

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

FORM 10-Q

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2022

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 0-51891

INTERNATIONAL STEM CELL CORPORATION

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

5950 Priestly Drive
Carlsbad, CA
(Address of Principal Executive Offices)

20-4494098
(I.R.S. Employer
Identification No.)

92008
(Zip Code)

(760) 940-6383
(Registrant's telephone number)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
None	None	None

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark whether the registrant has submitted electronically, every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). YES ☒ NO ☐

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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ☐ NO ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

As of May 11, 2022, the Registrant had 8,004,389 shares of Common Stock outstanding.

International Stem Cell Corporation and Subsidiaries

Form 10-Q

Table of Contents

	<u>Page Numbers</u>
<u>PART I—FINANCIAL INFORMATION</u>	
Item 1.	<u>Condensed Consolidated Financial Statements (Unaudited)</u>
	<u>Condensed Consolidated Balance Sheets as of March 31, 2022 (Unaudited) and December 31, 2021</u>
	<u>Condensed Consolidated Statements of Operations for the three months ended March 31, 2022 and 2021 (Unaudited)</u>
	<u>Condensed Consolidated Statements of Changes in Redeemable Convertible Preferred Stock and Stockholders' Deficit for the three months ended March 31, 2022 and 2021 (Unaudited)</u>
	<u>Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2022 and 2021 (Unaudited)</u>
	<u>Notes to Condensed Consolidated Financial Statements</u>
Item 2.	<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>
Item 3.	<u>Quantitative and Qualitative Disclosures About Market Risk</u>
Item 4.	<u>Controls and Procedures</u>
<u>PART II—OTHER INFORMATION</u>	
Item 1.	<u>Legal Proceedings</u>
Item 1A.	<u>Risk Factors</u>
Item 2.	<u>Unregistered Sales of Equity Securities and Use of Proceeds</u>
Item 3.	<u>Defaults Upon Senior Securities</u>
Item 4.	<u>Mine Safety Disclosures</u>
Item 5.	<u>Other Information</u>
Item 6.	<u>Exhibits</u>
	<u>Signatures</u>

PART I – FINANCIAL INFORMATION

Item 1. Condensed Consolidated Financial Statements (Unaudited)

International Stem Cell Corporation and Subsidiaries
Condensed Consolidated Balance Sheets
(In thousands, except share and par value data)

	March 31, 2022 (unaudited)	December 31, 2021
Assets		
Current assets:		
Cash	\$ 398	\$ 171
Accounts receivable, net	902	844
Inventory, net	1,322	1,184
Prepaid expenses and other current assets	338	135
Total current assets	2,960	2,334
Non-current inventory, net	390	372
Property and equipment, net	348	384
Intangible assets, net	933	949
Operating right-of-use assets	835	868
Deposits and other assets	35	39
Total assets	<u>\$ 5,501</u>	<u>\$ 4,946</u>
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit		
Current liabilities:		
Accounts payable	\$ 635	\$ 508
Accrued liabilities	505	404
Operating lease liabilities, current	196	179
Advances	250	250
Related party note payable	3,225	2,943
Total current liabilities	4,811	4,284
Operating lease liabilities, net of current portion	896	950
Total liabilities	<u>5,707</u>	<u>5,234</u>
Commitments and contingencies (Note 8)		
Series D redeemable convertible preferred stock, \$0.001 par value; 50 shares authorized; 43 shares issued and outstanding; liquidation preference of \$4,300 at March 31, 2022 and December 31, 2021, respectively		
	4,300	4,300
Stockholders' deficit:		
Non-redeemable convertible preferred stock, \$0.001 par value; 10,004,310 shares authorized; 5,254,310 shares issued and outstanding; liquidation preference of \$9,770 and \$9,766 at March 31, 2022 and December 31, 2021, respectively		
	5	5
Common stock, \$0.001 par value; 120,000,000 shares authorized; 8,004,389 shares issued and outstanding at March 31, 2022 and December 31, 2021, respectively		
	8	8
Additional paid-in capital	105,504	105,413
Accumulated deficit	(110,023)	(110,014)
Total stockholders' deficit	(4,506)	(4,588)
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	<u>\$ 5,501</u>	<u>\$ 4,946</u>

See accompanying notes to the unaudited condensed consolidated financial statements.

International Stem Cell Corporation and Subsidiaries
Condensed Consolidated Statements of Operations
(In thousands, except per share data)
(Unaudited)

	Three Months Ended March 31,	
	2022	2021
Product sales, net	\$ 2,020	\$ 1,658
Operating expenses:		
Cost of sales	725	615
Research and development	137	215
Selling and marketing	301	347
General and administrative	832	1,048
Total operating expenses	1,995	2,225
Income (loss) from operations	25	(567)
Other expense:		
Interest expense - related party	(34)	(32)
Total other expense	(34)	(32)
Net loss	\$ (9)	\$ (599)
Net loss per common share, basic and diluted	\$ (0.00)	\$ (0.08)
Weighted-average common shares used to compute net loss per share, basic and diluted	8,004	7,539

See accompanying notes to the unaudited condensed consolidated financial statements.

International Stem Cell Corporation and Subsidiaries
Condensed Consolidated Statements of Changes in Redeemable Convertible
Preferred Stock and Stockholders' Deficit
(In thousands)
(Unaudited)

Three Months Ended March 31, 2022									
	Series D Redeemable Convertible Preferred Stock		Non-redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2021	—	\$ 4,300	5,254	\$ 5	8,004	\$ 8	\$ 105,413	\$ (110,014)	\$ (4,588)
Stock-based compensation	—	—	—	—	—	—	91	—	91
Net loss	—	—	—	—	—	—	—	(9)	(9)
Balance at March 31, 2022	—	\$ 4,300	5,254	\$ 5	8,004	\$ 8	\$ 105,504	\$ (110,023)	\$ (4,506)

Three Months Ended March 31, 2021									
	Series D Redeemable Convertible Preferred Stock		Non-redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance at December 31, 2020	—	\$ 4,300	5,255	\$ 5	7,539	\$ 8	\$ 104,769	\$ (109,115)	\$ (4,333)
Stock-based compensation	—	—	—	—	—	—	234	—	234
Net loss	—	—	—	—	—	—	—	(599)	(599)
Balance at March 31, 2021	—	\$ 4,300	5,255	\$ 5	7,539	\$ 8	\$ 105,003	\$ (109,714)	\$ (4,698)

See accompanying notes to the unaudited condensed consolidated financial statements.

International Stem Cell Corporation and Subsidiaries
Condensed Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2022	2021
Cash flows from operating activities		
Net loss	\$ (9)	\$ (599)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	56	66
Non-cash operating lease expense	33	69
Stock-based compensation	91	234
Interest expense on related party note payable	32	27
Changes in operating assets and liabilities:		
Accounts receivable, net	(58)	(34)
Inventory, net	(156)	(151)
Prepaid expenses and other current assets	(203)	(263)
Deposits and other assets	4	13
Accounts payable	125	152
Accrued liabilities	99	174
Operating lease liabilities	(37)	(82)
Net cash used in operating activities	(23)	(394)
Cash flows from investing activities		
Payments for patent licenses	—	(2)
Net cash used in investing activities	—	(2)
Cash flows from financing activities		
Proceeds from Paycheck Protection Program loans	—	474
Proceeds from related party note payable	250	350
Net cash provided by financing activities	250	824
Net increase in cash	227	428
Cash at beginning of period	171	689
Cash at end of period	<u>\$ 398</u>	<u>\$ 1,117</u>

See accompanying notes to the unaudited condensed consolidated financial statements.

