Oncotelic Therapeutics Details PDAOAI Platform and Opens Access to Its Total TGF-β Knowledge Corpus

AGOURA HILLS, Calif., Dec. 22, 2025 (GLOBE NEWSWIRE) -- Oncotelic Therapeutics, Inc. (OTCQB:OTLC) ("Oncotelic", the "Company" or "We" or "Our"), a leader in RNA-based therapeutics, announced today opened access to PDAOAI, its proprietary evidence-interrogation platform designed to extract biologically meaningful signals from large, complex biomedical datasets without training bespoke large language models (LLMs) on proprietary data. The Company is also providing researchers access to a TGF-β literature corpus comprising all known publications for TGF-β- more than 125,000 PubMed abstracts- through a dedicated Discord research channel.

This platform has been developed and refined in parallel with Oncotelic's advancing clinical and preclinical programs, materially enhancing the speed, depth, and efficiency of discovery across its pipeline.

Oncotelic invites qualified researchers, academic collaborators, and industry partners to engage directly with the PDAOAI platform and the curated TGF-β knowledge corpus through its dedicated Discord research community. This forum provides an interactive environment for hypothesis exploration, signal interrogation, and collaborative discussion around TGF-β-driven biology and translational opportunities. Researchers and organizations interested in partnership opportunities, data collaboration, or strategic engagement with PDAOAI are encouraged to join the community at https://discord.gg/Rj5PaHUfzw and to contact Investor Relations at ir@oncotelic.com for additional information and partnership inquiries.

Unlike many AI approaches in biomedicine that rely on fitting predictive models to a single training dataset, PDAOAI functions as an interrogation layer-structuring, embedding, clustering, and querying large bodies of scientific and clinical information so that patterns already present in the data can emerge, be tested, and be validated against known biology and real-world outcomes.

"Our philosophy is simple: let the dataset speak," said Vuong Trieu, co-author and executive contributor. "In oncology today, the constraint is no longer data access-it is signal discovery and navigation. Over-training models on narrow datasets introduce bias and over-training models on large datasets dumb down the model due to noises. PDAOAI is built to surface reproducible, citation-backed workflows that generate testable hypotheses rather than opaque, black-box predictions."

"PDAOAI has enabled our researchers to elevate to a level that was not possible before. It has completely changed the game and has made research both more in depth and efficient," commented Scott Myers, Product Manager.

How PDAOAI Works

PDAOAI ingests large volumes of biomedical literature and structured datasets, embeds content into a semantic space, applies clustering algorithms to identify recurring biological themes, and enables structured, repeatable querying. The platform is designed to return evidence-linked hypothesis candidates-such as pathway dependencies, tumor-specific contexts, or biomarker patterns associated with clinical endpoints-that can be experimentally or clinically validated.

This approach allows researchers to repeatedly ask: *Which signals recur across datasets, tumor types, and immune or metabolic contexts-and which do not?*

Why This Matters Now

The platform is purpose-built for an era of **data abundance**, characterized by:

- Rapid growth of multi-omics datasets
- Increasingly rich clinical annotations and real-world evidence
- An exponential expansion of peer-reviewed biomedical literature

In this environment, advantage accrues to teams that can reliably extract **non-obvious, cross-domain signals**-without being constrained by the bias of a single training set.

Peer-Reviewed Validation

PDAOAI has supported evidence synthesis associated with multiple peer-reviewed publications, including work published in the International Journal of Molecular Sciences. These studies used large-scale evidence synthesis to contextualize survival-associated biological axes, including TGFB2, **DNMT3A**, and **GMPS**-across tumor microenvironment settings and patient populations.

A concrete example of the "dataset speaking" paradigm is the repeated emergence of TGFB2 as a central survival-associated axis across multiple cancers and immune contexts. While no single gene explains cancer biology, the consistent recurrence of TGFB2 across datasets provides a high-confidence anchor for downstream biomarker strategies, therapeutic combinations, and delivery approaches-particularly when integrated with clinical experience using a TGFB2 antisense agent such as OT-101 (Trabedersen).

Seven papers have been published that have utilized PDAOAI during the research process.

Qazi, S.; Richardson, S.; Potts, M.; Myers, S.; Saund, S.; De, T.; Trieu, V. Bioinformatic Approach to Identify Potential *TGFB2*-Dependent and Independent Prognostic Biomarkers for Ovarian Cancers Treated with Taxol. *Int. J. Mol. Sci.* **2025**, *26*, 11900. https://doi.org/10.3390/ijms262411900

Chang, W.-H.; Shah, D.; Myers, S.; Potts, M.; Qazi, S.; Trieu, V. Comparative Tumor Microenvironment Analysis for HCC and PDAC Using KMplotter. *Int. J. Mol. Sci.* **2025**, *26*, 11920. https://doi.org/10.3390/ijms262411920

De, T.; Trieu, V.; Myers, S.; Qazi, S.; Saund, S.; Lee, C. Sub-15 nm Nanoparticles for Drug Delivery: Emerging Frontiers and Therapeutic Potential. Int. J. Mol. Sci. 2025, 26, 10842. https://doi.org/10.3390/ijms262210842

Qazi, S.; Richardson, S.; Potts, M.; Myers, S.; Trieu, V. Bioinformatic Approach to Identify Positive Prognostic *TGFB2*-Dependent and Negative Prognostic *TGFB2*-Independent Biomarkers for Breast Cancers. *Int. J. Mol. Sci.* **2025**, *26*, 11580. https://doi.org/10.3390/ijms262311580

Saif, M.W.; Chang, W.-H.; Myers, S.; Potts, M.; Qazi, S.; Trieu, V. TGFB2 Expression and Methylation Predict Overall Survival in Pancreatic Ductal Adenocarcinoma Patients. *Int. J. Mol. Sci.* **2025**, *26*, 6357. https://doi.org/10.3390/ijms26136357

