrant modification for professional services	-	403
Change in fair value of contingent stock consideration	-	(159)
Loss on extinguishment of debt	3,908	-
Change in fair value of debt	694	354
Non cash interest expense	3,217	-
Other, net	(285)	2,012
Changes in assets and liabilities:		
Accounts receivable	1,054	(118)
Inventory	5,653	(1,605)
Prepaid expenses and other assets	109	2,179
Accounts payable	1,312	6,754

Accrued expenses and other liabilities	7,237	1,533
Accrued R&D software	(3,500)	24,161
Lease liabilities - operating	274	172
Deferred revenue	312	1,065
Net cash used in operating activities	(7,995)	(34,344)
Cash flow from investing activities:		
Capital expenditures	(105)	(468)
Proceeds from Sanuwave convertible note receivable	2,175	-
Purchase of acquired in-process research and development	-	(3,000)
Net cash provided by (used in) investing activities	2,070	(3,468)
Cash flow from financing activities:		
Proceeds from warrants and short-term debt - related parties	15,000	18,369
Proceeds from registered direct offering	-	9,000
Proceeds from the exercise of stock options	-	304
Repayments of short-term debt - unaffiliated	(17,374)	(16,811)
Proceeds from issuance of short-term debt - unaffiliated	2,993	2,000
Payment of SEPA commitment fee	(25)	-
Repayments of short-term debt - related parties	(106)	-
Proceeds from PIPE financing	6,000	12,750
Proceeds from the sale of common stock in ATM offering	-	136
Payments of PIPE and other issuance costs	-	(1,553)
Tax withholding on vesting of restricted stock units	(430)	(87)
Net cash provided by financing activities	6,058	24,108
Net increase (decrease) in cash, cash equivalents and restricted cash	133	(13,704)
Cash, cash equivalents and restricted cash at beginning of period	10,163	28,802
Cash, cash equivalents and restricted cash at end of period	$ 10,296	$ 15,098
Supplemental disclosure of cash flow information:		
Cash paid for interest	$ 144	$ 1,073
Supplemental non-cash investing and financing activities:		
Property and equipment included in accounts payable and accrued expenses	$ (56)	$ (752)
Modification of C.V. Starr warrants in connection with forbearance	$ 51	$ -
Reduction of right-of-use assets and associated lease liabilities - operating due to lease modification	$ -	$ (2,083)
Issuance of RWI warrants in connection with forbearance	$ 1,162	$ -
Issuance of warrants on senior secured bridge loan	$ -	$ 2,002
Reclassification of warrants from liability classified to equity classified	$ 2,970	$ -
PIPE related offering costs included in accrued expenses	$ -	$ (69)
Common stock issued for short-term debt conversion	$ -	$ 4,599
Interest accrued on senior secured loans within long-term debt - related parties	$ -	$ (1,229)

The accompanying notes are an integral part of these condensed consolidated financial statements.

Celularity Inc.
Notes to Unaudited Condensed Consolidated Financial Statements
(in thousands, except share and per share amounts)

1. Nature of Business

Celularity Inc., ("Celularity" or the "Company"), formerly known as GX Acquisition Corp. ("GX"), was a blank check company incorporated in Delaware on August 24, 2018. The Company was formed for the purpose of effectuating a merger, capital stock exchange, asset acquisition, stock purchase, reorganization or other similar business combination with one or more businesses.

On July 16, 2021 (the "Closing Date"), the Company consummated the previously announced merger pursuant to the Merger Agreement and Plan of Reorganization, dated January 8, 2021 (the "Merger Agreement"), by and among GX, Alpha First Merger Sub, Inc., a Delaware corporation and a direct, wholly owned subsidiary of GX ("First Merger Sub"), Celularity LLC (f/k/a Alpha Second Merger Sub LLC), a Delaware limited liability company and a direct, wholly owned subsidiary of GX ("Second Merger Sub"), and the entity formerly known as Celularity Inc., incorporated under the laws of the state of Delaware on August 29, 2016 ("Legacy Celularity"). Upon completion of the merger transaction, GX changed its name to Celularity Inc.

At the special meeting held on February 22, 2024, the stockholders of Celularity approved an amendment to Celularity's Second Amended and Restated Certificate of Incorporation, as amended, to effect a reverse stock split of Celularity's Class A common stock, par value $0.0001 per share, at a ratio of 1-for-10. Following the reverse stock split, each 10 shares of Celularity's Class A Common Stock issued and outstanding immediately prior thereto were combined into one new share of Class A Common Stock. Unless specifically provided otherwise herein, all share and per share information has been adjusted to reflect the reverse stock split.

Description of Business

Celularity is a cell therapy and regenerative medicine company focused on addressing aging related diseases including cancer and degenerative diseases. Celularity is headquartered in Florham Park, NJ. Legacy Celularity acquired Anthrogenesis Corporation ("Anthrogenesis") in August 2017 from Celgene Corporation ("Celgene"), a global biotechnology company that merged with Bristol Myers Squibb Company. Previously, Anthrogenesis operated as Celgene Cellular Therapeutics, Celgene's cell therapy division.

The Company is subject to risks and uncertainties common to early-stage companies in the biotechnology industry, including, but not limited to, development by competitors of new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with governmental regulations and the ability to secure additional capital to fund operations. Drug candidates currently under development will require significant additional approval prior to commercialization, including extensive preclinical and clinical testing and regulatory approval. These efforts require significant amounts of additional capital, adequate personnel, and infrastructure and extensive compliance-reporting capabilities. Even if the Company's drug development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from cellular therapy product sales.

Going Concern

The Company has evaluated whether there are certain conditions and events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the condensed consolidated financial statements are issued.

As an emerging clinical-stage biotechnology company, Celularity is subject to certain inherent risks and uncertainties associated with the development of an enterprise. In this regard, since the Company's inception, substantially all of management's efforts have been devoted to making investments in research and development including basic scientific research into placentally-derived allogeneic cells, pre-clinical studies to support its current and future clinical programs in cellular therapeutics, and clinical development of its cell programs as well as facilities and selling, general and administrative expenses that support its core business operations (collectively, the "investments"), all at the expense of the Company's short-term profitability. The Company has historically funded these investments through limited revenues generated from its biobanking and degenerative disease businesses and issuances of equity and debt securities to public and private investors (these issuances are collectively referred to as "outside capital"). Notwithstanding these efforts, management can provide no assurance that the Company's research and development and commercialization efforts will be successfully completed, or that adequate protection of the Company's intellectual property will be adequately maintained. Even if these efforts are successful, it is uncertain when, if ever, the Company will generate significant sales or operate in a profitable manner to sustain the Company's operations without needing to continue to rely on outside capital.

As of the date the accompanying condensed consolidated financial statements were issued, or the issuance date, management evaluated the significance of the following adverse conditions and events in considering its ability to continue as a going concern:

- Since its inception, the Company has incurred significant operating losses and net cash used in operating activities. For the nine months ended September 30, 2024, the Company incurred an operating loss of $29,078 and net cash used in operating activities of $7,995. As of September 30, 2024, the Company had an accumulated deficit of $886,390. The Company expects to continue to incur significant operating losses and use net cash for operations for the foreseeable future.

- The Company expects to incur substantial expenditures to fund its investments for the foreseeable future. In order to fund these investments, the Company will need to secure additional sources of outside capital. While the Company is actively seeking to secure additional outside capital (and has historically been able to successfully secure such capital), as of the issuance date, additional outside capital sufficient to fund operations for the next 12 months has not been secured or was deemed probable of being secured. In addition, management can provide no assurance that the Company will be able to secure additional outside capital in the future or on terms that are acceptable to the Company. Absent an ability to secure additional outside capital in the very near term, the Company will be unable to meet its obligations as they become due over the next 12 months beyond the issuance date.

- As of the issuance date, the Company had approximately $46,050 of debt outstanding, all of which is currently due or due within one year of the issuance date. As disclosed in Note 7, a substantial portion of the Company's outstanding debt is subject to forbearance agreements. In the event the terms of the forbearance agreements are not met and/or the outstanding borrowings are not repaid, the lenders may, at their discretion, exercise all of their rights and remedies under the loan agreements which may include, among other things, seizing the Company's assets and/or forcing the Company into liquidation.

- As a result of the Company's failure to timely file its quarterly reports on Form 10-Q for the periods ended March 31, 2024 and June 30, 2024, it no longer complied with the continued listing requirements under the timely filing criteria outlined in Nasdaq Listing Rule 5250(c)(1). The Company had regained compliance with the Nasdaq listing requirements upon filing its Form 10-Q for the period ended June 30, 2024 on November 7, 2024. On November 21, 2024, Nasdaq provided formal notice to the Company that as a result of Company's failure to timely file its quarterly report on Form 10-Q for the period ended September 30, 2024, the Company was not in

compliance with the continued listing requirements under Nasdaq Listing Rule 5250(c)(1). The Company has 60 days to submit a plan to Nasdaq to regain compliance with the continued listing requirements. If Nasdaq accepts the Company's plan, it may grant an exception of up to 180 days from the filing's due date, or May 13, 2025, to regain compliance. There can be no assurance that Nasdaq will grant the Company an extension or that the Company will maintain compliance with the Nasdaq listing requirements. If the Company is unable to regain compliance, the Company's securities will be delisted from the Nasdaq, which such delisting could have a materially adverse effect on the Company's ability to continue as a going concern.

- In the event the Company is unable to secure additional outside capital to fund the Company's obligations when they become due over the next 12 months beyond the issuance date, which includes the funds needed to repay the Company's outstanding debt, management will be required to seek other strategic alternatives, which may include, among others, a significant curtailment of the Company's operations, a sale of certain of the Company's assets, a sale of the entire Company to strategic or financial investors, and/or allowing the Company to become insolvent by filing for bankruptcy protection under the provisions of the U.S. Bankruptcy Code.

These uncertainties raise substantial doubt about the Company's ability to continue as a going concern. The accompanying condensed consolidated financial statements have been prepared on the basis that the Company will continue to operate as a going concern, which contemplates that the Company will be able to realize assets and settle liabilities and commitments in the normal course of business for the foreseeable future. Accordingly, the accompanying condensed consolidated financial statements do not include any adjustments that may result from the outcome of these uncertainties.

2. Summary of Significant Accounting Policies

Basis of Presentation

The Company's unaudited condensed consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States ("GAAP"). The unaudited condensed consolidated financial statements include the accounts of wholly owned subsidiaries, after elimination of intercompany accounts and transactions. The unaudited condensed consolidated financial information presented herein reflects all financial information that, in the opinion of management, is necessary for a fair statement of consolidated financial position, results of operations and cash flows for the periods presented.

The Company's condensed consolidated financial statements are prepared in accordance with the U.S. Securities and Exchange Commission's ("SEC") rules for the presentation of interim financial statements, which permit certain disclosures to be condensed or omitted. These financial statements should be read in conjunction with the Company's annual financial statements as of and for the year ended December 31, 2023 included in the Annual Report on Form 10-K filed with the SEC on July 30, 2024, (the "2023 Form 10-K").

In the opinion of management, the accompanying interim financial statements include all normal and recurring adjustments (which consist primarily of accruals, estimates and assumptions that impact the financial statements) considered necessary to present fairly the Company's consolidated financial position as of September 30, 2024, and its consolidated results of operations and cash flows for the nine months ended September 30, 2024 and 2023. Operating results for the three and nine months ended September 30, 2024, are not necessarily indicative of the results that may be expected for the year ending December 31, 2024.

Use of Estimates

The preparation of the Company's condensed consolidated financial statements in accordance with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements, and the reported amounts of revenue and expenses during the reporting period. Significant estimates and assumptions reflected in these condensed consolidated financial statements include, but are not limited to, assumptions related to the Company's goodwill and intangible asset impairment assessments, determination of incremental borrowing rates, accrual of research and development expenses, and the valuations of inventory, contingent consideration, short-term debt, stock options and stock warrants. The Company based its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates when there are changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. Actual results could differ from those estimates.

Fair Value Measurements

Certain assets and liabilities of the Company are carried at fair value under GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 — Quoted prices in active markets for identical assets or liabilities.
- Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies and similar techniques.

Comprehensive Income (Loss)

Comprehensive income (loss) refers to revenues, expenses, gains and losses that under GAAP are included in comprehensive income (loss) but are excluded from net income (loss) as these amounts are recorded directly as an adjustment to accumulated other comprehensive income (loss). The Company's only component of other comprehensive income (loss) is comprised of the portion of the total change in fair value of indebtedness accounted for under the fair value option that is attributable to changes in instrument-specific credit risk. During the nine months ended September 30, 2024, the Company recorded instrument-specific credit risk loss of $2. During the nine months ended September 30, 2023, the Company recorded instrument-specific credit risk income of $2,541 and reclassified $155 from accumulated other comprehensive income to other expense, net on the condensed consolidated statements of operations and comprehensive loss upon short-term debt conversion. These amounts have been recorded as a separate component of stockholders' equity.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the condensed consolidated financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. Potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies. No income tax expense was incurred during the nine months ended September 30, 2024 and 2023.

Net Income (Loss) per Share

Basic net income (loss) per share of common stock is computed by dividing net income (loss) by the weighted-average number of shares of common stock outstanding during each period. Diluted net income (loss) per share of common stock includes the effect, if any, from the potential exercise or conversion of securities, such as redeemable convertible preferred stock, convertible debt, stock options, restricted stock units and warrants, which would result in the issuance of incremental shares of common stock. However, potential common shares are excluded if their effect is anti-dilutive. For diluted net loss per share when the Company has a net loss, the weighted-average number of shares of common stock is the same for basic net loss per share due to the fact that when a net loss exists, dilutive securities are not included in the calculation as the impact is anti-dilutive. All warrants are participating securities, as they participate on a one-for-one basis with Class A common stock in the distribution of dividends, if and when declared by the Board of Directors. For the purposes of computing earnings per share, the warrants are considered to participate with Class A common stock in earnings of the Company. Therefore, the Company computes earnings per share using the two-class method, an earnings allocation method that determines net income (loss) per share (when there are earnings) for common stock and participating securities. No income was allocated to the warrants for the nine months ended September 30, 2024 and 2023, as results of operations were a loss for both periods.

The following potentially dilutive securities have been excluded from the computation of diluted weighted-average shares of Class A common stock outstanding, prior to the use of the two-class method, as they would be anti-dilutive:

	September 30,	
	2024	2023
Stock options	3,455,049	2,961,438
Restricted stock units	327,359	878,555
Warrants	10,905,901	7,070,627
Convertible debt	1,241,291	2,830,177
	15,929,600	13,740,797

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources in assessing performance. The Company manages its operations through an evaluation of three distinct businesses segments: Cell Therapy, Degenerative Disease and BioBanking. These segments are presented for the three and nine months ended September 30, 2024 and 2023 in Note 14.

Allowance for Credit Losses

With the adoption of ASU 2016-13 *Financial Instruments — Credit Losses,* as noted below, the Company recognizes credit losses based on forward-looking current expected credit losses. The Company makes estimates of expected credit losses based upon its assessment of various factors, including historical collection experience, the age of accounts receivable balances, credit quality of its customers, current economic conditions, reasonable and supportable forecasts of future economic conditions, and other factors that may affect its ability to collect from customers.

Concentrations of Credit Risk and Significant Customers

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash, cash equivalents and restricted cash, and accounts receivable. The Company generally maintains balances in various operating accounts at financial institutions that management believes to be of high credit quality, in amounts that may exceed federally insured limits. The Company has not experienced any losses related to its cash and cash equivalents or restricted cash and does not believe that it is subject to unusual credit risk beyond the normal credit risk associated with commercial banking relationships.

The Company is subject to credit risk from trade accounts receivable related to both degenerative disease product sales and biobanking services. All trade accounts receivables are a result from product sales and services performed in the United States. As of September 30, 2024, two of the Company's customers, each of which individually comprised at least 10%, represented an aggregate 33% of the Company's outstanding gross accounts receivable. As of December 31, 2023, two of the Company's customers, each of which individually comprised at least 10%, represented an aggregate 63% of the Company's outstanding gross accounts receivable. During the nine months ended September 30, 2024 and 2023, the Company had one customer that provided for 15% and 21% of revenue, respectively. The Company had no customers that individual comprised at least 10% of revenue and one customer that provided for 15% of revenue during the three months ended September 30, 2024 and 2023, respectively.

Emerging Growth Company

Section 102(b)(1) of the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act") exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Securities Exchange Act of 1934, as amended) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that an emerging growth company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such an election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period, which expires December 31, 2026 unless the Company is otherwise disqualified. Accordingly, when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard.

This may make comparison of the Company's condensed consolidated financial statements with another public company that is neither an emerging growth company nor an emerging growth company that has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Reclassifications

Certain prior period amounts have been reclassified to conform with current year presentation. On the condensed consolidated balance sheets, short-term debt - Yorkville and other short-term debt were reclassified to short-term debt - unaffiliated, and short-term debt - related party and short-term debt - related parties - C.V. Starr and RWI were reclassified to short-term debt - related parties. See Note 7 for further information.

Recently Adopted Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-13, *Financial Instruments — Credit Losses* ("ASU 2016-13"), which changes the accounting for recognizing impairments of financial assets. Under the new guidance, credit losses for certain types of financial instruments will be estimated based on expected losses. ASU 2016-13 also modifies the impairment models for available-for-sale debt securities and for purchased financial assets with credit deterioration since their origination. ASU 2016-13 is effective for annual periods beginning after December 15, 2022 (fiscal year 2023 for the Company), and interim periods within those periods, with early adoption permitted. The Company adopted ASU 2016-13 effective January 1, 2023. The standard did not have a material impact on the condensed consolidated financial statements.

Recently Issued Accounting Pronouncements

In November 2023, the FASB issued ASU 2023-07, *Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures* ("ASU 2023-07"), which requires disclosure of incremental segment information on an annual and interim basis. This ASU is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024 on a retrospective basis. The Company is currently evaluating the effect of this pronouncement on its disclosures.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* ("ASU 2023-09"), which expands the disclosures required for income taxes. This ASU is effective for fiscal years beginning after December 15, 2025, with early adoption permitted. The amendment should be applied on a prospective basis while retrospective application is permitted. The Company is currently evaluating the effect of this pronouncement on its disclosures.

In November 2024, the FASB issued ASU 2024-03, *Income Statement—Reporting Comprehensive Income—Expense Disaggregation Disclosures (Subtopic 220-40): Disaggregation of Income Statement Expenses*, which is intended to provide more detailed information about specified categories of expenses (purchases of inventory, employee compensation, depreciation and amortization) included in certain expense captions presented on the consolidated statement of operations. The guidance in this ASU is effective for fiscal years beginning after December 15, 2026, and interim periods within fiscal years beginning after December 15, 2027. Early adoption is permitted. The amendments may be applied either (1) prospectively to financial statements issued for periods after the effective date of this ASU or (2) retrospectively to all prior periods presented in the consolidated financial statements. The Company is currently evaluating the effect of this pronouncement on its condensed consolidated financial statements and footnote disclosures.