International Stem Cell Corporation and Subsidiaries
Notes to Condensed Consolidated Financial Statements
(Unaudited)

1. Description of Business, Basis of Presentation and Summary of Significant Accounting Policies

Description of Business

International Stem Cell Corporation (the "Company") was organized in Delaware in June 2005 and is headquartered in San Diego, California. The Company is primarily a research and development company, for the therapeutic market, which has focused on advancing potential clinical applications of human parthenogenetic stem cells ("hpSCs") for the treatment of various diseases of the central nervous system and liver diseases. The Company has the following wholly-owned subsidiaries:

- Lifeline Cell Technology, LLC ("LCT") – for the biomedical market, develops, manufactures and commercializes primary human cell research products including over 200 human cell culture products, including frozen human "primary" cells and the reagents (called "media") needed to grow, maintain and differentiate the cells;
- Lifeline Skin Care, Inc. ("LSC") – for the anti-aging market, develops, manufactures and markets a category of anti-aging skin care products based on the Company's proprietary parthenogenetic stem cell technology and small molecule technology;
- Cyto Therapeutics Pty. Ltd. ("Cyto Therapeutics") – performs research and development ("R&D") for the therapeutic market and is currently conducting clinical trials in Australia for the use of ISC-hpNSC® in the treatment of Parkinson's disease.

COVID-19 Pandemic

The COVID-19 pandemic has caused business disruptions in the Company's operations globally. The Company's condensed consolidated financial statements reflect judgments and estimates that could change in the future as a result of the COVID-19 pandemic. Impacts to the Company's business have included temporary or reduced occupancy of portions of its manufacturing facilities, and disruptions or restrictions on employee's ability to travel to such manufacturing facilities, which caused minor delays in manufacturing. As of the date of this report, the Company expects the COVID-19 pandemic will continue to impact its business, financial condition, liquidity, and future results of operations. The full extent to which the COVID-19 pandemic will impact the Company remains uncertain and ultimately will be dictated by the length and severity of the pandemic, as well as the economic recovery and federal, state, and local government actions taken in response. The Company will continue to monitor the impact of COVID-19 on the Company's operations, workforce, suppliers, customers, and industry.

Basis of Presentation

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") and the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") applicable to interim financial statements. Certain information and note disclosures normally included in annual financial statements prepared in accordance with GAAP have been condensed or omitted pursuant to those rules and regulations. The unaudited interim condensed consolidated financial statements reflect all adjustments consisting of normal recurring adjustments which, in the opinion of management, are necessary for a fair statement of the Company's condensed consolidated financial statements. The operating results for the three months ended March 31, 2022 are not necessarily indicative of the results that may be expected for the full year ending December 31, 2022. The condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto for the year ended December 31, 2021 included in the Company's annual report on Form 10-K filed with the SEC on March 29, 2022.

Liquidity and Going Concern

The Company had an accumulated deficit of approximately \$110.0 million as of March 31, 2022 and has incurred net losses and negative operating cash flows annually, since inception. The Company has had no revenue from research and development of its therapeutic product candidates. Unless the Company obtains additional financing, the Company does not have sufficient cash on hand to sustain operations for at least twelve months from the issuance date of these condensed consolidated financial statements.

There can be no assurance that the Company will be successful in maintaining normal operating cash flow or obtaining additional funding. These circumstances raise substantial doubt about the Company's ability to continue as a going concern. For the foreseeable future, the Company's ability to continue its operations is dependent upon its ability to obtain additional financing. The accompanying condensed consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability

and classification of assets or the amounts and classifications of liabilities that may result from the outcome of the uncertainty concerning the Company's ability to continue as a going concern.

The Company continues to evaluate various financing sources and options to raise working capital to help fund current research and development programs and operations. The Company plans to obtain significant additional funding from sources, including through debt and equity financing, license arrangements, grants and/or collaborative research arrangements to sustain its operations and develop products.

The timing and degree of any future capital requirements will depend on several factors, including:

- the accuracy of the assumptions underlying the estimates for capital needs;
- the extent that revenues from sales of LSC and LCT products cover the related costs and provide capital;
- scientific progress in research and development programs;
- the magnitude and scope of the Company's research and development programs and its ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing;
- the progress with preclinical development and clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;
- the number and type of product candidates that the Company decides to pursue;
- demand from the Company's largest original equipment manufacturer customers; and
- the development of major public health concerns, including COVID-19 or other pandemics arising globally, and the current and future impact that such concerns may have on the Company's operations and funding requirements.

Additional debt financing may be expensive and require the Company to pledge all or a substantial portion of its assets. If additional funds are obtained through arrangements with collaborative partners, these arrangements may require the Company to relinquish the rights to some of its technologies, product candidates or products that the Company would otherwise seek to develop and commercialize on its own. Furthermore, if sufficient capital is not available, the Company may be required to delay, reduce the scope of, or eliminate one or more of its product initiatives. The Company's failure to raise capital or enter into related arrangements when needed would have a negative impact on its financial condition.

Principles of Consolidation and Foreign Currency Transactions

The condensed consolidated financial statements include the accounts of International Stem Cell Corporation and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation. The functional currency of the Company and its wholly owned subsidiaries is the U.S. dollar. Monetary assets and liabilities that are not denominated in the functional currency are remeasured each reporting period into U.S. dollars at foreign currency exchange rates in effect at the respective balance sheet date. Non-monetary assets and liabilities and equity are remeasured at the historical exchange rates. Revenue and expenses are translated at the average rate in effect on the date of the transaction. Net realized and unrealized gains and losses from foreign currency transactions and remeasurement are reported in general and administrative expense in the accompanying condensed consolidated statements of operations and were not material for the periods presented.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. Significant estimates include patent life (remaining legal life versus remaining useful life), inventory carrying values, and the fair value of stock option grants using the Black-Scholes option valuation model. By their nature, estimates are subject to an inherent degree of uncertainty and actual results could differ from these estimates.

Segments

The Company's chief operating decision-maker reviews financial information presented on a consolidated basis, accompanied by disaggregated information for each reportable company's statement of operations. The Company operates the business on the basis of three reporting segments: ISCO – therapeutic market; LCT – biomedical market, and; LSC – anti-aging market.

Inventory, net

Inventory is accounted for using the average cost and first-in, first-out ("FIFO") methods for LCT cell culture media and reagents, average cost and specific identification methods for LSC products, and specific identification method for other LCT products. Inventory balances are stated at the lower of cost or net realizable value. Laboratory supplies used in the research and development process are expensed as consumed. LCT's inventory has a long product life cycle, does not have a shelf life when frozen, and future demand is uncertain. At each reporting period, the Company estimates its reserve allowance for excess and obsolete inventory using historical sales data and inventory turnover rates. The establishment of a reserve for excess and obsolete inventory establishes a new cost basis in inventory. If the Company is able to sell previously reserved inventory, the related reserves and inventory balances would be reduced in the period of sale. The value of the inventory that is not expected to be sold within twelve months of the current reporting period is classified as non-current inventory on the accompanying condensed consolidated balance sheets.

Accounts Receivable, net

Trade accounts receivable are recorded at the invoice value, net of discounts, and are not interest bearing. Accounts receivable primarily consist of trade accounts receivable from the sales of LCT's products as well as LSC trade receivable amounts related to spa and distributor sales. The Company considers receivables past due based on the contractual payment terms. The Company reviews its exposure to accounts receivable and reserves specific amounts if collectability is no longer reasonably assured. The Company recorded an immaterial amount pertaining to the allowance for doubtful accounts as of March 31, 2022 and December 31, 2021.

Intangible Assets

Intangible assets consist of acquired patent licenses and capitalized legal fees related to the acquisition, filing, maintenance, and defense of patents and trademarks. Amortization begins once the patent is issued by the appropriate authoritative bodies. In the period in which a patent application is rejected or efforts to pursue the patent are abandoned, all the related accumulated capitalized costs are expensed. Patents and other intangible assets are amortized on a straight-line basis over the useful life of the underlying patent, which is generally 15 years. All amortization expense related to intangible assets is included in general and administrative expense in the accompanying condensed consolidated statements of operations.

Long-Lived Asset Impairment

The Company reviews long-lived assets for impairment when events or changes in circumstances ("triggering event") indicate that the carrying value of an asset or group of assets may not be recovered. If a triggering event is determined to have occurred, the carrying value of an asset or group of assets is compared to the future undiscounted cash flows expected to be generated by the asset or group of assets. If the carrying value exceeds the undiscounted cash flows of the asset or group of assets, then impairment exists. Fair value is generally determined using the asset's expected future discounted cash flows or market value, if readily determinable.