Trieu, V.; Potts, M.; Myers, S.; Richardson, S.; Qazi, S. *TGFB2* Gene Methylation in Tumors with Low $CD8^+$ T-Cell Infiltration Drives Positive Prognostic Overall Survival Responses in Pancreatic Ductal Adenocarcinoma. *Int. J. Mol. Sci.* **2025**, *26*, 5567. https://doi.org/10.3390/ijms26125567

Qazi, S.; Potts, M.; Myers, S.; Richardson, S.; Trieu, V. Positive Prognostic Overall Survival Impacts of Methylated *TGFB2* and *MGMT* in Adult Glioblastoma Patients. *Cancers* **2025**, *17*, 1122. https://doi.org/10.3390/cancers17071122

Comprehensive TGF-β Knowledge Corpus and Community Access

As part of the PDAOAI initiative, Oncotelic has curated a **comprehensive TGF-β literature corpus comprising more than 125,000 PubMed abstracts**, representing the **near-totality of scientific knowledge related to TGF-β biology** across cancer, fibrosis, immunology, metabolism, and translational therapeutics.

This corpus has been fully embedded, clustered, and indexed within the PDAOAI environment, making it **conversant to researchers**-not as static references, but as an interactive knowledge base capable of supporting:

- Hypothesis generation
- Cross-context signal discovery
- Identification of overlooked or non-canonical connections
- Development of new mechanistic and translational insights

To encourage collaborative exploration and accelerate progress in the field, **this TGF-β knowledge corpus is now accessible through a dedicated Discord research channel**, enabling qualified researchers to interact with the dataset, explore emerging hypotheses, and contribute to advancing TGF-β-driven science.

Strategic Role at Oncotelic

PDAOAI serves as a **discovery and strategy engine** within Oncotelic, supporting:

- Biomarker identification and prioritization
- Context-aware interpretation of clinical endpoints
- Precision trial design and combination strategy development
- Translation of complex biomedical data into actionable development decisions

Rather than replacing biological expertise, PDAOAI is designed to **augment expert judgment** by systematically surfacing signals that merit focused experimental and clinical validation.

About Oncotelic

Oncotelic (f/k/a Mateon Therapeutics, Inc.), was formed in the State of New York in 1988 as OXiGENE, Inc., was reincorporated in the State of Delaware in 1992, and changed its name to Mateon Therapeutics, Inc. in 2016, and Oncotelic Therapeutics, Inc. in November 2020. Oncotelic is seeking to leverage its deep expertise in oncology drug development to improve treatment outcomes and survival of cancer patients with a special emphasis on rare pediatric cancers. Oncotelic has rare pediatric designation for Diffuse Intrinsic Pontine Glioma ("DIPG") through OT-101 through its 45% joint venture, GMP Bio, melanoma (through CA4P) and its wholly owned subsidiary Sapu, and Acute Myeloid Leukemia ("AML" through OXi 4503). Oncotelic also acquired PointR Data Inc. in November 2019 to build an AI driven biotechnology company. Further, Oncotelic acquired AL-101, during the 4th quarter of 2021, for the intranasal delivery of apomorphine. We intend to develop AL-101 for the treatment of Parkinson Disease, erectile dysfunction, female sexual disorder and hypoactive sexual desire disorder. All these ailments have a very large population suffering from them and there is a need for treatments for each. For more information on AL-101, refer to our 2024 Annual Report on form 10-K filed with the SEC on April 15, 2025.

Oncotelic's Cautionary Note on Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this communication regarding strategy, future operations, future financial position, prospects, plans and objectives of management are forward-looking statements. Words such as "may", "expect", "anticipate" "hope", "vision", "optimism", "design", "exciting", "promising", "will", "conviction", "estimate," "intend," "believe", "quest for a cure of cancer", "innovation-driven", "paradigm-shift", "high scientific merit", "impact potential" and similar expressions are intended to identify forward-looking statements. Forward looking statements contained in this press release include, but are not limited to, statements about future plans related to the operations of the JV, taking the JV into an initial public offering or the success thereof, the progress, timing of clinical development, scope and success of future clinical trials, the reporting of clinical data for the company's product candidates and the potential use of the company's product candidates to treat various cancer indications as well as obtaining required regulatory approval to conduct clinical trials and upon granting of approval by the regulatory agencies, the successful marketing of the products; building and the success of our nanoparticle platform and the related success of launching the platform, the success of the launch of a company with a DAO infrastructure, the success of the entity and the plans surrounding the pet and animal health, the ability for the Company to register the tokens of Pet2DAO, the actual filing of a registration statement and approval of the PDAO, or any other tokens that we may launch, as registrable securities with the SEC through a registration statement, the ability of the tokens to be tradable or any value such tokens may have if they become tradable.. Each of these forward-looking statements involves risks and uncertainties, and actual results may differ materially from these forward-looking statements or may not occur at all. Many factors may cause differences between current expectations and actual results, including unexpected safety or efficacy data observed during preclinical or clinical studies, clinical trial site activation or enrollment rates that are lower than expected, changes in expected or existing competition, changes in the regulatory environment, failure of collaborators to support or advance collaborations or product candidates and unexpected litigation or other disputes, taking the Company or its affiliates through initial public offerings. These risks are not exhaustive, the Company faces known and unknown risks, including the risk factors described in the Company's 2024 Annual Report on Form 10-K filed with the SEC on April 15, 2025 and in the company's other periodic filings. Forward-looking statements are based on expectations and assumptions as of the date of this press release. Except as required by law, the

company does not assume any obligation to update forward-looking statements contained herein to reflect any change in expectations, whether because of new information, future events, or otherwise.

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Attachment

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