3. Fair Value of Financial Assets and Liabilities

The following tables present information about the Company's financial assets and liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy used to determine such fair values:

	Fair Value Measurements as of September 30, 2024			
	Level 1	Level 2	Level 3	Total
Liabilities:				
Acquisition-related contingent consideration obligations	$ —	$ —	$ 1,606	$ 1,606
Contingent stock consideration	—	—	27	27
Short-term debt - Yorkville convertible note	—	—	3,695	3,695
Warrant liability - July 2023 Registered Direct Warrants	—	—	1,748	1,748
Warrant liability - April 2023 Registered Direct Warrants	—	—	1,670	1,670
Warrant liability - May 2022 PIPE Warrants	—	—	809	809
Warrant liability - Sponsor Warrants	—	—	32	32
Warrant liability - Public Warrants	144	—	—	144
	$ 144	$ —	$ 9,587	$ 9,731

	Fair Value Measurements as of December 31, 2023			
	Level 1	Level 2	Level 3	Total
Assets:				
Convertible note receivable	$ —	$ —	$ 2,072	$ 2,072
	$ —	$ —	$ 2,072	$ 2,072
Liabilities:				
Acquisition-related contingent consideration obligations	$ —	$ —	$ 1,606	$ 1,606
Contingent stock consideration	—	—	27	27
Short-term debt - Yorkville	—	—	17,223	17,223
Warrant liability - July 2023 Registered Direct Warrants	—	—	1,529	1,529
Warrant liability - April 2023 Registered Direct Warrants	—	—	1,487	1,487
Warrant liability - May 2022 PIPE Warrants	—	—	708	708
Warrant liability - Sponsor Warrants	—	—	60	60
Warrant liability - Public Warrants	575	—	—	575
	$ 575	$ —	$ 22,640	$ 23,215

During the nine months ended September 30, 2024 and 2023, there were no transfers between Level 1, Level 2 and Level 3. The carrying values of other current liabilities approximate fair value in the accompanying condensed consolidated financial statements due to the short-term nature of those instruments.

Valuation of Convertible Note Receivable

The convertible note receivable was received in connection with the disposition of the UltraMIST/MIST business in 2020. At any time on or after January 1, 2021, at the sole discretion of the Company, amounts outstanding under the convertible note receivable (including accrued interest) may be converted into Sanuwave common stock at a defined rate. The convertible note receivable was to be paid on or before August 6, 2021.

On December 18, 2023, the Company entered into a forbearance agreement with Sanuwave ("Sanuwave Forbearance Agreement"). Per the Sanuwave Forbearance Agreement, from the period from December 18, 2023 to the earliest of (i) February 28, 2024, (ii) the commencement of bankruptcy proceedings for Sanuwave pursuant to the U.S. Bankruptcy Code, (iii) the occurrence of an event of default other than payment default, or (iv) the failure of Sanuwave to comply with any term, condition or covenant set forth in the forbearance agreement, the Company agrees that it will not exercise any remedy available to it under the convertible note receivable, excluding the right to increase the interest rate. As collateral for payments owed to Palantir Technologies, Inc. ("Palantir"), the Company assigned to Palantir the Sanuwave convertible note receivable in the event of default (see Note 9). On May 10, 2024, the Company entered into a letter agreement with Sanuwave to extend the forbearance period from February 28, 2024 to June 3, 2024. The letter agreement increased the total note payments to $2,175. Upon executing the letter agreement, Sanuwave made an initial note payment of $100 and on June 3, 2024, made a second note payment of $2,075, fully discharging all outstanding indebtedness under the note.

The following table presents a reconciliation of the convertible note receivable measured on a recurring basis using Level 3 inputs for the nine months ended September 30, 2024:

	Balance as of January 1, 2024	Net transfers in to (out of) Level 3	Purchases, settlements and other net	Fair value adjustments	Balance as of September 30, 2024
Assets:					
Convertible note receivable	$ 2,072	$ —	$ (2,072)	$ —	$ —

At December 31, 2023, the fair value of this note was based on a bond valuation which employs a credit default model. The Company utilized Level 3 inputs on a probability weighted model based on outcomes of a default, repayment and conversion of the note. The measurement is based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions.

Significant inputs for the convertible note valuation model were as follows:

	December 31, 2023
Face value	$ 4,000
Coupon rate	12% - 17%
Stock price	$ 0.23
Term (years)	0.51-2.45
Risk-free interest rate	5.47%
Volatility	n/a

Valuation of Contingent Consideration

The fair value measurement of the contingent consideration obligations is determined using Level 3 inputs and is based on a probability-weighted income approach. The measurement is based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions.

The following table presents a reconciliation of contingent consideration obligations measured on a recurring basis using Level 3 inputs for the nine months ended September 30, 2024:

	Balance as of January 1, 2024	Net transfers in to (out of) Level 3	Purchases, settlements and other net	Fair value adjustments	Balance as of September 30, 2024
Liabilities:					
Acquisition-related contingent consideration obligations	$ 1,606	$ —	$ —	$ —	$ 1,606

The fair value of the liability to make potential future milestone and earn-out payments was estimated by the Company at each reporting date based, in part, on the results of a third-party valuation using a discounted cash flow analysis based on various assumptions, including the probability of achieving specified events, discount rates, and the period of time until earn-out payments are payable and the conditions triggering the milestone payments are met. The actual settlement of contingent consideration could differ from current estimates based on the actual occurrence of these specified events.

At each reporting date, the Company revalues the contingent consideration obligation to estimated fair value and records changes in fair value as income or expense in the Company's condensed consolidated statements of operations and comprehensive loss. Changes in the fair value of the contingent consideration obligations may result from changes in discount periods and rates, changes in the timing and amount of revenue estimates and changes in probability assumptions with respect to the likelihood of achieving the various contingent consideration obligations. The change in the fair value of the contingent consideration obligations during the nine months ended September 30, 2024 was de minimus. The Company has classified all of the contingent consideration as a long-term liability in the condensed consolidated balance sheets as of September 30, 2024 and December 31, 2023. See Note 9 for more information on contingent consideration.

Valuation of Contingent Stock Consideration

The contingent stock consideration liability at September 30, 2024, is comprised of the fair value of potential future issuance of Class A common stock to CariCord participating shareholders pursuant to a settlement agreement signed during the year ended December 31, 2021. The fair value measurement of the contingent stock consideration obligation is determined using Level 3 inputs and is based on a probability weighted expected return methodology ("PWERM"). The measurement is largely based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions.

The following table presents a reconciliation of the contingent stock consideration obligation measured on a recurring basis using Level 3 inputs for the nine months ended September 30, 2024:

	Balance as of January 1, 2024	Net transfers in to (out of) Level 3	Purchases, settlements and other net	Fair value adjustments	Balance as of September 30, 2024
Liabilities:					
Contingent stock consideration	$ 27	$ —	$ —	$ —	$ 27

The fair value of the liability to issue future shares of Class A common stock was estimated by the Company at each reporting date using a PWERM based on various inputs and assumptions, including the Company's common share price, discount rates, and the probability of achieving specified future operational targets. The actual settlement of contingent stock consideration could differ from current estimates based on the actual achievement of these specified targets and movements in the Company's common share price.

At each reporting date, the Company revalues the contingent stock consideration obligation to estimated fair value and records changes in fair value as income or expense in the Company's condensed consolidated statements of operations and comprehensive loss. Changes in the fair value of the contingent stock consideration obligation may result from changes in discount rates, changes in the Company's common share price, and changes in probability assumptions with respect to the likelihood of achieving specified operational targets. The change in the fair value of the contingent stock consideration obligation during the nine months ended September 30, 2024 was de minimus. The Company has classified all of the contingent stock consideration as a current liability in the condensed consolidated balance sheets as of September 30, 2024 and December 31, 2023.

Valuation of Short-Term Debt - Yorkville

The Company elected the fair value option to account for the Yorkville PPA signed on September 15, 2022 (see Note 7). As of December 31, 2023, due to the short-term nature of the debt, the fair value of the Yorkville PPA approximated the settlement amount, which was fully paid on January 17, 2024. The Company also elected the fair value option to account for the Yorkville convertible promissory note signed on March 13, 2024 (see Note 7). The fair value measurement of the debt is determined using Level 3 inputs and assumptions unobservable in the market. Changes in the fair value of debt that is accounted for at fair value, inclusive of related accrued interest expense, are presented as gains or losses in the accompanying condensed consolidated statements of operations and comprehensive loss under change in fair value of debt. The portion of total changes in fair value of debt attributable to changes in instrument-specific credit risk are determined through specific measurement of periodic changes in the discount rate assumption exclusive of base market changes and are presented as a component of comprehensive loss in the accompanying condensed consolidated statements of operations and comprehensive loss. The actual settlement of the short-term debt could differ from current estimates based on the timing of when and if Yorkville elects to convert amounts into common shares, potential cash repayment by the Company prior to maturity, and movements in the Company's common share price.

The following table presents a reconciliation of short-term debt obligations measured on a recurring basis using Level 3 inputs for the nine months ended September 30, 2024:

Liabilities:	
Balance as of January 1, 2024	$ 17,223
Principal repayments	(17,374)
Issuance of convertible promissory note	3,150
Fair value adjustment through earnings	694
Fair value adjustment through accumulated other comprehensive income	2
Balance as of September 30, 2024	$ 3,695

The fair value of the Yorkville convertible promissory note is based on a valuation which employs a Monte Carlo model and a credit default model. The Company utilized Level 3 inputs in a probability weighted model based on outcomes of a default, repayment and conversion of the note. The measurement is based upon unobservable inputs supported by little or no market activity based on the Company's own assumptions. The fair value of the Yorkville convertible promissory note on March 13, 2024, the date of issuance, was $2,993.

Significant inputs for the Yorkville convertible promissory note valuation model were as follows:

	September 30, 2024	March 13, 2024 (issuance)
Common share price	$ 2.97	$ 5.79
Credit spread	8.00%	8.50%
Dividend yield	0%	0%
Term (years)	0.45	1.00
Risk-free interest rate	4.30%	4.90%
Volatility	50.0%	50.0%

Valuation of Warrant Liability

The warrant liability at September 30, 2024 is comprised of the fair value of warrants to purchase shares of Class A common stock. The Public Warrants are recorded at fair value based on the period-end publicly stated close price, which is a Level 1 input. The January 2024 Bridge Loan - Tranche #2 Warrants were recorded at fair value based on a Monte Carlo simulation model and the Registered Direct, PIPE and Sponsor Warrants are recorded at their respective closing date fair values based on a Black-Scholes option pricing model that utilizes inputs for: (i) value of the underlying asset, (ii) the exercise price, (iii) the risk-free rate, (iv) the volatility of the underlying asset, (v) the dividend yield of the underlying asset and (vi) maturity, which are Level 3 inputs. The Black-Scholes option pricing model's primary unobservable input utilized in determining the fair values of the warrant liabilities is the expected volatility of the Class A common stock. Prior to the merger, Legacy Celularity was a private company and lacked company-specific historical and implied volatility information for its stock. Therefore, the Company estimates its expected stock price volatility using its volatility since the merger and the historical volatility of publicly traded peer companies. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the estimated remaining term of the warrants. Inputs to the Monte Carlo and Black-Scholes option pricing models for the warrants are updated each reporting period to reflect fair value.

The following table presents a reconciliation of the warrant liabilities measured on a recurring basis using Level 3 inputs for the nine months ended September 30, 2024:

Balance as of January 1, 2024	$ 3,784
January 2024 Bridge Loan - Tranche #2 warrant issuance	1,858
Gain recognized in earnings from change in fair value	1,587
Reclassification of warrants from liability classified to equity classified	(2,970)
Balance as of September 30, 2024	$ 4,259

Significant inputs for the May 2022 PIPE Warrants and the 2023 Registered Direct Warrants were as follows:

	September 30, 2024	December 31, 2023
Common share price	$ 2.97	$ 2.47
Exercise price	$ 3.50 - 7.50	$ 3.50 - 7.50
Dividend yield	0%	0%
Term (years)	4.03 - 4.34	4.78 - 5.09
Risk-free interest rate	3.58%	3.84%
Volatility	97.1% - 98.1%	100.1% - 100.7%

Significant inputs for the January 2024 Bridge Loan - Tranche #2 Warrants were as follows:

	July 15, 2024 (reclassification)	January 16, 2024 (issuance)
Common share price	$ 3.19	$ 2.00
Term to initial exercise date (years)[(1)]	N/A	0.50
Dividend yield	0%	0%
Term (years)	5.0	5.0
Risk-free interest rate	4.00%	3.90%
Volatility	112.5%	107.5%

(1) As discussed further in Note 7, the warrants were not exercisable and the exercise price was not set until certain conditions were met. As of July 15, 2024, the warrants became exercisable and no longer contain adjustment provisions to the exercise price that are not indexed to the Company's own stock. As such, the warrants were marked to fair value as of the initial exercise date and then reclassified from liability classified to equity classified.

Significant inputs for the Sponsor Warrants were as follows:

	September 30, 2024	December 31, 2023
Common share price	$ 2.97	$ 2.47
Exercise price	$ 115.00	$ 115.00
Dividend yield	0%	0%
Term (years)	1.8	2.5
Risk-free interest rate	3.66%	4.12%
Volatility	105.9%	100.7%

4. Inventory

The Company's major classes of inventory were as follows:

	September 30, 2024	December 31, 2023
Raw materials	$ 42	$ 3,081
Work in progress	10,284	10,696
Finished goods	8,720	10,922
Inventory, gross	19,046	24,699
Less: inventory reserves	(2,239)	(2,289)
Inventory, net	$ 16,807	$ 22,410
Balance Sheet Classification:		
Inventory	$ 3,963	$ 5,753
Inventory, net of current portion	12,844	16,657
	$ 16,807	$ 22,410

Inventory, net of current portion includes inventory expected to remain on-hand beyond one year from each balance sheet date presented.

5. Property and Equipment, Net

Property and equipment, net consisted of the following:

	September 30, 2024	December 31, 2023
Leasehold improvements	$ 73,211	$ 73,211
Laboratory and production equipment	14,093	14,093
Machinery, equipment and fixtures	7,781	7,781
Construction in progress	70	21
Property and equipment	95,155	95,106
Less: Accumulated depreciation and amortization	(31,947)	(27,278)
Property and equipment, net	$ 63,208	$ 67,828

Depreciation and amortization expense was $1,519 and $1,790 for the three months ended September 30, 2024 and 2023, respectively. Depreciation and amortization expense was $4,669 and $5,388 for the nine months ended September 30, 2024 and 2023, respectively.

6. Goodwill and Intangible Assets, Net

Goodwill

During the nine months ended September 30, 2023, the Company experienced a sustained decline in its stock price resulting in its market capitalization being less than the carrying value of its combined reporting units. The Company concluded the sustained decline in its stock price combined with the decision to discontinue certain Cell Therapy clinical trials and development were triggering events and performed a quantitative impairment test on goodwill and acquired IPR&D assets. Based on the results of the impairment analysis, the Company recognized an $82,714 and $112,347 goodwill impairment charge for the three and nine months ended September 30, 2023, respectively, relating to the Cell Therapy reporting unit in its condensed consolidated statements of operations and comprehensive loss. There was no goodwill impairment recognized during the three and nine months ended September 30, 2024. The carrying value of goodwill, all of which is assigned to the Company's BioBanking reporting unit, was $7,347 at both September 30, 2024 and December 31, 2023.

Intangible Assets, Net

Intangible assets, net consisted of the following:

	September 30, 2024	December 31, 2023	Estimated Useful Lives
Amortizable intangible assets:			
Developed technology	$ 16,810	$ 16,810	11 – 16 years
Customer relationships	2,413	2,413	10 years
Trade names & trademarks	570	570	10 – 13 years
Reacquired rights	4,200	4,200	6 years
	23,993	23,993	
Less accumulated amortization:			
Developed technology	(8,600)	(7,722)	
Customer relationships	(1,898)	(1,700)	
Trade names & trademarks	(371)	(330)	
Reacquired rights	(4,200)	(3,940)	
	(15,069)	(13,692)	
Amortizable intangible assets, net	8,924	10,301	
Non-amortized intangible assets			
Acquired IPR&D product rights	700	700	indefinite
	$ 9,624	$ 11,001	

For the three months ended September 30, 2024 and 2023, amortization expense for intangible assets was $375 and $553, respectively. For the nine months ended September 30, 2024 and 2023, amortization expense for the intangible assets was $1,377 and $1,640, respectively.

No impairment charges were recorded on intangible assets for the three and nine months ended September 30, 2024. During the three and nine months ended September 30, 2023, the Company discontinued its unmodified NK cell and AML Cell Therapy clinical trials and as a result recorded an IPR&D impairment of $107,800 on its CYNK-001 and GMNK intangible assets acquired from the Anthrogenesis acquisition.

7. Debt

Debt consisted of the following:

	September 30, 2024	December 31, 2023
Short-term debt - unaffiliated:		
Yorkville - PPA (measured at fair value)	$ -	$ 17,223
Yorkville - convertible promissory note (measured at fair value)	3,695	-
Short-term debt - other	-	2,108
Total short-term debt - unaffiliated	3,695	19,331
Short-term debt - related parties:		
C.V. Starr Bridge Loan, net of discount	5,640	5,523
RWI Bridge Loan, net of discount	29,482	12,967
CEO promissory note	3,793	1,419
Total short-term debt - related parties	38,915	19,909
Total debt	$ 42,610	$ 39,240

Yorkville PPA

On September 15, 2022, the Company entered into a Pre-Paid Advance Agreement ("PPA") with YA II PN, Ltd. ("Yorkville"), pursuant to which the Company could request advances of up to $ 40,000 in cash from Yorkville (or such greater amount that the parties may mutually agree) (each, a "Pre-Paid Advance") over an 18-month period, with an aggregate limitation of $150,000. Pre-Paid Advances were issued at a 2.0% discount, bore interest at an annual rate equal to 6.0% (increased to 15.0% in the event of default as described in the PPA) and may be offset by the issuance of shares of common stock, at Yorkville's option, at a price per share calculated pursuant to the PPA, which in no event will be less than $7.50 per share. The issuance of the shares under the PPA was subject to certain limitations, including that the aggregate number of shares of common stock issued pursuant to the PPA cannot exceed 19.9% of the Company's outstanding stock as of September 15, 2022, as well as a beneficial ownership limitation of 4.99%. Further, Yorkville agreed not to purchase any shares of common stock for 60 days following entry into the PPA, nor could Yorkville purchase more than $6,000 of shares of common stock during a 30-day period, in each case at a price per share less than the Fixed Price, as defined in the PPA. In the event the daily volume weighted average price ("VWAP") of the Class A common stock is below $7.50 (the "floor price") for any five of seven consecutive trading days, the Company would pay Yorkville a monthly cash payment of $6,000, plus any accrued and unpaid interest along with a 5.0% redemption premium until such time as the daily VWAP for five consecutive trading days immediately prior to the due date of the next monthly payment was at least 10.0% greater than $7.50. In connection with the Company's 2023 annual stockholder meeting held in June 2023, the Company and Yorkville agreed to lower the floor price to $0.50 (the "amended floor price"). The Company also received stockholder approval of the proposal for the issuance of more than 20.0% of its pre-transaction Class A common stock outstanding at a price below the minimum price pursuant to the PPA. Further, absent prior written consent from Yorkville, the Company agreed it would not increase the size or amount borrowed under the C.V. Starr loan facility nor would it incur other borrowings or liens of any kind as long as any amounts were due and remained outstanding to Yorkville until paid in full. The Company agreed that all obligations due and owing to Yorkville would become secured obligations upon any violation under the PPA.