Revenue Recognition

The Company's revenue consists primarily of sales of products from its two revenue-generating operating segments, the biomedical market (LCT) and anti-aging market (LSC). The biomedical market sells primary human cell research products with two product categories, cells and media, which are sold both domestically and internationally. The biomedical market also offers performance of quality control (QC) testing services. No revenue from services was earned during the three months ended March 31, 2022 and 2021. Prior to January 1, 2022, the anti-aging market sold a line of skincare products through two sales channels: ecommerce and professional. The ecommerce channel sold directly to customers through online orders, while professional sales were primarily to spas, salons, and other skincare providers. As of January 1, 2022, the anti-aging market sells products solely through the ecommerce channel. As such, there was no revenue earned pertaining to professional channel skin care during the three months ended March 31, 2022.

The following table presents the Company's revenue disaggregated by segment, product, and geography (in thousands):

Biomedical market:

	Three Months Ended March 31, 2022			
	Domestic	International	Total Revenues	% of Total Revenues
Biomedical products				
Cells	\$ 337	\$ 109	\$ 446	25%
Media	1,213	112	1,325	75%
Total	\$ 1,550	\$ 221	\$ 1,771	100%

	Three Months Ended March 31, 2021			
	Domestic	International	Total Revenues	% of Total Revenues
Biomedical products				
Cells	\$ 165	\$ 158	\$ 323	23%
Media	973	131	1,104	77%
Total	\$ 1,138	\$ 289	\$ 1,427	100%

Anti-aging market:

	Three Months Ended March 31,			
	2022		2021	
	Total Revenues	% of Total Revenues	Total Revenues	% of Total Revenues
Skin care sales channels				
Ecommerce	\$ 249	100%	\$ 166	72%
Professional	—	—%	65	28%
Total	\$ 249	100%	\$ 231	100%

Contract terms for unit price, quantity, shipping and payment are governed by sales agreements, invoices or online order forms which the Company considers to be a customer's contract in all cases. The unit price is considered the observable stand-alone selling price for the performance obligation(s) within the arrangements. Any promotional or volume sales discounts are applied evenly to the units sold for purposes of calculating standalone selling price.

The Company recognizes revenue when its customer obtains control of the promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. Product sales generally consist of a single performance obligation that the Company satisfies at a point in time (i.e., upon delivery of the product).

For LSC products, ecommerce sales are primarily paid through credit card charges. The anti-aging and biomedical products' standard payment terms for its customers are generally 30 days after the Company satisfies the performance obligation(s).

The Company elects to account for shipping and handling costs as activities to fulfill the promise to transfer the goods to a customer. As a result, no consideration is allocated to shipping and handling costs. Rather, the Company accrues the cost of shipping and handling upon shipment of the product, and all contract revenue (i.e., the transaction price) is recognized at the same time.

Variable Consideration

The Company records revenue from customers in an amount that reflects the consideration it expects to be entitled to after transferring control of those goods or services to a customer. From time to time, the Company offers sales promotions on its products such as discounts and free product offers. Variable consideration is estimated at contract inception only to the extent that it is probable that a significant reversal of revenue will not occur and is updated at the end of each reporting period as additional information becomes available.

Contract Balances

The Company records a receivable when it has an unconditional right to receive consideration after a performance obligation is satisfied. As of March 31, 2022 and December 31, 2021, accounts receivable, net, totaled \$902 thousand and \$844 thousand, respectively. During the three months ended March 31, 2022 and 2021, the Company did not incur material write-offs of its accounts receivable.

Practical Expedients

The Company has elected the practical expedient to not determine whether contracts with customers contain significant financing components. The Company pays commissions on certain sales for its biomedical and anti-aging product markets once the customer payment has been received, which are accrued at the time of the sale. The Company generally expenses sales commissions when incurred because the amortization period would be one year or less. These costs are recorded within sales and marketing expenses. In addition, the Company has elected to exclude sales taxes consideration from the determined transaction price.

Cost of Sales

Cost of sales consists primarily of salaries and benefits associated with employee efforts expended directly on the production of the Company's products, as well as related direct materials, general laboratory supplies and an allocation of overhead.

Research and Development Costs

Research and development costs, which are expensed as incurred, primarily consist of salaries and benefits associated with research and development personnel, overhead and occupancy costs, contract services costs and amortization of license costs for technology used in research and development with alternative future uses, offset by the research and development tax credit provided by the Australian Taxation Office for qualified expenditures. No tax credits were provided during the three months ended March 31, 2022 and 2021.

Stock-Based Compensation

The cost of a stock-based award is measured at the grant date based on the estimated fair value of the award. Stock-based compensation is recognized as expense on a straight-line basis, net of forfeitures, which are recognized as incurred, over the requisite service period of the award. The fair value of stock options is estimated using the Black-Scholes option valuation model, which requires the input of subjective assumptions, including price volatility of the underlying stock, risk-free interest rate, dividend yield, and expected life of the option.

Fair Value Measurements

Fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets.

Level 2: Inputs, other than the quoted prices in active markets that are observable either directly or indirectly.

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The Company believes that the carrying value of its cash, accounts receivables, accounts payable, accrued liabilities and related party note payable as of March 31, 2022 and December 31, 2021 approximate their fair values because of the short-term nature of those instruments. As of March 31, 2022 and December 31, 2021, the Company had no financial assets or liabilities measured at fair value on a recurring basis.

Income Taxes

The Company accounts for income taxes in accordance with applicable authoritative guidance, which requires the Company to provide a net deferred tax asset/liability equal to the expected future tax benefit/expense of temporary reporting differences between book and tax accounting methods and any available operating loss or tax credit carryforwards.

Net Loss Per Share

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period. Diluted net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common stock equivalents outstanding for the period determined using the treasury-stock and if-converted methods. Potentially dilutive common stock equivalents are comprised of stock options and convertible preferred stock. For the three months ended March 31, 2022 and 2021, there was no difference in the number of shares used to calculate basic and diluted shares outstanding.

For the three months ended March 31, 2022 and 2021, the following common stock options and convertible preferred stock were not included in the diluted net loss per share calculation because the effect would be anti-dilutive:

	Three Months Ended March 31,	
	2022	2021
Options outstanding	5,372,535	4,176,999
Redeemable convertible preferred stock	2,457,143	2,457,143
Non-redeemable convertible preferred stock	3,619,379	3,675,135
Total	11,449,057	10,309,277

Customer Concentrations

During the three months ended March 31, 2022 and 2021, one customer accounted for approximately 45% and 40%, respectively, of consolidated revenues. As of March 31, 2022 and December 31, 2021, the customer accounted for approximately 51% and 62%, respectively, of accounts receivable, net. No other single customer accounted for more than 10% of revenues for the periods then ended for any segment.

Recently Issued Accounting Pronouncements

In June 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-13, Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). The ASU introduced a new credit loss methodology, the Current Expected Credit Losses ("CECL") methodology, which requires earlier recognition of credit losses, while also providing additional transparency about credit risk. The CECL methodology utilizes a lifetime "expected credit loss" measurement objective for the recognition of credit losses for loans, held-to maturity debt securities, trade receivables and other receivables measured at amortized cost at the time the financial asset is originated or acquired. Subsequent to the issuance of ASU 2016-13, the FASB issued several additional ASUs to clarify implementation guidance, provide narrow-scope improvements and provide additional disclosure guidance. In November 2019, the FASB issued an amendment making this ASU effective for fiscal years beginning after December 15, 2022 for smaller reporting companies. The new standard will be effective for the Company on January 1, 2023 or at such earlier time where it is no longer a smaller reporting company. The Company is currently evaluating the potential impact that this standard may have on its consolidated financial statements and related disclosures.

In August 2020, the FASB issued ASU No. 2020-06, Debt – Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging – Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU 2020-06"). ASU 2020-06 simplifies the accounting for convertible debt instruments by reducing the number of accounting models and the number of embedded features that could be recognized separately from the host contract. Consequently, more convertible debt instruments will be accounted for as a single liability measured at its amortized cost, as long as no other features require bifurcation and recognition as derivatives. ASU 2020-06 also requires use of the if-converted method in the diluted earnings per share calculation for convertible instruments. ASU 2020-06 is effective for fiscal years beginning after December 15, 2023, and interim periods within those fiscal years for smaller reporting companies, with early adoption permitted. The new standard will be effective for the Company on January 1, 2024 or at such earlier time where it is no longer a smaller reporting company. The Company is currently evaluating the potential impact that this standard may have on its consolidated financial statements and related disclosures.