In connection with the entry into the PPA, the Company received the initial Pre-Paid Advance of $ 40,000 gross or $39,200 net of discount. Each Pre-Paid Advance had a maturity of 12 months. Further Pre-Paid Advances would be based upon the mutual agreement of the parties. Direct costs and fees related to the PPA were recognized in earnings. At issuance, the Company concluded that certain features of the PPA would be considered a derivative that would require bifurcation. In lieu of bifurcation, the Company elected the fair value option for this financial instrument and records changes in fair value within the condensed consolidated statements of operations and comprehensive loss at the end of each reporting period. Under the fair value option, upon derecognition the Company will include in net loss the cumulative amount of the gain or loss on the debt that resulted from changes in instrument-specific credit risk.

During the fourth quarter of 2022, Yorkville elected to convert $3,000 of principal and $694 of accrued interest into 262,797 shares of common stock, and during the year ended December 31, 2023, Yorkville elected to convert $3,889 of principal and $400 of accrued interest into 559,481 shares of common stock. Further, during the year December 31, 2023, total repayments to Yorkville were $ 18,724 which consisted of (i) $16,811 applied to the principal amount; (ii) $1,073 towards accrued interest; and (iii) $840 of redemption premium. As of December 31, 2023, the fair value of the debt was $17,223 and the principal balance was $16,623. Refer to Note 3 for additional details regarding the fair value measurement.

On January 12, 2024, the Company and Yorkville entered into a forbearance agreement ("Forbearance Agreement"), pursuant to which Yorkville agreed to restrain from enforcing its rights and remedies as a result of the event of default during the forbearance period. The forbearance period was to continue until the earlier of January 19, 2024 or the date the Company fully repaid all amounts outstanding under the PPA ("Forbearance Period"). During the Forbearance Period, interest accrued at 15.0% per annum. In addition, the Company was to make a cash payment of $17,348 plus per diem interest of $7 for each day after January 12, 2024 until payment was made and was required to issue Yorkville a total of 100,000 shares of its common stock. On January 12, 2024, the Company issued Yorkville 100,000 of its common stock in connection with the extension of the maturity date of the PPA. The PPA was repaid in full on January 17, 2024.

On March 13, 2024, the Company entered into a Standby Equity Purchase Agreement ("SEPA") with Yorkville (see Note 10).

Yorkville Convertible Promissory Note

Upon entry into the SEPA, the Company issued Yorkville a $3,150 convertible promissory note for $2,993 in cash (after a 5% original issue discount). The note bears interest at an annual rate equal to 8.0% (increased to 18.0% in the event of default as provided in the note) and matures on March 13, 2025. The note was initially convertible into common stock at a price per share equal to $6.3171, provided however, the conversion price was subject to reset on the earlier of (a) the fifth trading day following the effective date of the resale shelf, or (b) the six-month anniversary of the issuance date of the convertible note (i.e., September 13, 2024). The conversion price was reset to $2.7546 on September 13, 2024. Upon the occurrence and during the continuation of an event of default (as defined in the note), the note (including accrued interest) may become immediately due and payable. The issuance of the common stock upon conversion of the note and otherwise under the SEPA is capped at 19.9% of the outstanding common stock as of March 13, 2024. Further, the note and SEPA include a beneficial ownership blocker for Yorkville such that Yorkville may not be deemed the beneficial owner of more than 4.99% of the Company's common stock. As a result of the Company's failure to file its 2023 Form 10-K by April 30, 2024 (i.e., a deemed Event of Default under the convertible promissory note), the Company began accruing interest at the default rate of 18.0% as of May 1, 2024. A further event of default occurred as a result of the Company's failure to file a registration statement with the SEC for the resale by Yorkville of the shares of common stock issuable under the SEPA by May 3, 2024 (see Note 10).

The Company determined that the convertible note included embedded derivatives that would otherwise require bifurcation as derivative liabilities, and neither the debt instrument nor the embedded features are required to be classified as equity. Therefore, at inception, the Company elected to carry the convertible promissory note comprised of the debt host and the embedded derivative liabilities at fair value on a recurring basis as permitted under ASC 825, *Financial Instruments*. Changes in fair value caused by changes in the instrument-specific credit risk are reported in other comprehensive income, and the remaining change in fair value is reported in earnings (i.e., as a component of other income/expense). Interest expense is a component of the change in fair value of the notes and, therefore, is not separately recorded. As a result of the fair value election, the original issue discount of $157 was recorded to other expense in the consolidated statements of operations and comprehensive loss. As of September 30, 2024, the fair value of the debt was $3,695 and the principal balance was $3,150. Refer to Note 3 for additional details regarding the fair value measurement.

Short-Term Debt - Other and CEO Promissory Note

On August 21, 2023, the Company entered into a loan agreement with its Chairman and Chief Executive Officer, Dr. Robert Hariri, and two unaffiliated lenders, providing for a loan in the aggregate principal amount of $ 3,000 (of

which Dr. Hariri contributed $1,000), or the "Loan." The Loan bears interest at a rate of 15.0% per year, with the first year of interest being paid in kind on the last day of each month and matured on August 21, 2024. Pursuant to the terms of the Loan, the Company is required to apply the net proceeds from a subsequent transaction (as defined) in which the Company receives gross proceeds of $4,500 or more to repay the Loan. The Company did not repay the Loan upon receipt of the letter of credit funds in connection with signing the lease amendment (see Note 8) or the January 2024 PIPE (see Note 10), both of which were defined as subsequent transactions. The lenders agreed to a loan amendment whereby the loan maturity date was extended to December 31, 2024. Subsequently, on September 30, 2024, Dr. Hariri and the two unaffiliated lenders entered into an assignment agreement whereby Dr. Hariri assumed the full loan in exchange for repayment of the other lenders' respective principal loan amount, plus accrued interest. As of September 30, 2024, the loan was reclassified from short-term debt - unaffiliated to short-term debt - related parties.

On October 12, 2023, in order to further address the Company's immediate working capital requirements, Dr. Robert Hariri and the Company signed a promissory note for $285 which bears interest at a rate of 15.0% per year. The note matures together with the outstanding principal amount and accrued and unpaid interest upon the earlier of 12 months from the date of the note or upon a change of control.

As of September 30, 2024, there was no other short-term debt and the carrying value of the CEO promissory note inclusive of accrued interest was $3,793. As of December 31, 2023, the carrying value of the other short-term debt and the CEO promissory note inclusive of accrued interest was $2,108 and $1,419, respectively. At September 30, 2024 and December 31, 2023, the carrying amounts of the loans were deemed to approximate fair value.

Short-Term Debt – Related Parties - C.V. Starr and RWI

C.V. Starr & Co., Inc

On March 17, 2023, the Company entered into a loan agreement (the "Starr Bridge Loan") with C.V. Starr & Co., Inc. ("C.V. Starr"), a stockholder of the Company, for an aggregate principal amount of $ 5,000 net of an original issue discount of $100. The loan bears interest at a rate equal to 12.0% per year or 15.0% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matures on March 17, 2025. In addition, the parties entered into a warrant agreement to acquire up to an aggregate 75,000 shares of Class A common stock ("Starr Warrant"), at a purchase price of $ 1.25 per whole share underlying the Starr Warrant or $94. The Starr Warrant has a five-year term and had an exercise price of $7.10 per share.

In June 2023, in connection with the Amended RWI Loan (as defined below), the Company granted C.V. Starr additional warrants to acquire up to an aggregate 50,000 shares of its Class A common stock ("Starr Additional Warrant" and in combination with Starr Warrant, "Starr Warrants"), which additional warrants have a 5-year term and had an exercise price of $8.10 per share. The Company applied the guidance for this transaction in accordance with ASC 470-20, *Debt with Conversion and Other Options* and ASC 815, *Derivatives and Hedging*. The net proceeds of the Starr Bridge Loan and Starr Additional Warrant were recorded at fair value. The fair value of the Starr Additional Warrant was determined using a Black-Scholes option pricing model. The Starr Warrants met the requirements for a derivative scope exception under ASC 815-10-15-74(a) for instruments that are both indexed to an entity's own stock and classified in stockholders' equity.

Under the terms of the Starr Bridge Loan, the Company agreed to customary negative covenants restricting its ability to repay indebtedness, pay dividends to stockholders, repay or incur other indebtedness other than as permitted, grant or suffer to exist a security interest in any of the Company's assets, other than as permitted, or hold cash and cash equivalents less than $3,000 for more than five consecutive business days. During the year ended December 31, 2023, the Company's cash and cash equivalents fell below the $3,000 minimum liquidity covenant, which per the terms of the loan agreement caused an event of default. Therefore, the Company reclassified the loan as a current liability reflected within short-term debt - related parties on the condensed consolidated balance sheets.

On January 12, 2024, the Company entered into an amendment which terminated the minimum $3,000 liquidity covenant requirement. In addition to the negative covenants in the Starr Bridge Loan, the Starr Bridge Loan includes customary events of default and the Company granted C.V. Starr a senior security interest in all of its assets, pari passu with RWI (as defined below).

On March 13, 2024, the Company and C.V. Starr entered into a forbearance agreement ("Starr Forbearance Agreement") with respect to the Starr Bridge Loan. Under the Starr Forbearance Agreement, (i) C.V. Starr agreed not to exercise its rights and remedies upon the occurrence of any default under the Starr Bridge Loan until the Company's obligations in respect of the Yorkville convertible promissory note have been indefeasibly paid in full, (ii) C.V. Starr consented to the Company's incurrence of indebtedness under the Yorkville convertible promissory note, (iii) C.V. Starr consented to cash payments required to be made under the SEPA and the Yorkville convertible promissory note, (iv) the Company agreed to increase the interest rate on the loan outstanding under the Starr Bridge Loan by 100 basis points and (v) the Company agreed to amend the exercise price of (x) that certain warrant to acquire 75,000 shares of the Company's common stock for $7.10 per share, expiring March 17, 2028, and (y) that certain warrant to acquire 50,000 shares of common stock for $8.10 per share expiring June 20, 2028, each of which are held by C.V. Starr, such that the exercise price of each such warrant in (x) and (y) is $5.895 per share. In addition, the interest rate of the Starr Bridge Loan was increased to 13.0% per annum. The Starr Forbearance Agreement resulted in a modification of the Starr Bridge Loan, since the change in cash flows was determined to be less than 10%. Accordingly, no gain or loss was recorded and the change in fair value of the Starr Warrants of $51 was recorded as debt discount and will be amortized based on the new effective interest rate over the term of the Starr Bridge Loan. Due to the Company's failure to make certain interest payments when due, the Company began accruing interest at the default rate of 16.0% as of April 5, 2024.

As of September 30, 2024 and December 31, 2023, the carrying value of Starr Bridge Loan, inclusive of accrued interest and net of discount, was $5,640 and $5,523, respectively. The carrying amount of the Starr Bridge Loan was deemed to approximate fair value.

Resorts World Inc Pte Ltd

On May 16, 2023, with written consent provided by Yorkville, the Company entered into a senior secured loan agreement ("RWI Bridge Loan") with Resorts World Inc Pte Ltd, ("RWI") providing for an initial loan in the aggregate principal amount of $6,000 net of an original issue discount of $120, which bears interest at a rate of 12.5% per year or 15.5% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matured on June 14, 2023.

On June 21, 2023, the Company closed on an amended and restated senior secured loan agreement ("Amended RWI Loan"), to amend and restate the previous senior secured loan agreement, in its entirety. The Amended RWI Loan provided for an additional loan in the aggregate principal amount of $6,000 net of an original issue discount of $678, which bears interest at a rate of 12.5% per year or 15.5% in the event of default, with the first year of interest being paid in kind on the last day of each month, and matures March 17, 2025. The Amended RWI Loan extended the maturity date of the initial loan to March 17, 2025. In addition, the Amended RWI Loan provided for the issuance of warrants to acquire up to an aggregate 300,000 shares of the Company's Class A common stock ("RWI Warrant"), at a purchase price of $ 1.25 per whole share underlying the RWI Warrant (or an aggregate purchase price of $375). The RWI Warrant has a five-year term and an exercise price of $8.10 per share.

Pursuant to the terms of the Amended RWI Loan, the Company was required to apply the net proceeds to the trigger payments due to Yorkville pursuant to the PPA. In addition, the Company agreed to customary negative covenants restricting its ability to repay indebtedness, pay dividends to stockholders, repay or incur other indebtedness other than as permitted, grant or suffer to exist a security interest in any of its assets, other than as permitted, or hold cash and cash equivalents less than $3,000 for more than five consecutive business days, and includes customary events of default. The Company granted RWI a senior security interest in all of its assets, pari passu with C.V. Starr pursuant to the Starr Bridge Loan. The Company and RWI signed a forbearance agreement on September 14, 2023, whereby RWI agreed to forebear any action under the terms of the Amended RWI Loan in relation to the minimum $3,000 liquidity covenant and with respect to any potential default in relation to the Company's outstanding debt owed to Yorkville until December 31, 2023. The Company reclassified the loan as a current liability reflected within short-term debt - related parties on the condensed consolidated balance sheets. Pursuant to the amendment on January 12, 2024, see below, the minimum $3,000 liquidity covenant requirement was terminated.

The Company accounted for the Amended RWI Loan in accordance with ASC 470-20, *Debt with Conversion and Other Options* and ASC 815, *Derivatives and Hedging*. The net proceeds of the Amended RWI Loan and RWI Warrant were recorded at fair value, which resulted in a total discount of $2,151 based on the difference between the proceeds and fair value which were recorded as a loss within other income (expense) on the condensed consolidated statements of operations and comprehensive loss. The fair value of the RWI Warrant was determined using a Black-Scholes option pricing model. The RWI Warrant met the requirements for a derivative scope exception under ASC 815-10-15-74(a) for instruments that are both indexed to an entity's own stock and classified in stockholders' equity.

On January 12, 2024, the Company entered into a second amended and restated senior secured loan agreement ("RWI Second Amended Bridge Loan"), to amend and restate the previously announced senior secured loan agreement with RWI dated as of May 16, 2023, as amended on June 20, 2023, in its entirety. The RWI Second Amended Bridge Loan provided for an additional loan in the aggregate principal amount of $ 15,000 net of an original issue discount of $3,750, which bears interest at a rate of 12.5% per year, with the first year of interest being paid in kind on the last day of each month, and matures on July 16, 2025. In addition, the RWI Second Amended Bridge Loan provides for the issuance of a 5-year immediately exercisable warrant to acquire up to 1,650,000 shares of Class A common stock ("Tranche #1 Warrant"), and a warrant to acquire up to 1,350,000 shares of Class A common stock, which will only be exercisable upon the later of (x) stockholder approval for Nasdaq purposes of its exercise price, (y) CFIUS clearance and (z) six months from issuance date ("Tranche #2 Warrant") and will expire 5 years after it becomes exercisable. The Tranche #1 Warrant and Tranche #2 Warrant were each issued on January 16, 2024 in conjunction with the close of the RWI Second Amended Bridge Loan. The Tranche #1 Warrant has an exercise price of $ 2.4898 per share. The Tranche #2 Warrant became exercisable on July 15, 2024 and has an exercise price of $2.988 per share.

Pursuant to the terms of the RWI Second Amended Bridge Loan, the Company was required to apply the proceeds of the additional loan (i) to the payment in full of all outstanding amounts owed to Yorkville under the PPA, (ii) to the payment of invoices of certain critical vendors, (iii) to the first settlement payment owed to Palantir (see Note 9), and (iv) for working capital and other purposes pre-approved by RWI. Pursuant to the terms of the RWI Second Amended Bridge Loan, the Company agreed to customary negative covenants restricting its ability to pay dividends to stockholders, repay or incur other indebtedness other than as permitted, or grant or suffer to exist a security interest in any of the Company's assets, other than as permitted. In addition, the Company agreed to apply net revenues received through the sale of its products/provision of services in connection with or related to its distribution and manufacturing agreement with Genting Innovation Pte Ltd ("Genting Innovation"), a related party, as a prepayment towards the loan.

The RWI Second Amended Bridge Loan resulted in an extinguishment of the Amended RWI Loan, since the change in cash flows exceeds 10%. As a result, the Company record a loss on extinguishment equal to the difference between (i) the fair values of the new loan and Tranche #1 and Tranche #2 Warrants and (ii) the previous carrying amount of the Amended RWI Loan, or $3,908. The Company has not elected to carry the RWI Second Amended Bridge Loan at fair value, as permitted under ASC 815, *Derivatives and Hedging* and ASC 825, *Fair Value Option for Financial Instruments*. The Tranche #1 Warrant has been classified in stockholders' equity, since it is exercisable into a fixed number of the Company's own shares at a known exercise price, and therefore is not required to be classified as a liability under ASC 480, *Distinguishing Liabilities from Equity*. The Tranche #2 Warrant was initially classified as a liability, since the exercise price (i.e., Minimum Price) was not determined at issuance and may be subsequently adjusted. As of July 15, 2024, the Tranche #2 Warrant became exercisable and no longer contains adjustment provisions to the exercise price that are not indexed to the Company's own stock, resulting in the reclassification from liability to equity.

The Company and RWI also entered into an investor rights agreement dated as of January 12, 2024. The investor rights agreement provides RWI certain information and audit rights, as well as registration rights with respect to the shares underlying the Tranche #1 Warrant and Tranche #2 Warrant, including both the undertaking to file a registration statement within 45 days of filing of the 2023 Form 10-K, "piggyback" registration rights, as well as the right to request up to three demand rights for underwritten offerings per year; in each case subject to customary "underwriter cutback" language as well as any objections raised by the Securities and Exchange Commission to inclusion of securities. If the initial registration statement was not filed on or prior to May 15, 2024, the investor rights agreement provided for partial liquidating damages equal to 1.0% of the purchase price of the Tranche #1 and Tranche #2 Warrants amount each month, up to a maximum of 6.0%, plus interest thereon accruing daily at a rate of 18.0% per annum.

On March 13, 2024, the Company and RWI entered into a second forbearance agreement ("RWI 2nd Forbearance Agreement"). Under the RWI 2nd Forbearance Agreement, (i) RWI agreed not to exercise its rights and remedies upon the occurrence of any default under the RWI Second Amended Bridge Loan until the Company's obligations in respect of the Yorkville convertible promissory note have been indefeasibly paid in full or March 13, 2025, whichever occurs first, (ii) RWI consented to the Company's incurrence of indebtedness under the Yorkville convertible promissory note, (iii) RWI consented to cash payments required to be made under the SEPA and the Yorkville convertible promissory note, (iv) the Company agreed to increase the interest rate on the loan outstanding under the RWI Loan Agreement by 100 basis points, or from 12.5% to 13.5% per annum, and (v) the Company agreed to issue RWI a warrant to acquire up to 300,000 shares of common stock ("RWI New Warrant"), which expires June 20, 2028 and has an exercise price of $5.895 per share. The RWI 2nd Forbearance Agreement resulted in a modification of the RWI Second Amended Bridge Loan, since the change in cash flows is less than 10%. Accordingly, no gain or loss was recorded, and the fair value of the RWI New Warrant of $ 1,162 was recorded as debt discount and will be amortized based on the new effective interest rate over the term of the RWI Second Amended Bridge Loan. Due to the Company's failure to make certain interest payments when due, the Company began accruing interest on the Amended RWI Loan balance of approximately

$13,700 at the default rate of 16.5% as of August 5, 2024.

As of September 30, 2024 and December 31, 2023, the carrying value of the RWI Second Amended Bridge Loan and Amended RWI Loan, inclusive of interest and net of discount was $29,482 and $12,967, respectively. The carrying amount of the RWI Second Amended Bridge Loan was deemed to approximate fair value.

8. Leases

Lease Agreements

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The Company's lease ROU assets and liabilities are recognized at the lease commencement date based on the present value of lease payments over the lease term. In determining the present value of lease payments, the Company uses its incremental borrowing rate based on the information available at the lease commencement date to determine the appropriate discount rate by multiple asset classes. Variable lease payments that are not based on an index or that result from changes to an index subsequent to the initial measurement of the corresponding lease liability are not included in the measurement of lease ROU assets or liabilities and instead are recognized in earnings in the period in which the obligation for those payments is incurred. Lease terms may include options to extend or terminate the lease when it is reasonably certain that the Company will exercise any such options. Lease expense is recognized on a straight-line basis over the expected lease term. Rent expense was $1,114 and $892 for the three months ended September 30, 2024 and 2023, respectively. Rent expense was $3,333 and $2,687 for the nine months ended September 30, 2024 and 2023, respectively.

On March 13, 2019, Legacy Celularity entered into a lease agreement for a 147,215 square foot facility consisting of office, manufacturing and laboratory space in Florham Park, New Jersey, which expires in 2036. The Company has the option to renew the term of the lease for two additional five-year terms so long as the lease is then in full force and effect. The lease term commenced on March 1, 2020 subject to an abatement of the fixed rent for the first 13 months following the lease commencement date. The initial monthly base rent is approximately $230 and will increase annually. The Company is obligated to pay real estate taxes and costs related to the premises, including costs of operations, maintenance, repair, replacement and management of the new leased premises. In connection with entering into this lease agreement, Legacy Celularity issued a letter of credit of $14,722. The lease agreement allows for a landlord provided tenant improvement allowance of $14,722 to be applied to the costs of the construction of the leasehold improvements.

On September 14, 2023, the Company entered into a lease amendment on the Company's Florham Park, New Jersey facility to reduce the letter of credit by approximately $4,900 for a new letter of credit in the amount of $9,883 in exchange for higher base rental payments of approximately $400 per year, effective October 1, 2023. The letter of credit, inclusive of interest earned on the account, is classified as restricted cash (non-current) on the condensed consolidated balance sheets. The Company evaluates changes to the terms and conditions of a lease contract to determine if they result in a new lease or a modification of an existing lease. The Company accounted for the lease amendment as a modification since the change in lease payments did not represent additional ROU assets. The Company reassessed the IBR, remeasured the lease liability and ROU asset on the modification date of September 14, 2023. As a result, the Company recorded a decrease to the ROU asset and related lease liability in the amount of $2,083 on the condensed consolidated balance sheets reflecting a higher IBR due to lower Company credit rating.

The components of the Company's lease costs are classified on its condensed consolidated statements of operations and comprehensive loss as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Operating lease cost	$ 978	$ 759	$ 2,933	$ 2,278
Variable lease cost	348	320	1,026	911
Total operating lease cost	$ 1,326	$ 1,079	$ 3,959	$ 3,189

The table below shows the cash and non-cash activity related to the Company's lease liabilities during the period:

	Nine Months Ended September 30,	
	2024	2023
Cash paid related to lease liabilities:		
Operating cash flows from operating leases	$ 2,534	$ 2,168

As of September 30, 2024, the maturities of the Company's operating lease liabilities were as follows:

2024 (remaining three months)	$ 845
2025	3,452
2026	3,526
2027	3,599
2028	3,673
Thereafter	84,568
Total lease payments	99,663
Less imputed interest	(73,212)
Total	$ 26,451

As of September 30, 2024, the weighted average remaining lease term of the Company's operating lease was 21.5 years, and the weighted average discount rate used to determine the lease liability for the operating lease was 14.24%.

9. Commitments and Contingencies

Contingent Consideration Related to Business Combinations

In connection with Legacy Celularity's acquisition in 2017 of HLI Cellular Therapeutics, LLC and Anthrogenesis, the Company has agreed to pay future consideration to the sellers upon the achievement of certain regulatory and commercial milestones. As a result, the Company recorded $1,606 as contingent consideration as of September 30, 2024 and December 31, 2023. During 2023, the Company discontinued its unmodified NK cell and AML Cell Therapy clinical trials subject to the contingent consideration agreement under the Anthrogenesis acquisition and, as a result, the fair value of the contingent consideration obligation decreased significantly in 2023 and remains unchanged as of September 30, 2024. Due to the contingent nature of these milestone and royalty payments, there is a high degree of judgment in the management estimates that determine the fair value of the contingent consideration. See Note 3 for further discussion.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors and its executive officers that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not currently aware of any indemnification claims and has not accrued any liabilities related to such obligations in its condensed consolidated financial statements as of September 30, 2024 or December 31, 2023.

Agreement with Palantir Technologies Inc.

On May 5, 2021, Legacy Celularity executed a Master Subscription Agreement (the "Palantir MSA") with Palantir under which it agreed to pay $40,000 over five years for access to Palantir's Foundry platform along with certain professional services. The Company intended to utilize Palantir's Foundry platform to secure deeper insights into data obtained from the Company's discovery and process development, as well as manufacturing and biorepository operations. In January 2023, the Company ceased use of the software and provided a notice of dispute to Palantir on the basis that the software had not performed as promised and that Palantir had failed to provide the Company with the professional services necessary to successfully implement, integrate and enable the Foundry platform. As a result, in accordance with ASC 420, *Exit or Disposal Costs*, during the nine months ended September 30, 2023, the Company recognized the remaining related cease-use costs liability estimated based on the discounted future cash flows of contract payments for $24,161 which was included as software cease-use costs in the condensed consolidated statements of operations and comprehensive loss. On December 21, 2023, the Company entered into a settlement and release agreement with Palantir (the "Palantir Settlement Agreement"), which was subsequently amended on January 10, 2024 and May 6, 2024, whereupon the parties agreed that if the Company paid Palantir the settlement fees of $3,500, less any amounts previously paid, and issued shares as discussed in the *Arbitration Demand* section below no later than June 3, 2024, the parties would cease the arbitration and deem the original Palantir MSA terminated. The Company made the required payments prior to June 3, 2024, and on June 4, 2024, the parties dismissed all claims and counterclaims. Accordingly, at December 31, 2023, the Company reversed previously recognized costs in excess of the final settlement amount. The Company has no liability as of September 30, 2024 and a current liability of $3,500 as of December 31, 2023, respectively, for accrued R&D software on the condensed consolidated balance sheets.

Sirion License Agreement

In December 2021, the Company entered into a license agreement ("Sirion License") with Sirion Biotech GmbH ("Sirion"). Under the Sirion License, Sirion granted the Company a license related to patent rights and know-how associated with poloxamers ("Licensed Product"). As part of the Sirion License, the Company paid Sirion $136 as an upfront fee, a $113 annual maintenance fee and may owe up to $5,099 related to clinical and regulatory milestones for each Licensed Product during the term. The Company also agreed to pay Sirion low-single digit royalties on net sales on a Licensed Product-by-Licensed Product and country-by-country basis and until the later of: (i) expiration of the last to expire valid claim of the patents covering such Licensed Product, and (ii) 10 years after first Commercial Sale of a Licensed Product. In addition, the Sirion License is subject to termination rights including for termination for material breach and by the Company for convenience upon 30 days written notice. During the nine months ended September 30, 2024 and 2023, no milestones have been achieved and no royalties have been earned.

Legal Proceedings

At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses as incurred the costs related to such legal proceedings.

Civil Investigative Demand

The Company received a Civil Investigative Demand (the "Demand") under the False Claims Act, 31 U.S.C. § 3729, dated August 14, 2022, from the U.S. Attorney's Office for the Eastern District of Pennsylvania. The Demand requests documents and information relating to claims submitted to Medicare, Medicaid, or other federal insurers for services or procedures involving injectable human tissue therapy products derived from amniotic fluid or birth tissue and includes Interfyl, a biomaterials product. The Company is cooperating with the request and is engaged in an ongoing dialogue with the Assistant U.S. Attorneys handling the Demand. The matter is still in preliminary stages and there is uncertainty as to whether the Demand will result in any liability.

Arbitration Demand from Palantir Technologies Inc.

On April 20, 2023, Palantir commenced an arbitration with JAMS Arbitration asserting claims for declaratory relief and breach of contract relating to the Palantir MSA, seeking damages in an amount equal to the full value of the contract. The Company responded to the arbitration demand and asserted counterclaims for breach of contract, breach of warranty, fraudulent inducement, violation of California's Unfair Competition Law, amongst others, in relation to the Palantir MSA.

On December 21, 2023, the Company and Palantir entered into the Palantir Settlement Agreement to resolve the JAMS Arbitration. The Palantir Settlement Agreement was subsequently amended on January 10, 2024 and May 6, 2024. Both parties agreed to dismiss the arbitration proceeding and dispute and provide for mutual releases upon the Company's satisfaction of a settlement payment obligation. Through June 3, 2024, the Company made total settlement payments of $3,500 and issued Palantir an aggregate of 60,584 shares of the Company's Class A common stock as consideration for further amendments to the Palantir Settlement Agreement. On June 4, 2024, the parties dismissed all claims and counterclaims. The Palantir MSA is now fully terminated and neither party has any further rights or obligations thereunder. The shares of the Company's Class A common stock issued to Palantir were issued with piggyback registration rights. Resale of such shares by Palantir shall be included on any future registration statement filed by the Company.

Celularity Inc. v. Evolution Biologyx, LLC, et al.

On April 17, 2023, the Company filed a complaint against Evolution Biologyx, LLC, Saleem S. Saab, individually, and Encyte, LLC (collectively, "Evolution") in the United States District Court for the District of New Jersey to recover unpaid invoice amounts for the sale of its biomaterial products in the amount of approximately $2,350, plus interest. In September 2021, the Company executed a distribution agreement with Evolution, whereupon Evolution purchased biomaterial products from the Company for sale through Evolution's distribution channels. The Company fulfilled Evolution's orders and otherwise performed each of its obligations under the distribution agreement. Despite attempts to recover the outstanding invoices and Evolution's promise to pay, Evolution has refused to pay any of the invoices and has materially breached its obligations under the distribution agreement. The Company's complaint asserts claims of breach of contract and fraudulent inducement, amongst others. The Company intends to vigorously pursue the matter to recover the outstanding payments owed by Evolution, as well as interest and reasonable attorney's fees, but there can be no assurance as to the outcome of the litigation.

TargetCW v. Celularity Inc.

On March 27, 2024, WMBE Payrolling, Inc., dba TCWGlobal, filed a complaint in the United States District Court for the Southern District of California alleging a breach of contract and account stated claims relating to a Master Services Agreement dated May 4, 2020, or the TCWGlobal MSA, for the provision of certain leased workers to perform services on our behalf. The complaint alleges that the Company breached the TCWGlobal MSA by failing to make payments on certain invoices for the services of the leased workers. On May 7, 2024, the Company entered into a settlement agreement and mutual release with TCWGlobal whereupon the Company agreed to pay $500 in tiered monthly installments, with the last payment due and payable on May 1, 2025, in exchange for a dismissal of the complaint and full release of all claims.

10. Equity

Common Stock

As of September 30, 2024 and December 31, 2023, the Company's certificate of incorporation, as amended and restated, authorized the Company to issue 730,000,000 shares of $0.0001 par value Class A common stock. As of September 30, 2024 and December 31, 2023, shares of Class A common stock issued and outstanding were 21,984,614 and 19,378,192, respectively.

Voting Power

Except as otherwise required by law or as otherwise provided in any certificate of designation for any series of preferred stock, the holders of common stock possess all voting power for the election of the Company's directors and all other matters requiring stockholder action. Holders of common stock are entitled to one vote per share on matters to be voted on by stockholders.

Dividends

Holders of Class A common stock will be entitled to receive such dividends, if any, as may be declared from time to time by the Company's board of directors in its discretion out of funds legally available therefor. In no event will any stock dividends or stock splits or combinations of stock be declared or made on common stock unless the shares of common stock at the time outstanding are treated equally and identically.

Liquidation, Dissolution and Winding Up

In the event of the Company's voluntary or involuntary liquidation, dissolution, distribution of assets or winding-up, the holders of the common stock will be entitled to receive an equal amount per share of all of the Company's assets of whatever kind available for distribution to stockholders, after the rights of the holders of the preferred stock have been satisfied.

Preemptive or Other Rights

The Company's stockholders have no preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to common stock.

Election of Directors

The Company's board of directors is divided into three classes, Class I, Class II and Class III, with only one class of directors being elected in each year and each class serving a three-year term, except with respect to the election of directors at the special meeting held in connection with the merger with GX, Class I directors are elected to an initial one-year term (and three-year terms subsequently), the Class II directors are elected to an initial two-year term (and three-year terms subsequently) and the Class III directors are elected to an initial three-year term (and three-year terms subsequently). There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50.0% of the shares voted for the election of directors can elect all of the directors.

Preferred Stock

The Company's Certificate of Incorporation authorized 10,000,000 shares of preferred stock and provides that shares of preferred stock may be issued from time to time in one or more series. The Company's board of directors is authorized to fix the voting rights, if any, designations, powers and preferences, the relative, participating, optional or other special rights, and any qualifications, limitations and restrictions thereof, applicable to the shares of each series of preferred stock. The Company's board of directors is able to, without stockholder approval, issue preferred stock with voting and other rights that could adversely affect the voting power and other rights of the holders of common stock and could have anti-takeover effects. The ability of the Company's board of directors to issue preferred stock without stockholder approval could have the effect of delaying, deferring or preventing a change of control of Celularity or the removal of existing management. As of September 30, 2024 and December 31, 2023, the Company does not have any outstanding preferred stock.

ATM Agreement

On September 8, 2022, the Company entered into an At-the-Market Sales Agreement (the "ATM Agreement") with BTIG, LLC, Oppenheimer & Co. Inc. and B. Riley Securities, Inc., acting as sales agents and/or principals, pursuant to which the Company may offer and sell, from time to time in its sole discretion, shares of its common stock, having an aggregate offering price of up to $150,000, subject to certain limitations as set forth in the ATM Agreement. The Company is not obligated to make any sales of shares under the ATM Agreement.

Any shares offered and sold in the at-the-market offering will be issued pursuant to the Company's shelf registration statement on Form S-3 and the related prospectus supplement. Under the ATM Agreement, the sales agents may sell shares of common stock by any method permitted by law deemed to be an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act of 1933. The Company will pay the sales agents a commission rate of up to 3.0% of the gross sales proceeds of any shares sold and has agreed to provide the sales agents with customary indemnification, contribution and reimbursement rights. The ATM Agreement contains customary representations and warranties and conditions to the placements of the shares pursuant thereto.

During the nine months ended September 30, 2023, the Company received gross and net proceeds of $141 and $136, respectively, from the sale of 13,296 shares of its common stock at an average price of $10.60 per share under the ATM Agreement. No shares were issued under the ATM Agreement during the nine months ended September 30, 2024.

March 2023 PIPE

On March 20, 2023, the Company entered into a securities purchase agreement with two accredited investors, including its Chairman and Chief Executive Officer, Dr. Robert Hariri, providing for the private placement of (i) 938,184 shares of its Class A common stock, and (ii) accompanying warrants to purchase up to 938,183 shares of Class A common stock (the "March 2023 PIPE Warrants"), for $8.34 per share and $1.25 per accompanying March 2023 PIPE Warrant, for an aggregate purchase price of $9,000 (of which Dr. Hariri subscribed for $2,000). The closing of the private placement occurred on March 27, 2023. Each March 2023 PIPE Warrant had an exercise price of $30.00 per share, is immediately exercisable, will expire on March 27, 2028 (five years from the date of issuance), and is subject to customary adjustments for certain transactions affecting the Company's capitalization. The March 2023 PIPE Warrants may not be exercised if the aggregate number of shares of Class A common stock beneficially owned by the holder thereof (together with its affiliates) would exceed the specified percentage cap provided therein (which may be adjusted upon 61 days advance notice) immediately after exercise thereof.

The Company accounted for the March 2023 PIPE Warrants and common stock as a single non-arm's length transaction. The Company applied the guidance for this transaction in accordance with ASU 2020-06, *(Subtopic 470-20): Debt - Debt with Conversion and Other Options, ASC 815 Derivatives and Hedging,* and *ASC 480 Distinguishing Liabilities from Equity*. Accordingly, the net proceeds were allocated between common stock and the March 2023 PIPE warrants at their respective fair value, which resulted in a net premium of $1,650 based on the difference between the proceeds and fair value of the common stock and March 2023 PIPE warrants, which was recorded as additional paid-in capital within stockholders' equity on the condensed consolidated balance sheets. The fair value of the March 2023 PIPE Warrants was determined using a Black-Scholes option pricing model and the common stock based on closing date share price. The Company evaluated the March 2023 PIPE warrants under ASC 815 and determined that they did not require liability classification and met the requirements for a derivative scope exception under ASC 815-10-15-74(a) for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. The warrants were recorded in additional paid-in capital within stockholders' equity on the condensed consolidated balance sheets.

On September 14, 2023, the Company entered into a warrant amendment on the March 2023 PIPE Warrants with the unaffiliated investor to reduce the exercise price from $30.00 per share to $10.00 per share for warrants to purchase 729,698 shares of Class A common stock. The warrant amendment was executed as consideration for professional services rendered to the Company. As a result, the Company accounted for the transaction in accordance with ASC 718, *Stock-Based Compensation,* and based on the calculated incremental fair value attributable to the modified warrant compared to the original warrant immediately prior to the modification, recognized an expense of $402 within selling, general and administrative on the condensed consolidated statements of operations for the three and nine months ended September 30, 2023.

Registered Direct Offerings

On April 10, 2023, the Company closed on a registered direct offering of 923,077 shares of its Class A common stock together with warrants ("Registered Direct Warrants") to purchase up to 923,076 shares of its Class A common stock at a combined purchase price of $6.50 per share and accompanying warrant, resulting in total gross proceeds of approximately $6,000 before deducting placement agent commissions and other estimated offering expenses. The Registered Direct Warrants had an exercise price of $7.50, became exercisable beginning six months after the date of issuance and will expire five years thereafter. The Company used the $5,505 net proceeds from the offering to repay its obligations to Yorkville under the PPA. The Company considered the appropriate accounting guidance and concluded that the Registered Direct Warrants qualified for liability treatment, and therefore, recorded the warrant liability at fair value $4,280 which was based on a Black-Scholes option pricing model. The remainder of the net proceeds were allocated to the Class A common stock issued and recorded as a component of equity.

Upon the closing of the registered direct offering on April 10, 2023, the Company amended the existing May 2022 PIPE Warrants, to reduce the exercise price from $ 82.50 to $7.50 per share and extended the expiration date to five and one-half years following the closing of the offering or October 10, 2028. The modification resulted in the recognition of additional warrant liability of $1,389 based on the Black-Scholes option pricing model as of the modification date.