Recently Adopted Accounting Pronouncements

In May 2021, the FASB issued ASU No. 2021-04, Earnings Per Share (Topic 260), Debt-Modifications and Extinguishments (Subtopic 470-50), Compensation – Stock Compensation (Topic 718), and Derivatives and Hedging – Contracts in Entity’s Own Equity (Subtopic 815-40) Issuer’s Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options (a consensus of the FASB Emerging Issues Task Force) ("ASU 2021-04"), which clarifies and reduces the diversity in an issuer’s accounting for modifications or exchanges of freestanding equity-classified written call options that remain equity classified after modification or exchange. ASU 2021-04 is effective for fiscal years beginning after December 15, 2021 and interim periods within those fiscal years, with early adoption permitted. The Company adopted ASU 2021-04 on January 1, 2022. The adoption of this standard did not have a material impact on the Company's condensed consolidated financial statements.

In November 2021, the FASB issued ASU No. 2021-10, Government Assistance (Topic 832): Disclosure by Business Entities about Government Assistance ("ASU 2021-10"), which improves the transparency of government assistance received by certain business entities by requiring the disclosure of (1) the types of government assistance received; (2) the accounting for such assistance, and (3) the effect of the assistance on the business entity’s financial statements. ASU 2021-10 is effective for fiscal years beginning after December 15, 2021, with early adoption permitted. The Company adopted ASU 2021-10 on January 1, 2022. The adoption of this standard did not have a material impact on the Company’s condensed consolidated financial statements.

2. Inventory

The components of inventory are as follows (in thousands):

	March 31, 2022	December 31, 2021
Raw materials	\$ 645	\$ 592
Work in process	603	507
Finished goods	1,051	983
	2,299	2,082
Less: allowance for excess and obsolete inventory	(587)	(526)
Total current and non-current inventory, net	\$ 1,712	\$ 1,556
Inventory, net	\$ 1,322	\$ 1,184
Non-current inventory, net	390	372
Total current and non-current inventory, net	\$ 1,712	\$ 1,556

3. Property and Equipment

Property and equipment consist of the following (in thousands):

	March 31, 2022	December 31, 2021
Machinery and equipment	\$ 1,603	\$ 1,610
Computer equipment and software	243	243
Office equipment	104	104
Leasehold improvements	558	549
Construction in progress	—	1
	2,508	2,507
Less: accumulated depreciation and amortization	(2,160)	(2,123)
Property and equipment, net	\$ 348	\$ 384

Depreciation and amortization expense for the three months ended March 31, 2022 and 2021 was \$37 thousand and \$42 thousand, respectively.

4. Intangible Assets

Intangible Assets consists of the following (in thousands):

	March 31, 2022	December 31, 2021
Patents	\$ 1,280	\$ 1,277
Less: accumulated amortization	(422)	(403)
	858	874
Indefinite life logos and trademarks	75	75
Intangible assets, net	\$ 933	\$ 949

Amortization expense for the three months ended March 31, 2022 and 2021 was \$19 thousand and \$24 thousand, respectively.

5. Paycheck Protection Program Loan

In May 2020, the Company received a loan of \$654 thousand from its lender under the Paycheck Protection Program ("First Draw Loan"). The Paycheck Protection Program ("PPP"), as amended, was established under the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and is administered by the U.S. Small Business Administration ("SBA"). The First Draw Loan has a two-year term and bears interest at a rate of 1% per annum. As required by the CARES Act, the Company used the proceeds from the PPP Loan for payroll, healthcare benefits, rent and other qualifying expenses.

In March 2021, the Company received a loan of \$474 thousand from its lender under the PPP ("Second Draw Loan"). The Second Draw Loan has a five-year term and bears interest at a rate of 1% per annum. The Second Draw Loan was used to help fund payroll, healthcare benefits, rent, worker protection costs related to COVID-19, certain supplier costs and other qualifying expenses.

The First and Second Draw Loan, including the unpaid principal and accrued interest, were forgiven prior to December 31, 2021. There is no balance outstanding at March 31, 2022 and December 31, 2021.

6. Convertible Preferred Stock and Stockholders' Deficit

Convertible Preferred Stock

As of March 31, 2022 and December 31, 2021, the Company was authorized to issue 20,000,000 shares of preferred stock, \$0.001 par value per share. The Company designated 50 shares of Series D redeemable convertible preferred stock and 10,004,310 shares of Series B, Series G, and Series I-2 non-redeemable convertible preferred stock.

Non-Redeemable Convertible Preferred Stock

The Company's Series B, Series G, and Series I-2 non-redeemable convertible preferred stock has been classified as equity on the accompanying condensed consolidated balance sheets.

The authorized, issued, and outstanding shares of non-redeemable convertible preferred stock as of March 31, 2022 consist of the following:

	Shares Authorized	Shares Issued and Outstanding	Liquidation Preference	Carrying Value
			(in thousands)	
Series B	5,000,000	250,000	\$ 460	\$ —
Series G	5,000,000	5,000,000	5,000	5
Series I-2	4,310	4,310	4,310	—
Total	10,004,310	5,254,310	\$ 9,770	\$ 5

The authorized, issued and outstanding shares of non-redeemable convertible preferred stock as of December 31, 2021 consisted of the following:

	Shares Authorized	Shares Issued and Outstanding	Liquidation Preference	Carrying Value
			(in thousands)	
Series B	5,000,000	250,000	\$ 456	\$ —
Series G	5,000,000	5,000,000	5,000	5
Series I-2	4,310	4,310	4,310	—
Total	10,004,310	5,254,310	\$ 9,766	\$ 5

Series D Preferred Stock Redemption

The Company's Series D redeemable convertible preferred stock contains a contingent redemption feature that is not solely within the Company's control. Accordingly, the Series D redeemable convertible preferred stock is classified in temporary equity (outside of permanent equity) on the accompanying consolidated balance sheets.

Dividends

Holders of the Company's convertible preferred stock are entitled to participating dividends with common stock when and if declared by the Company's board of directors. No dividends have been declared as of March 31, 2022 and December 31, 2021.

Liquidation

Liquidation preference among classes of preferred shares is first with Series D with priority followed by Series G, Series B and Series I-2 on the proceeds from any sale or liquidation of the Company in an amount equal to the purchase price of shares plus (in the case of the Series B) an amount equal to 1% of the Series B original issue price for every two calendar months from February 1, 2008. Following the satisfaction of the liquidation preferences, all shares of common stock participate in any remaining distribution.

Conversion

The shares of convertible preferred stock are convertible into one share of common stock at any time, at the option of the holder. The conversion rates of the Series B, Series D, and Series I-2 are subject to anti-dilution adjustments whereby, subject to specified exceptions, if the Company issues equity securities or securities convertible into equity at a price below the applicable conversion price of the Series B, Series D, and Series I-2, the conversion price of each such series shall be adjusted downward to equal the price of the new securities. The conversion rate of the Series G is subject to a weighted-average adjustment in the event of the issuance of additional shares of common stock below the conversion price, subject to specified exceptions. The conversion price of the Series I-2 are also subject to certain resets as set forth in the Certificates of Designation, including a reverse stock split.

The following table summarizes the number of shares of common stock into which each share of convertible preferred stock can be converted as of March 31, 2022:

	Initial Conversion Price	Current Conversion Price	Conversion Ratio to Common Stock	Common Stock equivalent
Series B	\$ 75.00	\$ 0.39	2.5641030	641,026
Series D	\$ 37.50	\$ 1.75	57,142.8571	2,457,143
Series G	\$ 60.00	\$ 9.70	0.103099	515,495
Series I-2	\$ 1.75	\$ 1.75	571.428571	2,462,858

Common Stock

As of March 31, 2022 and December 31, 2021, the Company was authorized to issue 120,000,000 shares of common stock, \$0.001 par value per share.