On July 31, 2023, the Company closed on a registered direct offering of 857,143 shares of its Class A common stock together with warrants ("July 2023 Registered Direct Warrants") to purchase up to 857,142 shares of its Class A common stock at a combined purchase price of $3.50 per share and accompanying warrant, resulting in total gross proceeds of approximately $3,000 before deducting placement agent commissions and other estimated offering expenses. The July 2023 Registered Direct Warrants have an exercise price of $3.50, will be exercisable beginning six months after the date of issuance and will expire five years thereafter. The Company used the $2,740 net proceeds for working capital and general corporate purposes. The Company considered the appropriate accounting guidance and concluded that the July 2023 Registered Direct Warrants qualified for liability treatment, and therefore, recorded the warrant liability at fair value $2,645 which was based on a Black-Scholes option pricing model. The remainder of the net proceeds were allocated to the Class A common stock issued and recorded as a component of equity.

In connection with the July 31, 2023 registered direct offering described above, the Company also entered into an amendment to certain existing warrants to purchase up to an aggregate of 892,856 shares at an exercise price of $7.50 (consisting of all the May 2022 PIPE Warrants and a portion of the Registered Direct Warrants issued in April 2023), and such amended warrants have a reduced exercise price of $ 3.50 per share. As noted above, the modification resulted in an increase to the warrant liability of $511 based on the Black-Scholes option pricing model as of the July 31, 2023 modification date.

May 2023 PIPE

On May 18, 2023, the Company closed on a securities purchase agreement with a group of accredited investors, providing for the private placement of an aggregate (i) 581,395 shares of its Class A common stock and (ii) accompanying warrants to purchase up to 581,394 shares of Class A common stock (the "May 2023 PIPE Warrants"), for $5.20 per share and $ 1.25 per accompanying May 2023 PIPE Warrant, for an aggregate gross purchase price of $3,750. Each May 2023 PIPE Warrant has an exercise price of $10.00 per share, is immediately exercisable, will expire on May 17, 2028, and is subject to customary adjustments for certain transactions affecting the Company's capitalization. The May 2023 PIPE Warrants may not be exercised if the aggregate number of shares of Class A common stock beneficially owned by the holder thereof (together with its affiliates) would exceed the specified percentage cap provided therein (which may be adjusted upon 61 days advance notice) immediately after exercise thereof. The Company evaluated the May 2023 PIPE Warrants under ASC 815 and determined that they did not require liability classification and met the requirements for a derivative scope exception under ASC 815-10-15-74(a) for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. Accordingly, the proceeds were allocated between common stock and the May 2023 PIPE Warrants at their respective relative fair value basis to stockholders' equity on the condensed consolidated balance sheets. The fair value of the May 2023 PIPE Warrants was determined using a Black-Scholes option pricing model and the common stock based on the closing date share price and were recorded in additional paid-in capital within stockholders' equity on the condensed consolidated balance sheets.

January 2024 PIPE

On January 12, 2024, the Company entered into a securities purchase agreement with an existing investor, Dragasac Limited ("Dragasac"), providing for the private placement of (i) 2,141,098 shares of its Class A common stock, par value $0.0001 per share, or the Class A common stock, and (ii) accompanying warrants to purchase up to 535,274 shares of Class A common stock ("January 2024 PIPE Warrant"), for $ 2.4898 per share and $1.25 per accompanying January 2024 PIPE Warrant, for an aggregate purchase price of approximately $6,000. The closing of the private placement occurred on January 16, 2024. The securities were issued pursuant to an exemption from registration provided under Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder. The offer and sale of the shares and January 2024 PIPE Warrant (including the shares underlying the January 2024 PIPE Warrant) has not been registered under the Act or any state securities laws. The securities may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements. Each January 2024 PIPE Warrant has an exercise price of $2.4898 per share, is immediately exercisable, and will expire on January 16, 2029 (five years from the date of issuance).

The Company accounted for the January 2024 PIPE Warrant and common stock as a single non-arm's length transaction recognized in equity. The Company applied the guidance for this transaction in accordance with ASU 2020-06, *(Subtopic 470-20): Debt - Debt with Conversion and Other Options, ASC 815 Derivatives and Hedging,* and *ASC 480 Distinguishing Liabilities from Equity*. Accordingly, the net proceeds were allocated between common stock and the January 2024 PIPE Warrant at their respective fair values, which resulted in proceeds of $909 allocated to the January 2024 PIPE Warrant and the balance of the proceeds allocated to the common stock. The fair value of the January 2024 PIPE Warrant was determined using a Black-Scholes option pricing model and the common stock based on closing date share price. The Company evaluated the January 2024 PIPE warrant under ASC 815 and determined that it did not require liability classification and met the requirements for a derivative scope exception under ASC 815-10-15-74(a) for instruments that are both indexed to an entity's own stock and classified in stockholders' equity. The warrants were recorded in additional paid-in capital within stockholders' equity on the condensed consolidated balance sheets. Also in connection with the January 2024 PIPE transaction, the Company repriced legacy warrants held by Dragasac to purchase 652,981 shares of common stock with a previous exercise price of $67.70 per share to a new exercise price of $2.4898 per share. The modification of warrants resulted in incremental fair value of $524, which has been recognized as an equity issuance cost and had no net impact on stockholders' equity as the warrants remain equity-classified after the modification.

In connection with the execution of the securities purchase agreement, the Company also entered into an investor rights agreement with Dragasac dated as of January 12, 2024. The investor rights agreement provides Dragasac certain information and audit rights, as well as registration rights with respect to the shares (and shares underlying the January 2024 PIPE Warrant), including both the undertaking to file a registration statement within 45 days of filing of the 2023 Form 10-K, "piggyback" registration rights, as well as the right to request up to three demand rights for underwritten offerings per year; in each case subject to customary "underwriter cutback" language as well as any objections raised by the SEC to inclusion of securities. If the initial registration statement was not filed on or prior to May 15, 2024, the investor rights agreement provides for partial liquidating damages equal to 1.0% of the subscription amount each month, up to a maximum of 6.0%, plus interest thereon accruing daily at a rate of 18.0% per annum. The Company began to accrue partial liquidating damages and interest as of May 22, 2024. As a condition to closing, the Company entered into an amendment to an amended and restated distribution and manufacturing agreement with an affiliate of Dragasac to add cell therapy products in clinical development, investigational stage and/or in near-term commercial use to the list of products under the scope of the exclusive distribution and manufacturing licenses (including unmodified natural killer cells (such as CYNK-001) for aging and other non-oncology indications, PSC-100, PDA-001, PDA-002, pEXO and APPL-001 for regenerative indications).

Effective February 16, 2024, in order to comply with Section 4.15(a) of the securities purchase agreement, the Company entered into an amended employment agreement with its Chief Administrative Officer ("CAO"), whereby the CAO agreed to decrease his base salary from $500 to $425 per year through December 31, 2024.

Warrant Modifications

On January 12, 2024, in connection with the January 2024 PIPE, the Company agreed to amend the exercise price of legacy warrants held by Dragasac to purchase 652,981 shares of common stock, which expire March 16, 2025, from $67.70 per share to $2.4898 per share. On March 13, 2024, in connection with the RWI Forbearance Agreement (see Note 7), the Company agreed to issue RWI a warrant to acquire up to 300,000 shares of common stock, which expires June 20, 2028 and has an exercise price of $5.895 per share. Additionally, on March 13, 2024, in connection with the Starr Forbearance Agreement (see Note 7), the Company agreed to amend the exercise price of the 75,000 March 2023 Loan Warrants expiring March 17, 2028 from $7.10 per share to $5.895 per share (the "Minimum Price" as determined pursuant to Nasdaq 5635(d) on March 13, 2024) and the 50,000 June 2023 Warrants expiring June 20, 2028 from $8.10 per share to $5.895 per share, each of which are held by C.V. Starr.

Standby Equity Purchase Agreement

On March 13, 2024, the Company and Yorkville entered into a SEPA. Under the SEPA, the Company has the right to sell to Yorkville up to $ 10,000 of its Class A common stock, par value $0.0001 per share subject to certain limitations and conditions set forth in the SEPA, from time to time, over a 36-month period. Sales of the common stock to Yorkville under the SEPA, and the timing of any such sales, are at the Company's option, and the Company is under no obligation to sell any shares of common stock to Yorkville under the SEPA except in connection with notices that may be submitted by Yorkville, in certain circumstances as described below.

Upon the satisfaction of the conditions precedent in the SEPA, which include having a resale shelf for shares of common stock issued to Yorkville declared effective, the Company has the right to direct Yorkville to purchase a specified number of shares of common stock by delivering written notice ("Advance"). An Advance may not exceed 100% of the average of the daily trading volume of the common stock on Nasdaq, during the five consecutive trading days immediately preceding the written notice.

Yorkville will generally purchase shares pursuant to an Advance at a price per share equal to 97% of the VWAP, on Nasdaq during the three consecutive trading days commencing on the date of the delivery of the written notice (unless the Company specifies a minimum acceptable price or there is no VWAP on the subject trading day).

The SEPA will automatically terminate on the earliest to occur of (i) the first day of the month next following the 36-month anniversary of the date of the SEPA or (ii) the date on which Yorkville shall have made payment for shares of common stock equal to $10,000. The Company has the right to terminate the SEPA at no cost or penalty upon five trading days' prior written notice to Yorkville, provided that there are no outstanding advances for which shares of common stock need to be issued and the Yorkville convertible promissory note (the "Initial Advance") (see Note 7) has been paid in full. The Company and Yorkville may also agree to terminate the SEPA by mutual written consent.

As consideration for Yorkville's commitment to purchase the shares of common stock pursuant to the SEPA, the Company paid Yorkville a $ 25 cash due diligence fee and a commitment fee equal to 16,964 shares of common stock. The Company recorded direct issuance costs of $125 inclusive of the commitment shares as other expense in the condensed consolidated statements of operations and other comprehensive loss.

In connection with the entry into the SEPA, on March 13, 2024, the Company entered into a registration rights agreement with Yorkville, pursuant to which the Company agreed to file with the SEC no later than May 3, 2024, a registration statement for the resale by Yorkville of the shares of common stock issued under the SEPA (including the commitment fee shares). The Company agreed to use commercially reasonable efforts to have such registration statement declared effective within 45 days of such filing and to maintain the effectiveness of such registration statement during the 36-month commitment period. The Company will not have the ability to request any Advances under the SEPA (nor may Yorkville convert the Initial Advance into common stock) until such resale registration statement is declared effective by the SEC. The Company has not yet filed a registration statement with the SEC for the resale by Yorkville of the shares of common stock issued under the SEPA, which is deemed an event of default under the SEPA and as a result, the interest rate on the on the Yorkville convertible promissory note (see Note 7) increased to 18.0%.

The Company determined that the SEPA should be accounted for as a derivative measured at fair value, with changes in the fair value recognized in earnings. Because the Company has not yet filed a registration statement and no shares can currently be issued under the SEPA, the SEPA is deemed to have no value as of the issuance date and as of September 30, 2024.

Warrants

As of September 30, 2024, the Company had 10,905,901 outstanding warrants to purchase Class A common stock. A summary of the warrants is as follows:

	Number of Shares		Exercise Price	Expiration Date
Dragasac Warrant[(1)]	652,981	$	2.4898	March 16, 2025
Public Warrants[(2)]	1,437,447	$	115.00	July 16, 2026
Sponsor Warrants[(2)]	849,999	$	115.00	July 16, 2026
May 2022 PIPE Warrants	405,405	$	3.50	October 10, 2028
March 2023 PIPE Warrants	208,485	$	30.00	March 27, 2028
March 2023 PIPE Warrants (modified)	729,698	$	10.00	March 27, 2028
March 2023 Loan Warrants[(3)]	75,000	$	5.895	March 17, 2028
April 2023 Registered Direct Warrants	435,625	$	7.50	October 10, 2028
April 2023 Registered Direct Warrants (modified)	487,451	$	3.50	October 10, 2028
May 2023 PIPE Warrants	581,394	$	10.00	May 17, 2028
June 2023 Warrants[(3)]	50,000	$	5.895	June 20, 2028
June 2023 Loan Warrants	300,000	$	8.10	June 20, 2028
July 2023 Registered Direct Warrants	857,142	$	3.50	January 31, 2029
January 2024 PIPE Warrants	535,274	$	2.4898	January 16, 2029
January 2024 Bridge Loan - Tranche #1 Warrants	1,650,000	$	2.4898	January 16, 2029
January 2024 Bridge Loan - Tranche #2 Warrants	1,350,000	$	2.988	July 15, 2029
March 2024 RWI Forbearance Warrants	300,000	$	5.895	June 20, 2028
	10,905,901			

(1) In connection with the execution of the January 2024 PIPE described above, the Company agreed to reprice 652,981 legacy warrants held by Dragasac with a previous exercise price of $67.70 to a new exercise price of $2.4898. The term of the warrants was unchanged.

(2) The number of Public Warrants and Sponsor Warrants outstanding was not adjusted for the reverse stock split. There are 14,374,478 Public Warrants and 8,499,999 Sponsor Warrants outstanding. After the reverse stock split, the number of warrants outstanding remains the same. However, each outstanding warrant is now exercisable for one-tenth of a share of Class A common stock, and the exercise price per share was adjusted to $115.00 as a result of the split.

(3) In connection with the execution of the Starr Forbearance Agreement on March 13, 2024, described above under Warrant Modification and further in Note 7, the Company agreed to reprice 75,000 warrants with a previous exercise price of $7.10 and 50,000 warrants with a previous exercise price of $8.10 held by C.V. Starr to a new exercise price of $5.895. The term of the warrants was unchanged.

11. Stock-Based Compensation

2021 Equity Incentive Plan

In July 2021, the Company's board of directors adopted, and the Company's stockholders approved the 2021 Equity Incentive Plan (the "2021 Plan"). The 2021 Plan provides for the grant of incentive stock options ("ISOs") to employees and for the grant of nonstatutory stock options ("NSOs"), stock appreciation rights, restricted stock awards, restricted stock unit awards, performance awards and other forms of stock awards to employees, directors and consultants.

The number of shares of Class A Common Stock initially reserved for issuance under the 2021 Plan is 2,091,528. As of September 30, 2024, 1,254,803 shares remain available for future grant under the 2021 Plan. The number of shares reserved for issuance will automatically increase on January 1 of each year, for a period of 10 years, from January 1, 2022 through January 1, 2031, by 4.0% of the total number of shares of Celularity common stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares as may be determined by the Company's board of directors. Shares subject to stock awards granted under the 2021 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under the 2021 Plan. Additionally, shares issued pursuant to stock awards under the 2021 Plan that are repurchased or forfeited, as well as shares that are reacquired as consideration for the exercise or purchase price of a stock award or to satisfy tax withholding obligations related to a stock award, will become available for future grant under the 2021 Plan.

The 2021 Plan is administered by the Company's board of directors. The Company's board of directors, or a duly authorized committee thereof, may delegate to one or more officers the authority to (i) designate employees other than officers to receive specified stock awards and (ii) determine the number of shares to be subject to such stock awards. Subject to the terms of the 2021 Plan, the plan administrator has the authority to determine the terms of awards, including recipients, the exercise price or strike price of stock awards, if any, the number of shares subject to each stock award, the fair market value of a share, the vesting schedule applicable to the awards, together with any vesting acceleration, the form of consideration, if any, payable upon exercise or settlement of the stock award and the terms and conditions of the award agreements for use under the 2021 Plan. The plan administrator has the power to modify outstanding awards under the 2021 Plan. Subject to the terms of the 2021 Plan and in connection with a corporate transaction or capitalization adjustment, the plan administrator may not reprice or cancel and regrant any award at a lower exercise price, strike price or purchase price or cancel any award with an exercise price, strike price or purchase price in exchange for cash, property or other awards without first obtaining the approval of the Company's stockholders.

2017 Equity Incentive Plan

The 2017 Equity Incentive Plan (the "2017 Plan") adopted by Legacy Celularity's board of directors and approved by Legacy Celularity's stockholders provided for Legacy Celularity to grant stock options to employees, directors and consultants of Legacy Celularity. In connection with the closing of the merger and effectiveness of the 2021 Plan, no further grants will be made under the 2017 Plan.

The total number of stock options that could have been issued under the 2017 Plan was 3,234,204. Shares that expired, forfeited, canceled or otherwise terminated without having been fully exercised were available for future grant under the 2017 Plan.

The 2017 Plan is administered by the Company's board of directors or, at the discretion of the Company's board of directors, by a committee of the board of directors. The exercise prices, vesting and other restrictions were determined at the discretion of Legacy Celularity's board of directors, or its committee if so delegated, except that the exercise price per share of stock options could not be less than 100% of the fair market value of the share of common stock on the date of grant and the term of stock option could not be greater than ten years. Stock options granted to employees, officers, members of the board of directors and consultants typically vested over a three or four year period.

Stock Option Valuation

Awards with Service Conditions

The fair value of each option is estimated on the date of grant using a Black-Scholes option pricing model that takes into account inputs such as the exercise price, the estimated fair value of the underlying common stock at grant date, expected term, expected stock price volatility, risk-free interest rate, and dividend yield. The fair value of each grant of stock options was determined by the Company using the methods and assumptions discussed below. Certain of these inputs are subjective and generally require judgment to determine.

- The expected term of employee stock options with service-based vesting is determined using the "simplified" method, whereby the expected life equals the arithmetic average of the vesting term and the original contractual term of the option due to the Company's lack of sufficient historical data. The expected term of non-employee options is equal to the contractual term or its estimated term based on the underlying agreement.

- The expected stock price volatility is based on historical volatilities of comparable public entities within the Company's industry.
- The risk-free interest rate is based on the interest rate payable on U.S. Treasury securities in effect at the time of grant for a period that is commensurate with the respective expected term or contractual term.
- The expected dividend yield is 0% because the Company has not historically paid, and does not expect, for the foreseeable future, to pay a dividend on its common stock.

The following table presents, on a weighted average basis, the assumptions used in the Black-Scholes option-pricing model to determine the grant-date fair value of stock options granted during the nine months ended September 30, 2024 and 2023:

	Nine Months Ended September 30,	
	2024	2023
Risk-free interest rate	4.5%	4.1%
Expected term (in years)	5.5	5.6
Expected volatility	110.8%	86.5%
Expected dividend yield	0%	0%

The weighted average grant-date fair value per share of stock options granted during the nine months ended September 30, 2024 and 2023 was $3.10 and $0.39, respectively.

The following table summarizes option activity with service conditions under the 2021 Plan and the 2017 Plan:

	Weighted	Weighted Average	Aggregate

	Options	Average Exercise Price	Contract Term (years)	Intrinsic Value
Outstanding at January 1, 2024	2,820,187	$ 40.16	5.6	$ —
Granted	879,664	3.76		
Exercised	—	—		
Forfeited	(289,802)	31.47		
Outstanding at September 30, 2024*	3,410,049	$ 31.51	6.0	$ 115
Vested and expected to vest September 30, 2024	3,410,049	$ 31.51	6.0	$ 115
Exercisable at September 30, 2024	2,513,584	$ 38.00	4.9	$ 113

* Options outstanding at September 30, 2024 under the 2021 Plan and 2017 Plan were 1,979,953 and 1,475,096, respectively. Options outstanding at September 30, 2024 under the 2021 Plan include 45,000 awards with performance conditions (see below).

The aggregate intrinsic value of options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's Class A common stock for those options that had exercise prices lower than the fair value of Class A common stock.

The Company recorded stock-based compensation expense relating to option awards with service conditions of $2,077 and $6,306 for the three and nine months ended September 30, 2024, respectively. The Company recorded stock-based compensation expense relating to option awards with service conditions of $2,255 and $6,952 for the three and nine months ended September 30, 2023, respectively. As of September 30, 2024, unrecognized compensation cost for options issued with service conditions was $8,370 and will be recognized over an estimated weighted-average amortization period of 2.62 years.

Awards with Performance Conditions

In connection with the advisory agreement signed with Robin L. Smith, MD (see Note 15), the Company awarded options under the 2021 Plan to acquire a total of 105,000 shares with an exercise price of $29.90 to Dr. Smith, a former member of the Company's board of directors. The initial tranche of 25,000 stock options vested upon execution of the advisory agreement on August 16, 2022. The remaining 80,000 stock options are subject to vesting upon achievement of certain predefined milestones in relation to the expansion of the degenerative disease business. On November 1, 2022, the second tranche of 20,000 stock options vested upon achievement of the first milestone. The fair value of the award was determined based on a Black-Scholes option-pricing model. The Company's grant date fair value assumptions were 79.9% expected volatility, 2.95% risk-free interest rate, five-year expected term, and 0% expected dividend yield. The remaining 60,000 stock options were forfeited on August 16, 2023 upon termination of the advisory agreement. There were no milestones achieved or probable of being achieved and accordingly there was no stock-based compensation recorded during the three and nine months ended September 30, 2023.

Awards with Market Conditions

In September 2021, the Company awarded options to acquire a total of 246,928 shares with an exercise price of $63.20 to the Company's former President in connection with the commencement of his employment. The grant was comprised of four equal tranches, and would vest in up to five equal installments in respect of achieving certain share price targets between the third and fourth anniversary of the effective date, subject to his continued employment with the Company. The Company's President resigned effective August 31, 2022, and the entirety of the President's award was terminated at such time, all previously recognized stock-based compensation expense was reversed, and a consulting agreement was signed thereafter, refer to Note 15 for further details.

Restricted Stock Units

The Company issues restricted stock units ("RSUs") to employees that generally vest over a four-year period, with 25.0% vesting on the anniversary of the grant date, and the remainder vesting in equal annual installments thereafter so that the RSUs are vested in full on the four-year anniversary of the grant date. At times, the board of directors may approve exceptions to the standard RSU vesting terms. Any unvested shares will be forfeited upon termination of services. The fair value of an RSU is equal to the fair market value price of the Company's common stock on the date of grant. RSU expense is amortized straight-line over the vesting period. There are no RSUs outstanding under the 2017 Plan.

The following table summarizes activity related to RSU stock-based payment awards under the 2021 Plan:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2024	823,332	$ 13.77
Granted	—	—
Vested	(395,996)	11.50
Forfeited	(99,977)	13.24
Outstanding at September 30, 2024	327,359	$ 16.68

The Company recorded stock-based compensation expense of $595 and $2,322 for the three and nine months ended September 30, 2024, respectively, related to RSUs. The Company recorded stock-based compensation expense of $1,343 and $4,490 for the three and nine months ended September 30, 2023, respectively, related to RSUs. As of September 30, 2024, the total unrecognized expense related to all RSUs was $4,086, which the Company expects to recognize over a weighted-average period of 2.20 years.

Stock Units with Market Condition Vesting

In July 2023, the Company granted 174,500 market condition stock unit awards ("MCUs") under the 2021 Plan to certain members of management. The awards are scheduled to vest over a period of one to three years from the grant date based on continuous employment and specified market conditions based on the Company's stock price at the time of vest. As of September 30, 2024, 145,833 of the MCUs were forfeited as a result of the participant's termination of continuous service. Stock-based compensation expense for the remaining 28,667 MCUs is being recognized over the requisite service period based on the award's fair value on the grant date, which was determined based on the Company's closing stock price on the date of grant of $5.00, further discounted to reflect the effects of the market condition of the award.

Stock-Based Compensation Expense

The Company recorded stock-based compensation expense in the following expense categories of its condensed consolidated statements of operations and comprehensive loss:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Cost of revenues	$ 90	$ 166	$ 285	$ 462
Research and development	182	379	903	1,384
Selling, general and administrative	2,400	3,053	7,440	9,596
	$ 2,672	$ 3,598	$ 8,628	$ 11,442

12. Revenue Recognition

The following table provides information about disaggregated revenue by product and services:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2024	2023	2024	2023
Product sales, net	$ 3,393	$ 1,684	$ 26,199	$ 3,633
Services	1,292	1,427	3,857	4,062
License, royalty and other	4,611	675	6,032	2,964
Total net revenues	$ 9,296	$ 3,786	$ 36,088	$ 10,659

Net revenues include: (i) sales of biomaterial products, including Biovance, Biovance 3L, Rebound™, Interfyl, and CentaFlex, of which our direct sales are included in Product Sales while sales through our network of distribution partners are included in License, royalty and other; and (ii) the collection, processing and storage of umbilical cord and placental blood and tissue after full-term pregnancies, collectively, Services.

The following table provides changes in deferred revenue from contract liabilities:

	2024	2023
Balance at January 1	$ 6,020	$ 4,492
Deferral of revenue(1)	3,931	4,579
Recognition of unearned revenue(2)	(3,619)	(3,514)
Balance at September 30	$ 6,332	$ 5,557

(1) Deferral of revenue includes $3,736 and $3,818 in 2024 and 2023, respectively, resulting from payments received in advance of performance under the biobanking services storage contracts that are recognized as revenue under the contract as performance is completed.

(2) Recognition of unearned revenue includes $2,271 and $2,274 that was included in the beginning deferred revenue balance at January 1, 2024 and 2023, respectively.

13. License and Distribution Agreements

Sequence LifeScience, Inc. Independent Distribution Agreement

On August 23, 2024, the Company entered into an Independent Distributor Agreement (the "Distribution Agreement") with Sequence LifeScience, Inc. ("Sequence"), which provides the Company exclusive rights to market, sell and distribute Rebound™, a full thickness placental-derived allograft matrix product, in the U.S. for a period of ninety (90) days. Under the terms of the Distribution Agreement, Sequence will make Rebound available for purchase to the Company at a fixed price consistent with market terms. The Distribution Agreement is intended to be a bridge to allow the parties to cooperatively market the product prior to consummating the Asset Purchase Agreement. The Company acquired Rebound on October 9, 2024, through an asset purchase agreement with Sequence. For more information about the Rebound asset purchase agreement see Note 16, "Subsequent Events."

Regeneron Research Collaboration Services Agreement

On August 25, 2023, the Company entered into a multi-year research collaboration services agreement with Regeneron Pharmaceuticals, Inc. ("Regeneron"), pursuant to which the Company will support the research effort of Regeneron's allogeneic cell therapy candidates (the "Regeneron Services Agreement"). The Regeneron Services Agreement's initial focus is the research on a targeted allogeneic gamma delta chimeric antigen receptor (CAR) T-cell therapy owned by Regeneron designed to enhance proliferation and potency against solid tumors. Payments to the Company under the Regeneron Services Agreement included a non-refundable up-front payment and payments based upon the achievement of defined milestones according to written statements of work. The Regeneron Services Agreement will expire five years from the effective date and may be terminated immediately by either party for the uncured material breach, bankruptcy, or insolvency of the other party. Regeneron may also terminate for convenience upon 30 days' written notice.

The Regeneron Services Agreement grants Regeneron a royalty-free, fully-paid up, worldwide, non-exclusive license, with the right to grant sublicenses, to the Company's intellectual property ("IP") to the extent that any such license is necessary for Regeneron to fully use the Company's research services. The Company determined that the (1) research licenses and (2) the research activities performed by the Company represent a single combined performance obligation under the Regeneron Services Agreement. The Company determined that Regeneron cannot benefit from the licenses separately from the research activities because these services are specialized and rely on the Company's expertise such that these activities are highly interrelated and therefore not distinct. Accordingly, the promised goods and services represent one combined performance obligation and the entire transaction price was allocated to that single combined performance obligation. The performance obligation will be satisfied over the research term as the Company performs the research activities.

The upfront payment of $750 was recorded as deferred revenue as of September 30, 2024, and will be recognized as revenue as the combined performance obligation is satisfied. The Company recognizes revenue using the cost-to-cost method, which it believes best depicts the transfer of control to the customer over time. Under the cost-to-cost method, the extent of progress towards completion is measured based on the ratio of actual costs incurred to the total estimated costs expected upon satisfying the identified performance obligation. Under this method, revenue is recorded as a percentage of the estimated transaction price based on the extent of progress towards completion. As of December 31, 2023, the potential research milestone payments that the Company is eligible to receive and have not been achieved, and were excluded from the transaction price as they were fully constrained by uncertain events. The Company will reevaluate the transaction price at the end of each reporting period and as uncertain events are resolved or other changes in circumstances occur, and if necessary, the Company will adjust its estimate of the transaction price. Any additions to the transaction price would be reflected in the period as a cumulative revenue catch-up based on the ratio of costs incurred to the total estimated costs expected applied to the revised transaction price.

Sorrento Therapeutics, Inc. License and Transfer Agreement

The Company and Sorrento Therapeutics, Inc. ("Sorrento"), a related party through September 30, 2023, are party to a License and Transfer Agreement for the exclusive worldwide license to CD19 CAR-T constructs for use in placenta-derived cells and/or cord blood-derived cells for the treatment of any disease or disorder (the "2020 Sorrento License Agreement"). The Company retains the right to sublicense the rights granted under the agreement with Sorrento's prior written consent. As consideration for the license, the Company is obligated to pay Sorrento a royalty equal to low single-digit percentage of net sales (as defined within the agreement) and a royalty equal to low double-digit percentage of all sublicensing revenues (as defined within the agreement). The 2020 Sorrento License Agreement will remain in effect until terminated by either the Company or Sorrento for uncured material breach upon 90 days written notice or, after the first anniversary of the effective date of the 2020 Sorrento License Agreement, by the Company for convenience upon six months' written notice to Sorrento. On October 19, 2023, Sorrento filed a Plan of Reorganization under Chapter 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of Texas which plan contemplates a liquidation of the debtor. If the Plan is confirmed by the Bankruptcy Court, the Company believes that Sorrento will not be able to perform under the license and that any rights the Company might have under the license would be unenforceable. After assessing the status of the IND to determine an optional path forward for the program, the Company elected to terminate development of CYCART-19 for B-cell malignancies during the third quarter of 2023. The Company may continue pre-clinical development of other T-cell candidates.

Genting Innovation PTE LTD Distribution Agreement

On May 4, 2018, concurrently with Dragasac's equity investment in Legacy Celularity, Legacy Celularity entered into a distribution agreement with Genting Innovation pursuant to which Genting Innovation was granted supply and distribution rights to certain Company products in select Asia markets (the "Genting Agreement"). The Genting Agreement grants Genting Innovation limited distribution rights to the Company's then-current portfolio of degenerative disease products and provides for the automatic rights to future products developed by or on behalf of the Company.

The term of the Genting Agreement was renewed on January 31, 2023, and automatically renews for successive 12 month terms unless: Genting provides written notice of its intention not to renew at least three months prior to a renewal term or the Genting Agreement is otherwise terminated by either party for cause.

Genting Innovation and Dragasac are both direct subsidiaries of Genting Berhad, a public limited liability company incorporated and domiciled in Malaysia.

On June 14, 2023, the Genting Agreement was amended and restated to include manufacturing rights in the territories covered under the agreement, expanded to include two new countries, and a commitment by the Company to provide technology transfer pursuant to the plan established by a Joint Steering Committee. On January 17, 2024, the Company further amended the Genting Agreement to include distribution and manufacturing rights to certain of the Company's cell therapy products, including PSC-100, PDA-001, PDA-002, pEXO-001, APPL-001 and CYNK-001. As of September 30, 2024, the Company has not recognized any revenue under the Genting Agreement.

Celgene Corporation License Agreement

The Company is party to a license agreement with Celgene (the "Celgene Agreement") pursuant to which the Company granted Celgene two separate licenses to certain intellectual property. The Celgene Agreement grants Celgene a royalty-free, fully-paid up, worldwide, non-exclusive license to the certain intellectual property ("IP") for pre-clinical research purposes in all fields and a royalty-free, fully-paid up, worldwide license, with the right to grant sublicenses, for the development, manufacture, commercialization and exploitation of products in the field of the construction of any CAR, the modification of any T-lymphocyte or NK cell to express such a CAR, and/or the use of such CARs or T-lymphocytes or NK cells for any purpose, including prophylactic, diagnostic, and/or therapeutic uses thereof. The Celgene Agreement will remain in effect until its termination by either party for cause.

Pulthera, LLC Binding Term Sheet

Concurrent with the entry into the securities purchase agreement for the private placement described in Note 7 above, the Company executed a binding term sheet to negotiate and enter into a sublicense agreement of certain assets from an affiliate of Pulthera, LLC (the "sublicensor"). Pursuant to the binding term sheet, the Company paid sublicensor $3,000 option fee in cash and issued $1,000 of shares of its Class A common stock (169,492 shares based on the closing price on March 17, 2023) as consideration for stem-cells inventory to be used in research and development. The option fee paid by the Company will be applied towards an initial license fee as outlined in the sublicense agreement. The Company is required to use diligent and reasonable efforts to develop and obtain regulatory approval to market at least one licensed product contingent upon a firm written commitment to provide further financing to the Company. The $3,000 option fee was recorded as acquired IPR&D expense included in research and development expense on the condensed consolidated statements of operations and comprehensive loss for the nine months ended September 30, 2023, as the acquired IPR&D had no alternative future use.

License Agreement with BioCellgraft, Inc.

On December 11, 2023, the Company and BioCellgraft, Inc. ("BioCellgraft") entered into a license agreement whereby the Company granted an exclusive license to BioCellgraft, with the right to sublicense, to develop and commercialize certain licensed products to the dental market in the United States over an initial four year term and will automatically renew for an additional two years unless either party provides written notice of termination. BioCellgraft will pay to the Company total license fees of $5,000 over a two year period, as defined. Upon execution of the agreement, the Company received a $300 payment towards the first year payment. To date, the Company has not received any additional consideration beyond the $300 license payment under the agreement.

14. Segment Information

The Company regularly reviews its segments and the approach used by management to evaluate performance and allocate resources. The Company manages its operations through an evaluation of three distinct business segments: Cell Therapy, Degenerative Disease, and BioBanking. The chief operating decision maker uses the revenues and earnings (losses) of the operating segments, among other factors, for performance evaluation and resource allocation among these segments.

The reportable segments were determined based on the distinct nature of the activities performed by each segment. Cell Therapy broadly refers to therapies the Company is researching and developing. Therapies being researched are unproven and in various phases of development. Degenerative Disease produces, sells and licenses products used in surgical and wound care markets. BioBanking collects stem cells from umbilical cords and placentas and provides storage of such cells on behalf of individuals for future use.

The Company manages its assets on a total company basis, not by operating segment. Therefore, the chief operating decision maker does not regularly review any asset information or related income statement effects by operating segment and, accordingly, asset information is not reported by operating segment. Total assets were $128,840 and $143,889 as of September 30, 2024 and December 31, 2023, respectively.

Financial information by segment for the three months ended September 30, 2024 and 2023 is as follows:

	Three Months Ended September 30, 2024				
	Cell Therapy	BioBanking	Degenerative Disease	Other	Total
Net revenues	$ -	$ 1,292	$ 8,004	$ -	$ 9,296
Cost of revenues (excluding amortization of acquired intangible assets)	-	238	3,645	-	3,883
Direct expenses	3,496	353	4,187	8,529	16,565
Segment contribution	$ (3,496)	$ 701	$ 172	$ (8,529)	$ (11,152)

Indirect expenses	375	(a)	375
Loss from operations			$ (11,527)

(a) Components of other

Amortization	375
Total other	$ 375

	Three Months Ended September 30, 2023				
	Cell Therapy	BioBanking	Degenerative Disease	Other	Total
Net revenues	$ -	$ 1,427	$ 2,359	$ -	$ 3,786
Cost of revenues (excluding amortization of acquired intangible assets)	-	398	3,204	-	3,602
Direct expenses	4,887	350	1,901	9,074	16,212
Segment contribution	$ (4,887)	$ 679	$ (2,746)	$ (9,074)	$ (16,028)
Indirect expenses				83,228 (b)	83,228
Loss from operations					$ (99,256)

(b) Components of other

Change in fair value of contingent stock consideration	(39)
Goodwill impairment	82,714
Amortization	553
Total other	$ 83,228

Financial information by segment for the nine months ended September 30, 2024 and 2023 is as follows:

	Nine Months Ended September 30, 2024				
	Cell Therapy	BioBanking	Degenerative Disease	Other	Total
Net revenues	$ -	$ 3,857	$ 32,231	$ -	$ 36,088
Cost of revenues (excluding amortization of acquired intangible assets)	-	952	6,694	-	7,646
Direct expenses	12,383	1,216	14,385	28,159	56,143
Segment contribution	$ (12,383)	$ 1,689	$ 11,152	$ (28,159)	$ (27,701)
Indirect expenses				1,377 (a)	1,377
Loss from operations					$ (29,078)

(a) Components of other

Amortization	1,377
Total other	$ 1,377

	Nine Months Ended September 30, 2023				
	Cell Therapy	BioBanking	Degenerative Disease	Other	Total
Net revenues	$ -	$ 4,062	$ 6,597	$ -	$ 10,659
Cost of revenues (excluding amortization of acquired intangible assets)	-	1,355	5,052	-	6,407
Direct expenses	53,505	780	6,799	31,481	92,565
Segment contribution	$ (53,505)	$ 1,927	$ (5,254)	$ (31,481)	$ (88,313)
Indirect expenses				117,289 (b)	117,289
Loss from operations					$ (205,602)

(b) Components of other

Change in fair value of contingent consideration liability	(104,339)
Change in fair value of contingent stock consideration	(159)
Goodwill impairment	112,347
IPR&D impairment	107,800
Amortization	1,640
Total other	$ 117,289

15. Related Party Transactions

Amended and Restated Employment Agreement with Dr. Robert Hariri

On January 25, 2023, in order to address the Company's current working capital requirements, Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, agreed to temporarily reduce payment of his salary pursuant to his employment agreement to minimum wage level with the remaining salary deferred until December 31, 2023. As of September 30, 2024, $1,432 was recorded to accrued expenses on the condensed consolidated balance sheets.

In order to comply with the Securities Purchase Agreement dated January 12, 2024 with Dragasac Limited that Dr. Hariri not be paid the $1,088 in base salary that was otherwise due to him for the 2023 calendar year unless the Company raises additional cash through offerings of equity securities with aggregate net proceeds equal or greater to $21,000 at a valuation at least equal to the valuation, cost per security or exercise/conversion price, as applicable, of the Class A common stock and January 2024 PIPE Warrant purchased by Dragasac Limited in January 2024. In compliance with the requirements of Internal Revenue Code Section 409A, the compensation committee of the Company's board of directors approved a cash bonus program, or bonus program, effective February 16, 2024, pursuant to which Dr. Hariri will be paid 125% of his unpaid base salary upon the satisfaction of the foregoing performance conditions. Accordingly, the Company entered into a second amendment to Dr. Hariri's employment agreement implementing the 85% base salary reduction effective as of February 16, 2024 and documenting the bonus program. As a result of the reduction, Dr. Hariri's annual rate of base salary for the 2024 year will be $180. Payment of Dr. Hariri's base salary at the rate in effect prior to the reduction will resume on January 1, 2025.