Equity Incentive Plans

The Company adopted the 2006 Equity Participation Plan (as amended the "2006 Plan"), which provides for the grant of stock options, restricted stock and other equity-based awards. Awards for up to 100,000 shares may be granted to employees, directors and consultants under this Plan. The options granted under the 2006 Plan may be either qualified or non-qualified options. Options may be granted with different vesting terms and expire no later than 10 years from the date of grant. The 2006 Plan expired on November 16, 2016. Options and other equity-based awards granted prior to the expiration of the 2006 Plan will continue in effect until the option or award is exercised or terminates pursuant to its terms. No new awards may be granted under the 2006 Plan following its expiration.

In April 2010, the Company adopted the 2010 Equity Participation Plan, as amended (the "2010 Plan"), which provides for the grant of stock options, restricted stock and other equity-based awards. Awards for up to 9,700,000 shares may be granted to employees, directors and consultants under the 2010 Plan. The options granted under the 2010 Plan may be either qualified or non-qualified options. Options may be granted with different vesting terms and expire no later than 10 years from the date of grant. In June 2020, the Company amended the 2010 Plan to extend the term of the 2010 Plan until March 2030. No other material provisions were amended.

Stock Options

Transactions involving stock options issued to employees, directors and consultants under the 2006 Plan and the 2010 Plan are summarized below. Options issued have a maximum life of 10 years. The following tables summarize the changes in options outstanding and the related exercise prices for the Company's common stock options issued:

	Number of Outstanding Options	Weighted- Average Exercise	Weighted- Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2021	5,373,203	\$ 1.42	—	\$ 146
Expired	(668)	\$ 73.50	—	\$ —
Outstanding at March 31, 2022	5,372,535	\$ 1.41	7.06	\$ 159
Vested and expected to vest at March 31, 2022	5,225,939	\$ 1.44	7.00	\$ 145
Exercisable at March 31, 2022	4,219,545	\$ 1.69	6.48	\$ 55

The fair value of stock options granted is estimated at the date of grant using the Black-Scholes option valuation model. For the three months ended March 31, 2022 and 2021, no stock options were granted.

Total stock-based compensation expense recorded in the condensed statements of operations is as follows (in thousands):

	Three Months Ended March 31,	
	2022	2021
Cost of sales	\$ 2	\$ 8
Research and development	6	23
Selling and marketing	3	17
General and administrative	80	186
Total	\$ 91	\$ 234

Unrecognized compensation expense related to stock options as of March 31, 2022 was \$249 thousand, which is expected to be recognized over a weighted-average period of 2.03 years.

Common Stock Reserved for Future Issuance

As of March 31, 2022, the Company had shares of common stock reserved for future issuance as follows:

Options outstanding	5,372,535
Common stock available for issuance under the 2010 Plan	4,161,857
Redeemable convertible preferred stock	2,457,143
Non-redeemable convertible preferred stock	3,619,379
Total	<u>15,610,914</u>

7. Related Party Transactions

Related party lease arrangements

On October 26, 2021, the Company and S Real Estate Holdings, LLC, a related party, entered jointly into a lease agreement with Rehco Holdings, LLC (the "Lease"), for the purpose of establishing a new corporate headquarters, including corporate, R&D, and manufacturing operations. The lease commenced on November 1, 2021 and expires on December 31, 2026 with no options to extend or renew. The lease was personally guaranteed by Dr. Russell Kern, the Company's Executive Vice President and Chief Scientific Officer.

On December 15, 2021, the Company and S Real Estate Holdings LLC entered into a co-tenant agreement, whereby the Company and S Real Estate Holdings LLC agreed to allocate portions of the base rent and variable charges, including insurance, maintenance costs, taxes and operating expenses, between the parties. During the term of the Lease, the Company will be liable for 40% of all costs incurred in connection with the lease, while S Real Estate Holdings LLC will be liable for the remaining 60%.

Related party note payable

As of December 31, 2021, the Company had an unsecured, non-convertible promissory note, with a principal outstanding amount of \$2.650 million (the "Note") and accrued interest of approximately \$300 thousand with Dr. Andrey Semechkin, the Company's Chief Executive Officer and Co-Chairman of the Board of Directors. The outstanding principal amount under the Note accrued interest at a rate of 4.5% per annum. The outstanding principal and accrued interest on the Note was due and payable on January 15, 2022 and could be pre-paid without penalty at any time.

On January 13, 2022, to obtain funding for working capital purposes, the Company issued an unsecured, non-convertible promissory note in the principal amount of \$2.9 million (the "Modified Note") to Dr. Semechkin. In exchange, Dr. Semechkin surrendered the Note and provided an additional \$250 thousand to the Company. The Modified Note, including outstanding amounts of principal and accrued interest, was due and payable on March 15, 2022, but may be pre-paid by the Company without penalty at any time.

On March 1, 2022, the Company and Dr. Andrey Semechkin restructured the Modified Note and agreed to extend the maturity date for an additional six-month period to September 15, 2022. No other terms of the Modified Note were modified. The amendments qualify as a troubled debt restructure which did not result in a gain as the carrying amount of the debt was less than the total future cash payments of the restructured debt.

8. Commitments and Contingencies

Leases

The Company has three operating leases for real estate in California and Maryland:

- San Diego, California – corporate headquarters, including corporate, R&D, and manufacturing operations, with a term date of December 2026, jointly leased with a related party (refer to Note 7 – Related Party Transactions, for further information) ("headquarter lease"). This lease contains no renewal or term extension options;
- San Diego, California – supplemental office space adjacent to the Company's corporate headquarters with a term date of December 2026. This lease contains no renewal or term extension options; and
- Frederick, Maryland – mixed laboratory and administrative space with a term date of December 2025. The lease contains one renewal option for an additional three-year term through November 2028. The Company is reasonably certain it will not exercise this renewal option.

The headquarter lease commenced on November 1, 2021 and expires on December 31, 2026. At commencement, base rent due under the lease was approximately \$11 thousand and increases approximately 3.5% per annum over the lease term. The lease is subject to additional variable charges, including insurance, maintenance costs, taxes and operating expenses. Base rent and additional variable charges are shared between the Company and S Real Estate Holdings LLC, a related party, pursuant to a co-tenant agreement between the parties (refer to Note 7 – Related Party Transactions, for further information). In addition, base rent for months two through five of the lease term were abated by 50%.

In November 2021, the Company entered into an operating lease for supplemental office space adjacent to its new corporate headquarters with the same landlord. The lease commenced on December 1, 2021 and expires on December 31, 2026 and is not subject to the co-tenant agreement with S Real Estate Holdings, LLC. At commencement, base rent due under the supplemental office lease was approximately \$4 thousand per month and increases at a fixed amount per annum over the lease term.

The Company's operating leases for real estate are subject to additional variable charges for common area maintenance and other variable costs. All operating lease expense is recognized on a straight-line basis over the lease term. For the three months ended March 31, 2022 and 2021, lease expense totaled \$73 thousand and \$118 thousand, respectively. As of March 31, 2022 and December 31, 2021, the Company had no finance leases.

Maturities of lease liabilities are as follows (in thousands):

Years ending December 31,		
2022 (remaining nine months)	\$	242
2023		338
2024		349
2025		360
2026		119
Total minimum lease payments		1,408
Less: imputed interest		(316)
Total future minimum lease payments		1,092
Less: operating lease liabilities, current		(196)
Operating lease liabilities, net of current portion	\$	896

Licensed patents

The Company has a minimum annual license fee of \$75 thousand payable in two installments per year to Astellas Pharma pursuant to the amended UMass IP license agreement. The license agreement with Astellas Pharma may be terminated by the Company at any time with a 30-day notice. We do not anticipate any short-term liquidity effect from this obligation.

9. Segments

The Company operates the business on the basis of three reporting segments, the parent company and two business units: ISCO – therapeutic market; LCT – biomedical market; LSC – anti-aging market.