March 2023 PIPE

On March 20, 2023, the Company entered into a securities purchase agreement with two accredited investors, including its Chairman and Chief Executive Officer, Dr. Robert Hariri, for an aggregate purchase price of $9,000 (of which Dr. Hariri subscribed for $2,000). See Note 10, Equity under March 2023 PIPE caption for further details.

Loan Agreement with Dr. Robert Hariri

On August 21, 2023, the Company entered into a $1,000 loan agreement with Dr. Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, which bears interest at a rate of 15% per year, with the first year of interest being paid in kind on the last day of each month and was schedule to mature on August 21, 2024. The loan maturity date was subsequently extended to December 31, 2024. On September 30, 2024, Dr. Hariri assumed the loans of two unaffiliated lenders who were parties to an August 21, 2023 loan agreement. See Note 7, Short-Term Debt - Other and CEO Promissory Note for more information.

On October 12, 2023, in order to further address the Company's immediate working capital requirements, Robert Hariri, M.D., Ph.D., the Company's Chairman and Chief Executive Officer, and the Company signed a promissory note for $285 which bears interest at a rate of 15.0% per year (see Note 7).

Consulting & Advisory Agreements with Dr. Andrew Pecora

On August 31, 2022, Dr. Pecora resigned as the Company's President, and subsequently entered into a consulting agreement with the Company dated September 21, 2022, to receive a $ 10 monthly fee for an initial six-month term and will be automatically renewed for one additional six- month term if either party does not provide notice of non-renewal. Simultaneously, the Company entered into a scientific and clinical advisor agreement (the "SAB Agreement"), effective as of September 1, 2022, whereby Dr. Pecora agreed to serve as co-chair of the Company's scientific and clinical advisory board for a $ 10 monthly fee and a one-time grant of RSUs having a value of $125 on the grant date and will vest equally over four years. The SAB Agreement has a one-year term and may be renewed for successive one-year terms upon mutual agreement of both parties. The consulting agreement was early terminated effective January 14, 2023. As of August 8, 2024, Dr. Pecora no longer serves on the Company's scientific and clinical advisory board.

Advisory Agreement with Robin L. Smith MD

On August 16, 2022, the Company entered into an advisory agreement with Robin L. Smith, MD, a then member of the Company's board of directors, to receive $20 per month for advisory fees, an equity grant for a total amount of 105,000 stock options with the initial tranche of 25,000 stock options vesting upon execution of the advisory agreement and the remaining shares subject to vesting upon achievement of certain predefined milestones. On November 1, 2022, the second tranche of 20,000 stock options vested upon achievement of the milestone. The agreement also provides for a one-time cash bonus of $1,500 upon the successful achievement of the trigger event, as defined in the agreement. The Company paid advisory fees of $0 and $20 for the nine months ended September 30, 2024 and 2023, respectively. The advisory agreement expired pursuant to the terms of the agreement on August 16, 2023 and was not renewed for an additional term. Dr. Smith resigned from the Company's board effective December 24, 2023.

COTA, Inc

In November 2020, Legacy Celularity and COTA, Inc. ("COTA") entered into an Order Schedule (the "Order Schedule No. 2"), to the Master Data License Agreement between Legacy Celularity and COTA, dated October 29, 2018, pursuant to which COTA will provide the licensed data in connection with AML patients. The COTA Order Schedule No. 2 will terminate on the one-year anniversary following the final licensed data deliverable described therein. Andrew Pecora, M.D., Celularity's former President, is the Founder and Chairman of the Board of COTA and Dr. Robin L. Smith, a former member of the Company's board of directors, is an investor in COTA. The Company did not make any payments to COTA during the nine months ended September 30, 2024 and 2023. As of August 8, 2024, Dr. Pecora no longer serves on the Company's scientific and clinical advisory board and therefore, COTA is no longer a related party.

Cryoport Systems, Inc

During the nine months ended September 30, 2024 and 2023, the Company made payments totaling $2 and $33, respectively to Cryoport Systems, Inc ("Cryoport") for transportation of cryopreserved materials. The Company's Chief Executive Officer and director, Dr. Robert Hariri, M.D, Ph.D., has served on Cryoport's board of directors since September 2015.

C.V. Starr Loan

On March 17, 2023 the Company entered into a $5,000 loan agreement with C.V. Starr. C.V. Starr is an investor in the Company, holding 125,000 warrants to purchase Class A common stock and 1,528,138 shares of Class A common stock as of September 30, 2024.

Employment of an Immediate Family Member

Alexandra Hariri, the daughter of Robert J. Hariri, M.D., Ph.D., Celularity's Chairman and Chief Executive Officer, is employed by Celularity as an Executive Director, Corporate Strategy & Business Development. Ms. Hariri's annual base salary for 2024 and 2023 was $265. Ms. Hariri has received and continues to be eligible to receive a bonus, equity awards and benefits on the same general terms and conditions as applicable to unrelated employees in similar positions.

Fountain Life Management LLC

On November 7, 2024, the Company entered into a Technology Services Agreement with Fountain Life Management LLC ("Fountain Life") under which the Company agreed to process and store mononuclear cells isolated from blood samples collected by Fountain Life or its authorized representatives in accordance with the Company's adult banking enrollment processes. In consideration of the services, Fountain Life will pay the Company a one-time fee of two thousand five hundred dollars per sample collected and stored. The initial term of the agreement is one year and automatically extends for one-year periods unless earlier terminated by either party. The Company's Chairman and Chief Executive Officer, Dr. Robert Hariri, M.D, Ph.D., and director, Peter Diamandis, M.D., are founding partners of Fountain Life.

16. Subsequent Events

Rebound™ Asset Purchase Agreement

On October 9, 2024, the Company entered into an asset purchase agreement with Sequence LifeScience, Inc. ("Sequence") to acquire Sequence's Rebound™ full thickness placental-derived allograft matrix product and certain related assets. The aggregate consideration paid for the assets was $5,500, which consisted of (i) an upfront cash payment of $1,000 (ii) an aggregate of up to $4,000 in monthly milestone payments, and (iii) a credit of $500 for previous payments made by Celularity to Sequence pursuant to a letter of intent between Celularity and Sequence dated August 16, 2024. Pursuant to the terms of the asset purchase agreement, the milestone payments are calculated based on 20% of net sales collected by Celularity from its customers during the preceding calendar month, commencing the first full month after the closing of the transaction.

Concurrently with the execution of the asset purchase agreement, the Company entered into an exclusive supply agreement with Sequence for the manufacture and supply of Rebound for a minimum period of six months. Celularity retains the right to manufacture Rebound internally and intends to commence a technology transfer as soon as practicable.

Unsecured Senior Convertible Notes

On November 25, 2024, the Company entered into a securities purchase agreement (the "Purchase Agreement") with an accredited investor exempt from registration under Section 4(a)(2) of the Securities Act of 1933, as amended, and Rule 506(b) of Regulation D promulgated thereunder, pursuant to which the Company agreed to sell and issue, in one or more closings, to the investor and other purchasers (the "Purchasers") in a private placement transaction, unsecured senior convertible notes (the "Notes") and warrants (the "Purchaser Warrants") for an aggregate original principal amount of up to $1,000. As of the date of this filing, the Company issued and sold $750 Notes and Purchaser Warrants pursuant to the Purchase Agreement.

The Notes bear interest at an annual rate of 8% (increasing to 10% in the event of default as defined in the Purchase Agreement) and have a maturity date of one year from the date of issuance. Upon an event of default, the Notes are convertible at the Purchasers' option into shares of the Company's Class A common stock, par value $ 0.0001 per share (the "Common Stock"), at a price per share equal to (i) $2.85 (adjusted for stock splits, reverse stock splits, stock dividends, or similar transactions); or (ii) the offering price of a subsequent financing transaction with gross proceeds of $2,500 or more (a "Subsequent Financing"), subject to a floor price of $1.00 per share. The Notes include customary negative covenants restricting the Company's ability to incur other indebtedness other than as permitted, pay dividends to stockholders, grant or suffer to exist a security interest in any of the Company's assets, other than as permitted, amongst others. In addition, the Notes include customary events of default.

The Purchaser Warrants entitle the Purchasers to purchase shares of Common Stock equal to each Purchaser's subscription amount divided by the exercise price of $ 2.85 per share. The exercise price, and the number of shares of Common Stock issuable under the Purchaser Warrants, are subject to a one-time reset upon the completion of a Subsequent Financing, subject to a floor price of $1.00 per share. The Purchaser Warrants are immediately exercisable and have a 5-year term.

In connection with the transaction, the Company paid a cash fee equal to 7% of the aggregate proceeds, a non-accountable expense fee of 1% of the aggregate proceeds, and an initial retainer fee of $25, and a reimbursement of legal expenses up to $75. In addition, the Company agreed to issue a 5-year warrant to purchase a number of shares of Common Stock equal to 7% of the proceeds of the transaction (the "Placement Agent Warrants"), at an exercise price equal to 125% of the offering price. The Placement Agent Warrants are subject to the same one-time exercise price adjustment provision as the Purchaser Warrants in connection with a Subsequent Financing. The Company intends to use the net proceeds from the Notes and the Purchaser Warrants for working capital and general corporate purposes.

There are no additional items that have not previously been mentioned elsewhere (see Note 1) requiring disclosure.

Up to Shares of Class A Common Stock

Up to Pre-Funded Warrants to Purchase up to Shares of Class A Common Stock

Celularity Inc.

PRELIMINARY PROSPECTUS

ThinkEquity

, 2025

PART II—INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth all expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of the securities being registered. All the amounts shown are estimates except the SEC registration fee and the FINRA filing fee.

		Amount to be paid
SEC registration fee	$	2,807
FINRA filing fee	$	3,250
Accounting fees and expenses	$	90,000
Legal fees and expenses	$	150,000
Miscellaneous	$	3,943
Total	$	250,000

Item 14. Indemnification of Directors and Officer

Section 145 of the DGCL provides that a corporation may indemnify directors and officers as well as other employees and individuals against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with any threatened, pending or completed actions, suits or proceedings in which such person is made a party by reason of such person being or having been a director, officer, employee or agent of the registrant. The DGCL provides that Section 145 is not exclusive of other rights to which those seeking indemnification may be entitled under any bylaws, agreement, vote of stockholders or disinterested directors or otherwise. Our certificate of incorporation and bylaws provide for indemnification by us of our directors and officers to the fullest extent permitted by the DGCL.

Section 102(b)(7) of the DGCL permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (1) for any breach of the director's duty of loyalty to the corporation or its stockholders, (2) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (3) for unlawful payments of dividends or unlawful stock repurchases redemptions or other distributions or (4) for any transaction from which the director derived an improper personal benefit. Our certificate of incorporation provides for such limitation of liability to the fullest extent permitted by the DGCL.

We have entered into indemnification agreements with each of our directors and executive officers to provide contractual indemnification in addition to the indemnification provided in our certificate of incorporation. Each indemnification agreement provides for indemnification and advancements by us of certain expenses and costs relating to claims, suits or proceedings arising from his or her service to our Company or, at our request, service to other entities, as officers or directors to the maximum extent permitted by applicable law. We believe that these provisions and agreements are necessary to attract qualified directors.

We also maintain standard policies of insurance under which coverage is provided (1) to our directors and officers against loss arising from claims made by reason of breach of duty or other wrongful act, while acting in their capacity as directors and officers of our Company, and (2) to us with respect to payments that may be made by us to such officers and directors pursuant to any indemnification provision contained in our certificate of incorporation and bylaws or otherwise as a matter of law.

Item 15. Recent Sales of Unregistered Securities

Set forth below is information regarding securities issued by us since during the prior three years that were not registered under the Securities Act.

2025

On January 3, 2025, we issued 21,739 shares of our Class A common stock to a former employee pursuant to a Confidential Settlement and Release Agreement by and among us and the former employee with an effective date of January 3, 2025.

On January 24, 2025, the Company issued 1,188,255 shares of our Class A common stock upon the exercise of warrants.

2024

On January 10, 2024, we issued 20,000 shares of our Class A common stock to Palantir Technologies Inc., Palantir, pursuant to a Confidential Letter Agreement by and among us and Palantir dated January 10, 2024.

On January 12, 2024, we entered into a securities purchase agreement with an existing investor, Dragasac Limited, providing for the private placement of (i) 2,141,098 shares of our Class A common stock and (ii) accompanying warrants to purchase up to 535,274 shares of our Class A common stock for $2.4898 per share and $1.25 per accompanying warrant, for an aggregate purchase price of approximately $6.00 million. Each warrant has an exercise price of $2.4898 per share, is immediately exercisable, will expire on January 16, 2029. As a result of closing of the business combination pursuant to that certain Agreement and Plan of Merger and Reorganization dated January 8, 2021 by and among us, our wholly-owned merger subs and Celularity LLC (formerly known as Celularity Inc.), we assumed certain warrants held by Dragasac that, after application of the exchange ratio provided in the merger agreement, became exercisable for an aggregate 652,981 shares of our Class A common stock at an adjusted exercise price of $67.70 per share. In connection with the private placement, we and Dragasac agreed to amend and restate such warrants to reduce the exercise price per share to $2.4898 per share, subject to further adjustment as set forth therein.

On January 12, 2024,we and Celularity LLC, our wholly owned subsidiary, entered into a second amended and restated senior secured loan agreement with RWI pursuant to which we issued five-year immediately exercisable warrants to acquire up to 1,650,000 shares of Class A common stock at an exercise price of $2.4898 per share and a five-warrants to acquire up to 1,350,000 shares of Class A common stock at an exercise price equal to $2.988.

On March 13, 2024, we entered into the SEPA with YA II PN, LTD pursuant to which we have the right to sell to Yorkville up to $10.0 million of our Class A common stock, subject to certain limitations and conditions set forth in the SEPA, from time to time, over a 36-month period. Sales of the shares of Class A common stock to Yorkville under the SEPA, and the timing of any such sales, are at our option, and we are under no obligation to sell any shares of our Class A common stock to Yorkville under the SEPA except in connection with notices that may be submitted by Yorkville, in certain circumstances. As of the date of this prospectus, we have not issued any shares of Class A common stock to Yorkville pursuant to the SEPA. Upon entry into the SEPA, we issued Yorkville a $3.15 million convertible promissory note for $2.99 million in cash (after a 5% original issue discount). The note bears interest at an annual rate equal to 8.0% (increased to 18.0% in the event of default as provided in the note), and matures March 13, 2025. Yorkville may convert the note into shares of our Class A common stock at a price per share equal to the average VWAP of our shares of Class A common stock on Nasdaq during the five consecutive trading days immediately prior to the conversion price reset date, subject to a floor price of $2.4898 per share. The conversion price was reset to $2.7546 on September 13, 2024. The issuance of shares of our Class A common stock upon conversion of the note and otherwise under the SEPA is capped at 19.9% of the outstanding shares of our Class A common stock as of the date of this prospectus. As consideration for Yorkville's commitment to purchase the shares of Class A common stock pursuant to the SEPA, we paid Yorkville, among other things, a commitment fee equal to 16,964 shares of our Class A common stock.

On March 13, 2024, in connection with a forbearance agreement with RWI, we issued RWI a warrant to acquire up to 300,000 shares of our Class A common stock which expires June 20, 2028 and has an exercise price of $5.895 per share.

On March 13, 2024, in connection with a forbearance agreement with C.V. Starr & Co. Inc., we amended the exercise price of certain warrants to acquire 75,000 shares of our Class A common stock for $7.10 per share, expiring March 17, 2028, and warrants to acquire 50,000 shares of our Class A common stock for $8.10 per share, such that the exercise price of each such warrant is $5.895 per share.

On May 6, 2024, we issued 40,584 shares of our Class A common stock to Palantir pursuant to a Confidential Letter Amendment to the Palantir Settlement Agreement by and among us and Palantir dated December 21, 2023.

On dates ranging from November 11, 2024 to November 14, 2024, we issued YA II PN, Ltd., or Yorkville, a total of 478,881 shares of our Class A common stock in connection with the conversion of notes outstanding in the principal amount of $1.3 million.

On November 18, 2024, we issued 59,176 shares of our Class A common stock to a former employee pursuant to a Confidential Settlement and Release Agreement by and among us and the former employee with an effective date of November 18, 2024.

On November 25, 2024, we entered into a securities purchase agreement with an accredited investor pursuant to which we sold unsecured senior convertible notes and warrants for an aggregate original principal amount of up to $1,000,000. As of the date of this prospectus, we issued and sold $750,000 notes and warrants. The notes bear interest at an annual rate of 8% (increasing to 10% in the event of default) and have a maturity date of one year from the date of issuance. Upon an event of default, the notes are convertible at the purchasers' option into shares of our Class A common stock at a price per share equal to (i) $2.85 (adjusted for stock splits, reverse stock splits, stock dividends, or similar transactions); or (ii) the offering price of a subsequent financing transaction with gross proceeds of $2,500,000 or more (a "Subsequent Financing"), subject to a floor price of $1.00 per share. The warrants entitle the purchasers to purchase shares of our Class A common stock equal to each purchaser's subscription amount divided by the exercise price of $2.85 per share. The exercise price, and the number of shares of our Class A common stock issuable under the warrants, are subject to a one-time reset upon the completion of a Subsequent Financing, subject to a floor price of $1.00 per share. The warrants are immediately exercisable and have a five-year term. Madison Global Partners, LLC served as the exclusive placement agent for the offering. In connection with the transaction, among other fees, we issued Madison Global Partners, LLC or their designees a five-year warrant to purchase up to an aggregate of 52,500 shares of our Class A common stock at an exercise price equal to $3.56 per share.

2023

On March 17, 2023, in connection with a loan agreement with C.V. Starr & Co. Inc. we issued warrants to acquire up to an aggregate 75,000 shares of our Class A common stock at a purchase price of $1.25 per whole share underlying the warrant (or $94). The warrant has a five-year term and an exercise price of $7.10 per share. In March 2024, the exercise price of the warrant was amended to $5.895 in connection with the Starr Forbearance Agreement.

On March 20, 2023, we entered into a securities purchase agreement with two accredited investors, including our Chairman and Chief Executive Officer, Dr. Robert Hariri, providing for the private placement of (i) 938,183 shares of our Class A common stock and (ii) accompanying warrants to purchase up to 938,183 shares of Class A common stock for $83.43 per share and $1.25 per accompanying warrant, for an aggregate purchase price of approximately $9.0 million (of which Dr. Hariri subscribed for $2.0 million). Each warrant has an exercise price of $30.00 per share, is immediately exercisable and expires on March 24, 2028. Concurrent with the entry into the securities purchase agreement we executed a binding term sheet to negotiate and enter into a sublicense of certain assets from an affiliate of the accredited investor party to the private placement transaction and in connection therewith issued 169,492 shares of Class A common stock.

On May 17, 2023, we entered into a securities purchase agreement with several accredited investors for the private placement of (i) 581,394 shares of our Class A common stock and (ii) accompanying warrants to purchase up to 581,394

shares of Class A common stock for $5.20 per share and $1.25 per accompanying warrant for an aggregate purchase price of approximately $3.75 million. Each warrant has an exercise price of $10.00 per share, is immediately exercisable, and expires on May 18, 2028.