The Company does not measure the performance of its segments on any asset-based metrics. Therefore, segment information is presented only for operating income (loss). Revenues, expenses and operating income (loss) for the three months ended March 31, 2022 and 2021 by market segment were as follows (in thousands):

	Three Months Ended March 31,	
	2022	2021
Product sales, net:		
Biomedical market	\$ 1,771	\$ 1,427
Anti-aging market	249	231
Total product sales, net	2,020	1,658
Operating expenses:		
Therapeutic market	624	813
Biomedical market	999	1,083
Anti-aging market	372	329
Total operating expenses	1,995	2,225
Income (loss) from operations		
Therapeutic market	(624)	(813)
Biomedical market	772	344
Anti-aging market	(123)	(98)
Total income (loss) from operations	\$ 25	\$ (567)

10. Subsequent Events

On April 25, 2022, the Company granted Dr. Andrey Semechkin, Chief Executive Officer and Co-Chairman of the Board of Directors, and Dr. Russell Kern, Executive Vice President and Chief Scientific Officer and a director, options to purchase 1,000,000 shares of common stock each with a grant date fair value of \$0.445 per share. The total value of the awards is \$890 thousand. The options have a term of 10 years and are subject to a 36-month vesting term.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and related notes and other financial information included elsewhere herein. This information should also be read in conjunction with our audited historical consolidated financial statements which are included in our Form 10-K for the fiscal year ended December 31, 2021 ("Form 10-K"). The discussion contains forward-looking statements, such as our plans, expectations and intentions (including those related to clinical trials and business and expense trends), that are based upon current expectations and that involve risks and uncertainties. Our actual results may differ significantly from management's expectations. The factors that could affect these forward-looking statements are discussed in the Risk Factors included in our Form 10-K. This discussion should not be construed to imply that the results discussed herein will necessarily continue into the future, or that any expectations expressed herein will necessarily be indicative of actual operating results in the future. Such discussion represents only the best assessment by our management.

Business Overview

We are a clinical stage biotechnology company devoted to discovering and developing innovative therapies using human parthenogenetic stem cells to treat severe diseases of the central nervous system, joints and liver. Our lead product candidate, ISC-hpNSC is designed to treat Parkinson's Disease, traumatic brain injury and ischemic stroke. ISC-hpNSC-based therapy is in phase I clinical trials for Parkinson's disease, while therapies for traumatic brain injury and ischemic stroke are in preclinical stages. We have additional product candidates in development for osteoarthritis and metabolic liver diseases. We currently intend to commercialize our products directly or through collaborations. None of our product candidates have been approved for sale in the United States or elsewhere.

Our products are based on multi-decade experience with human cell culture and a proprietary type of pluripotent stem cells, human parthenogenetic stem cells ("hpSCs"). Our hpSCs are comparable to human embryonic stem cells ("hESCs") in that they have the potential to be differentiated into many different cells in the human body. However, the derivation of hpSCs does not require the use of fertilized eggs or the destruction of viable human embryos and also offers the potential for the creation of immune-matched cells and tissues that are less likely to be rejected following transplantation. Our collection of hpSCs, known as UniStemCell™, currently consists of 15 stem cell lines. We have facilities and manufacturing protocols that comply with the requirements of Good Manufacturing Practice (GMP) standards as promulgated by the U.S. Code of Federal Regulations and enforced by the United States Food and Drug Administration ("FDA").

We have generated aggregate product sales revenues from our Biomedical and Anti-aging commercial businesses of \$2.0 million and \$1.7 million for the three months ended March 31, 2022 and 2021, respectively. We currently have no revenue generated from our principal operations in the therapeutic market and we do not expect to generate any revenue in this market unless and until we successfully complete clinical product development and obtain regulatory approval for our product candidates.

COVID-19 Pandemic

The impact of the COVID-19 pandemic has been and will likely continue to be extensive in many aspects of society, which has resulted in and will likely continue to result in significant disruptions to the global economy, as well as businesses and capital markets around the world. Impacts to our business have included reduced occupancy of portions of our manufacturing facilities, and disruptions or restrictions on our employee's ability to travel to such manufacturing facilities which caused minor delays in manufacturing. Our manufacturing facilities continue to operate as they are deemed essential suppliers in accordance with laws applicable to California and Maryland. We have taken precautionary measures to better ensure the health and safety of our workers, including staggering employees' shifts and isolating at-risk employees.

The scope and duration of these delays and disruptions, and the ultimate impacts of COVID-19 on our operations, are currently unknown. We are continuing to actively monitor the situation and may take further precautionary and preemptive actions as may be required by federal, state or local authorities or that we determine are in the best interests of public health and safety. We cannot predict the effects that such actions, or the impact of COVID-19 on global business operations and economic conditions, may continue to have on our business, strategy, collaborations, or financial and operating results.

Market Opportunity and Growth Strategy

Therapeutic Market – Clinical Applications of hpSCs for Disease Treatments

With respect to therapeutic research and product candidates, we focus on applications where cell and tissue therapy is already proven but where there is an insufficient supply of safe and functional cells or tissue. We believe that the most promising potential clinical applications of our technology are Parkinson's disease ("PD") traumatic brain injury ("TBI") and stroke. Using our proprietary technologies and know-how, we are creating neural stem cells from hpSCs as a potential treatment of PD, TBI and stroke.

Our most advanced project is the neural stem cell program for the treatment of Parkinson's disease. In 2013 we published in Nature Scientific Reports the basis for our patent on a new method of manufacturing neural stem cells which is used to produce the clinical-grade cells necessary for future clinical studies and commercialization. In 2014 we completed the majority of the preclinical research establishing the safety profile of NSC in various animal species including non-human primates. In June 2016 we published the results of a 12-month pre-clinical non-human primate study, which demonstrated the safety, efficacy and mechanism of action of the ISC- hpNSC®. In 2017 we dosed four patients in our Phase I trial of ISC-hpNSC®, human parthenogenetic stem cell-derived neural stem cells for the treatment of Parkinson's disease. We reported 12-month results from the first cohort and 6-month interim results of the second cohort at the Society for Neuroscience annual meeting (Neuroscience 2018) in November 2018. In April 2019, we announced the completion of subject enrollment, with the 12th subject receiving a transplantation of the highest dose of cells. There have been no safety signals or serious adverse effects seen to date as related to the transplanted ISC-hpNSC® cells.

We announced successful completion of the dose escalating phase 1 clinical trial in June 2021. In terms of preliminary efficacy, where scores are compared against baseline before transplantation, we observed a potential dose-dependent response, with an apparent peak effectiveness at our middle dose. The % OFF-Time, which is the time during the day when levodopa medication is not performing optimally and PD symptoms return, decreases an average 47% from the baseline at 12 months post transplantation in cohort 2. This trend continued through 24 months where the % OFF-Time in the second cohort dropped by 55% from the initial reading. The same was true for % ON-Time without dyskinesia, which is the time during the day when levodopa medication is performing optimally without dyskinesia. The % ON-Time increased an average of 42% above the initial evaluation at 12 months post-transplantation in the second cohort.

In August 2014 we announced the launch of a stroke program, evaluating the use of ISC-hpNSC® transplantation for the treatment of ischemic stroke using a rodent model of the disease. The Company has a considerable amount of safety data on ISC-hpNSC® from the Parkinson's disease program and, as there is evidence that transplantation of ISC-hpNSC® may improve patient outcomes as an adjunctive therapeutic strategy in stroke, having a second program that can use this safety dataset is therefore a logical extension. In 2015 the Company together with Tulane University demonstrated that NSC can significantly reduce neurological dysfunction after a stroke in animal models.

In October 2016 we announced the results of the pre-clinical rodent study, evaluating the use of ISC-hpNSC® transplantation for the treatment of TBI. The study was conducted at the University of South Florida Morsani College of Medicine. We demonstrated that animals receiving injections of ISC-hpNSC® displayed the highest levels of improvements in cognitive performance and motor coordination compared to vehicle control treated animals. In February 2019, we published the results of the pre-clinical study in *Theranostics*, a prestigious peer-reviewed medical journal. The publication titled, "Human parthenogenetic neural stem cell grafts promote multiple regenerative processes in a traumatic brain injury model," demonstrated that the clinical-grade neural stem cells used

in our Parkinson's disease clinical trial, ISC-hpNSC®, significantly improved TBI-associated motor, neurological, and cognitive deficits without any safety issues.

Anti-Aging Cosmetic Market – Skin Care Products

Our wholly-owned subsidiary LSC develops, manufactures and sells anti-aging skin care products based on two core technologies: encapsulated extract derived from hpSC and specially selected targeted small molecules. LSC's products include:

- ProPlus Advanced Defense Complex
- ProPlus Advanced Recovery Complex
- ProPlus Eye Firming Complex
- ProPlus Neck Firming Complex
- ProPlus Advanced Aquoues Treatment
- ProPlus Collagen Booster (Advanced Molecular Serum)
- ProPlus Elastin Booster
- ProPlus Brightening Toner

LSC's products are regulated as cosmetics. LSC's products are sold domestically through a branded website, Amazon, and ecommerce partners.

Biomedical Market – Primary Human Cell Research Products

Our wholly-owned subsidiary LCT develops, manufactures and commercializes approximately 200 human cell culture products, including frozen human "primary" cells and the reagents (called "media") needed to grow, maintain and differentiate the cells. LCT's scientists have used a standardized, methodical, scientific approach to basal medium optimization to systematically produce optimized products designed to culture specific human cell types and to elicit specific cellular behaviors. These techniques can also be used to produce products that do not contain non-human animal proteins, a feature desirable to the research and therapeutic markets. Each LCT cell product is quality tested for the expression of specific markers (to assure the cells are the correct type), proliferation rate, viability, morphology and absence of pathogens. Each cell system also contains associated donor information and all informed consent requirements are strictly followed. LCT's research products are marketed and sold by its internal sales force, OEM partners and LCT brand distributors in Europe and Asia.

Results of Operations

Comparison of the Three Months Ended March 31, 2022 and 2021

The following table summarizes our results of operations for the three months ended March 31, 2022 and 2021:

	Three Months Ended March 31,			
	2022	2021	\$ Change	% Change
	(dollar in thousands)			
Product sales, net	\$ 2,020	\$ 1,658	\$ 362	22%
Cost of sales	725	615	110	18%
As a % of revenues	36%	37%		
Research and development	137	215	(78)	-36%
Selling and marketing	301	347	(46)	-13%
General and administrative	832	1,048	(216)	-21%
Other expense - related party	(34)	(32)	(2)	6%
Net loss	<u>\$ (9)</u>	<u>\$ (599)</u>	<u>\$ 590</u>	-98%
As a % of revenues	0%	-36%		

Product Sales, net

Product sales revenue for the three months ended March 31, 2022 was \$2.0 million, compared to \$1.7 million for the three months ended March 31, 2021. The increase of \$362 thousand, or 22%, was primarily attributable to an increase of \$343 thousand in product sales in our biomedical segment for the three months ended March 31, 2022 as compared to 2021. This increase in sales is primarily due to the restrictions of COVID easing and therefore allowing for a general return to the types of research that these products are used in.

Cost of Sales

Cost of sales for the three months ended March 31, 2022 was \$725 thousand, compared to \$615 thousand for the three months ended March 31, 2021. The increase of \$110 thousand, or 18%, was primarily attributable to a \$163 thousand increase in costs as a result of an increase in product sales, a \$47 thousand increase for inventory purchases, offset by an approximately \$100 thousand decrease in unfavorable manufacturing variances and absorption due to increased customer demand for the three months ended March 31, 2022 as compared to 2021. Profit margins have deteriorated slightly for the three months ended March 31, 2022, as compared to the three months ended March 31, 2021. This is largely as a result of rising raw materials and labor related costs as well as scarcity of certain materials, principally plastics. In response to this we increased our supply of raw materials on hand and have, where possible, sourced materials from alternative vendors.

Cost of sales consists primarily of salaries and benefits associated with employee efforts expended directly on the production of the Company's products, as well as related direct materials, general laboratory supplies and an allocation of overhead. We aim to continue refining our manufacturing processes and supply chain management to improve the cost of sales as a percentage of revenue for both LCT and LSC.

Research and Development Expenses

Research and development expenses for the three months ended March 31, 2022 was \$137 thousand, compared to \$215 thousand for the three months ended March 31, 2021. The decrease of \$78 thousand, or 36%, was primarily attributable to a \$34 thousand decrease in personnel-related costs and stock-based compensation as a result of a decrease in headcount with the remaining decrease pertaining to decreases in material and supplies as well as facilities related expenses.

Selling and Marketing Expenses

Selling and marketing expenses for the three months ended March 31, 2022 was \$301 thousand, compared to \$347 thousand for the three months ended March 31, 2021. The decrease of \$46 thousand, or 13%, was primarily attributable to a \$44 thousand decrease in personnel-related costs, including temporary services, sales commissions and stock-based compensation primarily as a result of headcount reductions.

General and Administrative Expenses

General and administrative expenses for the three months ended March 31, 2022 was \$832 thousand, compared to \$1.0 million for the three months ended March 31, 2021. The decrease of \$216 thousand, or 21%, was primarily attributable to a decrease in personnel-related costs and stock-based compensation of \$177 thousand, a \$30 thousand decrease in building related expenses, with the remaining decrease primarily due to a decrease in public relations and insurance expense.

Liquidity and Capital Resources

The Company enters into contracts in the normal course of business with various third-party consultants and contract research organizations ("CRO") for preclinical research, clinical trials and manufacturing activities. These contracts generally provide for termination upon notice. Actual expenses associated with these arrangements may be higher or lower due to various reasons, including but not limited to, progress of our development products, enrollment in clinical trials, and product and personnel delays due to COVID. Other short-term and long term commitments that would affect liquidity include lease obligations as well as related party debt repayments.

As of March 31, 2022, we had an accumulated deficit of approximately \$110.0 million and have, on an annual basis, incurred net losses and negative operating cash flows since inception. Substantially all of our operating losses have resulted from the funding of our research and development programs and general and administrative expenses associated with our operations. We incurred net losses of \$9 thousand and \$599 thousand for the three months ended March 31, 2022 and 2021, respectively. As of March 31, 2022,

we had cash of approximately \$398 thousand, compared to \$171 thousand as of December 31, 2021. Our primary use of cash is to continue to fund our research and development programs while maintaining and growing our revenue generating businesses.

Licensed patents

The Company has a minimum annual license fee of \$75 thousand payable in two installments per year to Astellas Pharma pursuant to the amended UMass IP license agreement. The license agreement with Astellas Pharma may be terminated by the Company at any time with a 30-day notice. We do not anticipate any short-term liquidity effect from this obligation.

Cash Flows

Comparison of the Three Months Ended March 31, 2022 and 2021

The following table provides information regarding our cash flows for the three months ended March 31, 2022 and 2021 (in thousands):

	Three Months Ended March 31,	
	2022	2021
Net cash used in operating activities	\$ (23)	\$ (394)
Net cash used in investing activities	—	(2)
Net cash provided by financing activities	250	824
Net increase in cash	<u>\$ 227</u>	<u>\$ 428</u>

Operating Cash Flows

For the three months ended March 31, 2022, net cash used in operating activities was \$23 thousand, resulting primarily from our net loss of \$9 thousand and net changes in operating assets and liabilities of \$226 thousand, consisting primarily of increases in accounts receivable of \$58 thousand, inventory, net of \$156 thousand, prepaid expenses and other current assets of \$203 thousand and a decrease in the operating lease liability of \$37 thousand. These are offset partially by increases in accounts payable, accrued liabilities and deposits of \$228 thousand. These net decreases were partially offset by net non-cash adjustments of \$212 thousand consisting primarily of stock-based compensations expense of \$91 thousand, operating lease expense of \$33 thousand and depreciation and amortization of \$56 thousand.

For the three months ended March 31, 2021, net cash used in operating activities was \$394 thousand, resulting primarily from our net loss of \$599 thousand and net changes in operating assets and liabilities of \$191 thousand, partially offset by non-cash adjustments of stock-based compensation expense of \$234 thousand, operating lease expense of \$69 thousand, and depreciation and amortization of \$66 thousand.