On June 20, 2023, in connection with an amended and restated senior secured loan agreement with RWI, we granted C.V. Starr additional warrants to acquire up to an aggregate 50,000 shares of our Class A common stock, which additional warrants have a five-year term and an exercise price of $8.10 per share and issued RWI warrants to acquire up to an aggregate of 300,000 shares of Class A common stock, which warrant has a five-year term and an exercise price of $8.10 per share.

On September 18, 2023, in connection with a letter agreement with YA II PN, Ltd. we issued 270,731 shares of Class A common stock.

2022

In March 2022, we amended and restated certain warrants held by Starr International Investments Ltd. and its affiliates to (i) reduce the exercise price per share from $75.30 per share to $35.00 per share, subject to adjustment as set forth in the amended and restated warrants, (ii) remove the transfer restrictions set forth in the warrants, and (iii) make other changes reflecting the impact of our business combination. Immediately following the amendment and restatement of the warrants, such holders exercised these amended and restated warrants in full, for cash, for approximately $46.5 million, and we issued the holders an aggregate 1,328,138 shares of our Class A common stock.

In May 2022, we issued (i) 405,405 shares of our Class A common stock, and (ii) accompanying warrants to purchase up to 405,405 shares of our Class A common stock, for $740.00 per share and accompanying warrant, or an aggregate purchase price of approximately $30.0 million to an institutional accredited investor in a private placement.

Item 16. Exhibits and Financial Statement Schedules

EXHIBIT INDEX

Exhibit Number	Description
1.1**	Form of Underwriting Agreement
2.1+	Merger Agreement and Plan of Reorganization by and among GX Acquisition Corp., Alpha First Merger Sub, Inc., Alpha Second Merger Sub, LLC, and Celularity Inc. (incorporated by reference to Exhibit 2.1 to the current report on Form 8-K, filed with the Commission on January 8, 2021).
3.1	Second Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
3.2	Certificate of Amendment of the Second Amended and Restated Certificate of Incorporate of Celularity Inc. (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the Commission on June 16, 2023).
3.3	Certificate of Amendment of the Second Amended and Restated Certificate of Incorporate of Celularity Inc. (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the Commission on February 26, 2024).
3.4	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
4.2**	Form of Pre-funded Warrant
4.3**	Form of Representative's Warrant
5.1**	Opinion of Sheppard, Mullin, Richter & Hampton, LLP
10.1	Amended and Restated Registration Rights Agreement (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
10.2	Registration Rights Agreement, dated May 18, 2022, between Celularity Inc. and the holder party thereto (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed with the Commission on May 20, 2022).
10.3	Form of Registration Rights Agreement, among Celularity Inc. and the holder party thereto (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed with the Commission on March 23, 2023).

10.4	Form of Registration Rights Agreement, dated May 18, 2023, among Celularity Inc. and the holder party thereto (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed with the Commission on May 19, 2023).
10.5	Registration Rights Agreement, dated March 13, 2024, between Celularity, Inc. and YA II PN, Ltd. (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed on March 15, 2024).
10.6	Vesting Agreement dated as of July 16, 2021 by and among GX Sponsor LLC, Celularity Inc. (f/k/a GX Acquisition Corp.), and each of the other Persons set forth on the signature pages thereto (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
10.7	Warrant Agreement, dated May 20, 2019, by and between GX Acquisition Corp. and Continental Stock Transfer & Trust Company, as warrant agent (incorporated by reference to Exhibit 4.1 to the current report on Form 8-K, filed with the Commission on May 24, 2019).
10.8	Specimen Warrant Certificate (incorporated by reference to Exhibit 4.2 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
10.9#	Form of Indemnification Agreement (incorporated by reference to Exhibit 10.9 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.10#	Celularity Inc. Amended and Restated 2017 Equity Incentive Plan (incorporated by reference to Exhibit 10.10 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.11#	Forms of Stock Option Grant Notice, Option Agreement and Notice of Exercise under the 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.11 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.12#	Celularity Inc. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 99.3 to the registration statement on Form S-8 (File No. 333-260025), filed with the Commission on October 4, 2021).
10.13#	Forms of Stock Option Grant Notice, Option Agreement, Notice of Exercise, RSU Award Grant Notice and Award Agreement under the 2021 Equity Incentive Plan (incorporated by reference to Exhibit 99.4 to the registration statement on Form S-8 (File No. 333-260025), filed with the Commission on October 4, 2021).
10.14#	Celularity 2021 Employee Stock Purchase Plan (incorporated by reference to Exhibit 99.5 to the registration statement on Form S-8 (File No. 333-260025), filed with the Commission on October 4, 2021.
10.15#	Celularity Inc. 2018 Annual Incentive Plan (incorporated by reference to Exhibit 10.14 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).

10.16#	Amended and Restated Employment Agreement by and between Celularity and Robert J. Hariri, dated as of January 7, 2021 (incorporated by reference to Exhibit 10.15 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.17#	Amendment to the Employment Agreement, as of January 25, 2023, by and between Celularity Inc. and Robert J. Hariri. (incorporated by reference to Exhibit 10.14 to the annual report on Form 10-K, filed with the Commission on March 31, 2023).
10.18#	Second Amendment dated February 16, 2024 to the Amended and Restated Employment Agreement dated January 7, 2021 by and between Celularity Inc. and Robert J. Hariri, MD PhD (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed on February 22, 2024.
10.19#	Employment Agreement, as of April 1, 2022, by and between Celularity Inc. and David C. Beers (incorporated by reference to Exhibit 10.7 to the quarterly report on Form 10-Q filed with the Commission on November 10, 2022).

10.20#	Amendment dated February 16, 2024 to the Amended and Restated Employment Agreement dated as of April 1, 2022 by and between Celularity Inc. and David Beers (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed on February 22, 2024.
10.21#	Employment Agreement, as of April 1, 2022, by and between Celularity Inc. and Stephen A. Brigido (incorporated by reference to Exhibit 10.6 to the quarterly report on Form 10-Q filed with the Commission on November 10, 2022).
10.22#	Amendment dated February 16, 2024 to the Amended and Restated Employment Agreement dated as of April 1, 2022 by and between Celularity Inc. and Stephen Brigido (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed on February 22, 2024.
10.23#	Employment Agreement, as of April 1, 2022, by and between Celularity Inc. and John R. Haines (incorporated by reference to Exhibit 10.8 to the quarterly report on Form 10-Q filed with the Commission on November 10, 2022).
10.24#	Amendment dated February 16, 2024 to the Amended and Restated Employment Agreement dated as of April 1, 2022 by and between Celularity Inc. and John Haines (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed on February 22, 2024.

10.25	Lease Agreement, dated March 13, 2019, by and between LSREF4 Turtle, LLC and Celularity Inc (incorporated by reference to Exhibit 10.32 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.26	Second Amendment to the Lease Agreement originally entered on March 13, 2019, by and between Celularity Inc. and LPIT 170 Park Avenue, LLC, dated on September 14, 2023 (incorporated by reference to Exhibit 10.7 to the quarterly report on Form 10-Q, filed with the Commission on January 3, 2024).
10.27	Lease Amendment, dated September 14, 2023, by and between LSREF4 Turtle, LLC and Celularity Inc. (incorporated by reference to Exhibit 10.32 to the annual report on Form 10-K, filed with the Commission on July 30, 2024)
10.28¥	License Agreement, dated August 15, 2017, by and between Celgene Corporation and Anthrogenesis Corp. (incorporated by reference to Exhibit 10.23 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.29¥	Contingent Value Rights Agreement, dated August 15, 2017, by and between Celularity Inc. and the Holders named therein, as amended by Amendment No. 1 to the Contingent Value Rights Agreement, dated March 4, 2021 (incorporated by reference to Exhibit 10.25 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.30	Investors Rights Agreement, between Celularity Inc. and Dragasac Limited, dated as of January 12, 2024 (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K, filed on January 17, 2024).
10.31	Investor Rights Agreement dated as of January 12, 2024, between Celularity Inc. and Resorts World Inc Pte Ltd (incorporated by reference to Exhibit 10.8 to the current report on Form 8-K, filed on January 17, 2024).
10.32¥	Agreement and Plan of Merger, dated August 22, 2018, by and among Celularity Inc., CariCord Inc, CC Subsidiary, Inc. and Gregory L. Andrews, as amended by the First Amendment to the Agreement and Plan of Merger, dated September 30, 2018 and the Second Amendment to the Agreement and Plan of Merger, dated June 24, 2020 (incorporated by reference to Exhibit 10.28 to the registration statement on Form S-4 (File No. 333-252402), filed with the Commission on June 22, 2021).
10.33	Amendment No. 1 to certain warrants issued on May 20, 2022, dated as of April 4, 2023, by and between Celularity Inc. and the holder party thereto (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed with the Commission on April 7, 2023).
10.34	Amendment to certain warrants issued on May 20, 2022 and April 4, 2023, dated as of July 27, 2023, by and between Celularity Inc. and the holder party thereto (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed with the Commission on July 28, 2023).

10.35	Form of Starr Warrant issued on March 17, 2023 (incorporated by reference to Exhibit 10.5 to the current report on Form 8-K, filed with the Commission on March 23, 2023).
10.36	Form of Common Stock Purchase Warrant (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed with the Commission on April 7, 2023).
10.37	Form of RWI Warrant (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed with the Commission on June 21, 2023).
10.38	Form of Common Stock Purchase Warrant issued on July 31, 2023 (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed with the Commission on July 28, 2023).
10.39	Form of Additional Starr Warrant dated as of June 20, 2023, by and between Celularity Inc. and C.V. Starr & Co., Inc. (incorporated by reference to Exhibit 10.11 to the quarterly report on Form 10-Q, filed with the Commission on August 14, 2023).
10.40	Amended and Restated Warrant, between Celularity Inc. and Dragasac Limited, dated as of January 16, 2024 (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed on January 17, 2024).
10.41	Tranche 1 Warrant issued to RWI, dated as of January 16, 2024 (incorporated by reference to Exhibit 10.6 to the current report on Form 8-K, filed on January 17, 2024).
10.42	Tranche 2 Warrant issued to RWI, dated as of January 16, 2024 (incorporated by reference to Exhibit 10.7 to the current report on Form 8-K, filed on January 17, 2024).
10.43	Warrant issued to Resorts World Inc Pte Ltd, dated as of March 13, 2024 (incorporated by reference to Exhibit 10.6 to the current report on Form 8-K, filed on March 15, 2024).
10.44	At-the-Market Sales Agreement, dated September 8, 2022, by and among the Celularity Inc., BTIG, LLC, Oppenheimer & Co. Inc. and B. Riley Securities, Inc. (incorporated by reference to Exhibit 1.1 to the current report on Form 8-K, filed with the Commission on September 8, 2022).
10.45	Securities Purchase Agreement, dated March 20, 2023, among Celularity Inc. and the purchaser party thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on March 23, 2023).
10.46	Securities Purchase Agreement, dated as of April 4, 2023, by and between Celularity Inc. and the investors party thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on April 7, 2023).
10.47	Form of Securities Purchase Agreement, dated May 17, 2023, among Celularity Inc. and the purchaser party thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on May 19, 2023).
10.48	Securities Purchase Agreement dated as of July 27, 2023, by and between Celularity Inc. and the investors party thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on July 28, 2023).
10.49+	Securities Purchase Agreement, between Celularity Inc. and Dragasac Limited, dated as of January 12, 2024 (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed on January 17, 2024).
10.50	Secured Loan Agreement, dated as of March 17, 2023, among Celularity Inc. and the lender party thereto (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed with the Commission on March 23, 2023).
10.51	Secured Loan Agreement, dated as of May 16, 2023, among Celularity Inc. and the lender party thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on May 16, 2023).
10.52	Form of Amended and Restated Secured Loan Agreement, dated as of June 20, 2023, by and between Celularity Inc. and the lender party thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on June 21, 2023).
10.53¥	Loan Agreement, dated as of August 21, 2023, among Celularity Inc. and the lenders thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on August 25, 2023).

10.54	Second Amended and Restated Loan Agreement, among Celularity Inc., Celularity LLC and Resorts World Inc Pte Ltd dated as of January 12, 2024 (incorporated by reference to Exhibit 10.5 to the current report on Form 8-K, filed on January 17, 2024).
10.55	Supplemental Letter Agreement to Pre-Paid Advance dated as of September 15, 2022, by and between Celularity Inc. and YA II PN, Ltd. dated on September 18, 2023 (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on August 25, 2023).
10.56	Support Agreement, dated as of January 12, 2024 (incorporated by reference to Exhibit 10.9 to the current report on Form 8-K, filed on January 17, 2024).
10.57	Standby Equity Purchase Agreement, dated March 13, 2024, between Celularity, Inc. and YA II PN, Ltd. (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed on March 15, 2024).
10.58	Form of convertible promissory note (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed on March 15, 2024).
10.59	Forbearance Agreement, dated March 13, 2024, between Celularity Inc. and Resorts World Inc Pte Ltd. (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K, filed on March 15, 2024).
10.60	Forbearance Agreement, dated March 13, 2024, between Celularity Inc. and C.V. Starr & Co. Inc. (incorporated by reference to Exhibit 10.5 to the current report on Form 8-K, filed on March 15, 2024).
10.61	Form of PIPE Warrant (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K, filed with the Commission on May 20, 2022).
10.62	Pre-Paid Advance Agreement, dated September 15, 2022, by and between Celularity Inc. and YA II PN, Ltd. (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K, filed with the Commission on September 15, 2022).
10.63	Amendment dated August 16, 2024 to the Loan Agreement dated August 21, 2023 by and between Celularity Inc. and the lender parties thereto (incorporated by reference to Exhibit 10.22 to the quarterly report on Form 10-Q filed with the Commission on October 16, 2024)
10.64	Securities Purchase Agreement dated as of November 25, 2024, by and between Celularity Inc. and the investor parties thereto (incorporated by reference to Exhibit 10.1 to the current report on Form 8-K filed with the Commission on December 2, 2024)

10.65	Form of Unsecured Bridge Note (incorporated by reference to Exhibit 10.2 to the current report on Form 8-K filed with the Commission on December 2, 2024)
10.66	Form of Purchaser Warrant (incorporated by reference to Exhibit 10.3 to the current report on Form 8-K filed with the Commission on December 2, 2024)
10.67	Form of Placement Agent Warrant (incorporated by reference to Exhibit 10.4 to the current report on Form 8-K filed with the Commission on December 2, 2024)
16.1	Letter from Deloitte & Touche LLP dated August 5, 2024 (incorporated by reference to Exhibit 16.1 to the current report on Form 8-K filed with the Commission on August 5, 2024)
21.1	List of Subsidiaries (incorporated by reference to Exhibit 3.1 to the current report on Form 8-K, filed with the Commission on July 22, 2021).
23.1*	Consent of Deloitte & Touche LLP
23.2**	Consent of Sheppard, Mullin, Richter & Hampton, LLP (included in Exhibit 5.1).
24.1*	Power of Attorney (included on the signature page)
99.1	Order of the Chancery Court of the State of Delaware (incorporated by reference to Exhibit 99.1 to the annual report on Form 10-K, filed with the Commission on March 31, 2023)
107*	Filing Fee Table.

* Filed herewith.

** Filed by amendment.

# Indicates a management contract or any compensatory plan, contract or arrangement.

+ Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. We agree to furnish supplementally a copy of any omitted schedule or exhibit to the SEC upon request.

¥ Certain portions of this exhibit are omitted because they are not material and are the type that the registrant treats as private or confidential.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (i), (ii) and (iii) do not apply if the registration statement is on Form S-1 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser: each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use; and

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been

advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Florham Park, State of New Jersey, on the 30th day of January 2025.

CELULARITY INC.

By: */s/ Robert J. Hariri*
Robert J. Hariri, M.D., Ph.D.
Chief Executive Officer and Chairman of the Board of Directors *(Principal Executive Officer)*

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints each of Robert J. Hariri, M.D., Ph.D. and David C. Beers, his/her true and lawful attorney-in-fact, with full power of substitution and resubstitution for him/her and in his/her name, place and stead, in any and all capacities to sign any and all amendments to this prospectus, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact or his/her substitute, each acting alone, may lawfully do or cause to be done by virtue thereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Robert J. Hariri Robert J. Hariri, M.D., Ph.D.	Chief Executive Officer and Chairman of the Board of Directors *(Principal Executive Officer)*	January 30, 2025
/s/ David C. Beers David C. Beers	Chief Financial Officer (*Principal Accounting and Financial Officer*)	January 30, 2025
/s/ Dean C. Kehler Dean C. Kehler	Director	January 30, 2025
/s/ Diane Parks Diane Parks	Director	January 30, 2025
/s/ Geoffrey Ling Geoffrey Ling, M.D.	Director	January 30, 2025
/s/ Peter Diamandis Peter Diamandis, M.D.	Director	January 30, 2025
 Richard J. Berman	Director	January 30, 2025

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Registration Statement on Form S-1 of our report dated July 30, 2024, relating to the financial statements of Celularity, Inc. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ DELOITTE & TOUCHE LLP

Morristown, New Jersey
January 30, 2025

Exhibit 107

Calculation of Filing Fee Tables

FORM S-1
(Form Type)

CELULARITY INC.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Share	Maximum Aggregate Offering Price(1)(3)	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Class A Common Stock, $0.0001 par value (2)	457(o)			$ 17,250,000	$ 0.00015310	$ 2,640.98
Fees to Be Paid	Equity	Pre-Funded Warrants to Purchase Class A Common Stock (4)				-	-	(4)
Fees to Be Paid	Equity	Class A Common Stock Underlying Pre-Funded Warrants (4)				-	-	(4)
Fees to Be Paid	Equity	Representative's Warrants to Purchase Class A Common Stock				-	-	(5)
Fees to Be Paid	Equity	Class A Common Stock Underlying Representative's Warrants				$ 1,078,125(6)	$ 0.00015310	$ 165.06
		Total Offering Amounts						$ 2,806.04
		Total Fees Previously Paid						$ -
		Total Fee Offsets						$ -
		Net Fee Due						$ 2,806.04

(1) This registration statement also includes an indeterminate number of securities that may become offered, issuable or sold to prevent dilution resulting from stock splits, stock dividends and similar transactions, which are included pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act").

(2) Estimated solely for the purpose of computing the registration fee in accordance with Rule 457(o) under the Securities Act.

(3) Includes the offering price of additional shares that the underwriters have the option to purchase to cover over-allotments, if any.

(4) The proposed maximum aggregate offering price of the Class A common stock will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants issued in the offering, and the proposed maximum aggregate offering price of the pre-funded warrants to be issued in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any Class A common stock issued in the offering. Accordingly, the proposed maximum aggregate offering price of the Class A common stock and pre-funded warrants (including the Class A common stock issuable upon exercise of the pre-funded warrants), if any, is $17,250,000.

(5) No separate registration fee is payable pursuant to Rule 457(g) under the Securities Act.

(6) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(g) under the Securities Act. The warrants have an exercise price equal to 125% of the public offering price. As estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(g) under the Securities Act, the proposed maximum aggregate offering price of the shares underlying the Representative's Warrants is equal to $1,078,125 (which is equal to 5% of the proposed maximum aggregate offering price for the Class A common stock of $17,250,000 multiplied by 125%).