Investing Cash Flows

Net cash used in investing activities for the three months ended March 31, 2022 was \$0, compared to \$2 thousand for the three months ended March 31, 2021. The decrease was attributable to a decrease in payments for patent licenses year-over-year.

Financing Cash Flows

Net cash provided by financing activities for the three months ended March 31, 2022 was \$250 thousand, compared to \$824 thousand for the three months ended March 31, 2021. The decrease was attributable to proceeds from a note payable from a related party of \$250 thousand in the current year, compared to proceeds of \$474 thousand from our Second Draw Loan under the Paycheck Protection Program and proceeds from a note payable from a related party of \$350 thousand in the prior year.

Funding Requirements

Management continues to evaluate various financing sources and options to raise working capital to help fund our current research and development programs and operations. We will need to obtain significant additional capital from equity and/or debt financings, license arrangements, grants and/or collaborative research arrangements to sustain our operations and develop products. Unless we obtain additional financing, we do not have sufficient cash on hand to sustain our operations at least through one year after the issuance date. The timing and degree of any future capital requirements will depend on many factors, including:

- the accuracy of the assumptions underlying our estimates for capital needs;
- the extent that revenues from sales of LSC and LCT products cover the related costs and provide capital;
- scientific progress in our research and development programs;
- the magnitude and scope of our research and development programs and our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing;
- our progress with preclinical development and clinical trials;
- the extent to which third party interest in Company's research and commercial products can be realized through effective partnerships;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims;
- the number and type of product candidates that we pursue; and
- the development of major public health concerns, including COVID-19 or other pandemics arising globally, and the current and future impact that such concerns may have on our operations and funding requirements.

Our failure to raise capital or enter into applicable arrangements when needed would have a negative impact on our financial condition. Additional debt financing may be expensive and require us to pledge all or a substantial portion of its assets. Further, if additional funds are obtained through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of its technologies, product candidates or products that we would otherwise seek to develop and commercialize on its own. If sufficient capital is not available, we may be required to delay, reduce the scope of or eliminate one or more of its product initiatives.

We currently have no revenue generated from our principal operations in therapeutic and clinical product development through research and development efforts. There can be no assurance that we will be successful in maintaining our normal operating cash flow and obtaining additional funds and that the timing of our capital raising or future financing will result in cash flow sufficient to sustain our operations at least through one year after the issuance date.

Based on the factors above, there is substantial doubt about our ability to continue as a going concern. The consolidated financial statements were prepared assuming that we will continue to operate as a going concern. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty. Management's plans in regard to these matters are focused on managing our cash flow, the proper timing of our capital expenditures, and raising additional capital or financing in the future.

Critical Accounting Policies and Estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our condensed consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States of America and the rules and regulations of the Securities and Exchange Commission. The preparation of these condensed consolidated financial statements requires us to make judgments and estimates that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statement, and the reported amounts of revenues, costs and expenses during the reporting periods.

Our estimates are based on our historical experience, known trends and events, and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities and amount of expense recognized that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We evaluate our estimates and assumptions on an ongoing basis. The effects of

material revisions in estimates, if any, will be reflected in the consolidated financial statements prospectively from the date of the change in estimates.

There have been no material changes to our critical accounting policies and estimates during the three months ended March 31, 2022 from those disclosed in "Part II – Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact our financial position and results of operations is disclosed in Note 1 to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations and commitments outside the ordinary course of business during the three months ended March 31, 2022 from those disclosed in "Part II - Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are a smaller reporting company, as defined by Rule 12b-2 of the Exchange Act, and are not required to provide the information required under this item.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As required by Rule 13a-15(e) and 15d-15(e) under the Exchange Act, the Company, with the participation of management, including our Chief Executive Officer and Principal Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in such rules) as of the end of the period covered by this report. Based on this evaluation, our Chief Executive Officer and Principal Financial Officer concluded that, at March 31, 2022, our disclosure controls and procedures were effective.

Disclosure controls and procedures are controls and other procedures that are designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Principal Financial Officer, or persons performing similar functions, as appropriate, to allow timely decisions regarding required disclosure.

Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. The design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal controls during the three months ended March 31, 2022 that materially affected, or are reasonably likely to materially affect, our internal controls over financial reporting.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings

None.

Item 1A. Risk Factors

There have been no material changes to the risk factors disclosed in "Part I – Item 1A. Risk Factors" included in our Annual Report on Form 10-K for the year ended December 31, 2021 filed with the SEC on March 29, 2022.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Index

Exhibit	Description
3.1	<u>Certificate of Incorporation (incorporated by reference to Exhibit 3.4 of the Registrant's Form 10-SB filed on April 4, 2006).</u>
3.2	<u>Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Preliminary Information Statement on Form 14C filed on December 29, 2006).</u>
3.3	<u>Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on June 4, 2012).</u>
3.4	<u>Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on May 14, 2014).</u>
3.5	<u>Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on July 28, 2015).</u>
3.6	<u>Certificate of Amendment of Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on May 19, 2016).</u>
3.7	<u>Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on May 6, 2011).</u>
4.1	<u>Form of Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 of the Registrant's Form 10-KSB filed on April 9, 2007).</u>
4.2	<u>Certification of Designation of Series B Preferred Stock (incorporated by reference to Exhibit 4.1 of the Registrant's Form 8-K filed on May 12, 2008).</u>
4.3	<u>Certification of Designation of Series D Preferred Stock (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed on January 5, 2009).</u>
4.4	<u>Certificate of Designation of Series G Preferred Stock (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on March 14, 2012).</u>
4.5	<u>Certificate of Preferences, Rights and Limitations of Series I-2 Convertible Preferred Stock (incorporated by reference to Exhibit 3.2 of the Registrant's Form 8-K filed on March 10, 2016).</u>
4.6	<u>Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934 (incorporated by reference to Exhibit 4.7 of the Registrant's Form 10-K filed March 30, 2021).</u>
10.1	<u>Form of Note issued on January 13, 2022 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed January 14, 2022)</u>
10.2	<u>Form of Note issued on March 1, 2022 (incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed March 3, 2022)</u>
31.1*	<u>Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer.</u>
31.2*	<u>Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer.</u>
32.1*	<u>Section 1350 Certification of Chief Executive Officer.</u>
32.2*	<u>Section 1350 Certification of Chief Financial Officer.</u>
101.INS*	Inline XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document

Exhibit	Description
104*	Cover Page Interactive Data File (embedded within the Inline XBRL document)

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

INTERNATIONAL STEM CELL CORPORATION

Dated: May 13, 2022

By: _____ /s/ ANDREY SEMECHKIN
Name: **Andrey Semechkin**
Title: **Chief Executive Officer**
(Principal Executive Officer)

By: _____ /s/ RUSSELL KERN
Name: **Russell Kern**
Title: **EVP and Chief Scientific Officer (Principal Financial Officer)**

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Andrey Semechkin, Chief Executive Officer of International Stem Cell Corporation, certify that:

1. I have reviewed this quarterly report on Form 10-Q of International Stem Cell Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 13, 2022

By: /s/ Andrey Semechkin
 Andrey Semechkin
 Chief Executive Officer
 (Principal Executive Officer)

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

I, Sophia Gamette, Vice President, Legal Affairs and Operations of International StemCell Corporation, certify that:

1. I have reviewed this quarterly report on Form 10-Q of International StemCell Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 13, 2022

By: /s/ Sophia Gamette
 Sophia Gamette
 Vice President, Legal Affairs and Operations
 (Principal Financial Officer)

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of International Stem Cell Corporation (the "Company") for the quarter ended March 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Andrey Semechkin, Chief Executive Officer of the Company, hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 13, 2022

By: /s/ Andrey Semechkin
Andrey Semechkin
Chief Executive Officer
(Principal Executive Officer)

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of International Stem Cell Corporation (the "Company") for the quarter ended March 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Sophia Gamette, Vice President, Legal Affairs and Operations of the Company, hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) the Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 13, 2022

By: /s/ Sophia Gamette
Sophia Gamette
Vice President, Legal Affairs and Operations
(Principal Financial Officer)

