Predictive Oncology Develops Novel Stem Cell Expression System for the Production of Functional and Stable G-Protein Coupled Receptors (GPCRs)

June 11, 2024

Company files expansive intellectual property protection for "Membrane Protein Factory" to produce purified and biologically active membrane proteins for drug development

External sources value annual US GPCR market at nearly $3.5 billion in 2022, growing more than 5% annually through 2030[1]

PITTSBURGH, June 11, 2024 (GLOBE NEWSWIRE) -- Predictive Oncology Inc. (NASDAQ: POAI), a leader in AI-driven drug discovery and biologics, today announced the introduction of a new technology designed to express functional and stable G-Protein Coupled Receptors (GPCRs).

GPCRs are cell surface membrane receptors that are believed to play a key role in tumorigenesis, with prior studies demonstrating involvement in cancer initiation, progression, and metastasis. It is estimated that drugs targeting GPCRs represent more than 30% of the global market for therapeutic drugs, yet the number of characterized GPCR targets represent just a small fraction of the GPCR superfamily, suggesting significant potential to further target GPCRs for future drug discovery and development[2,3].

"As a result of our sustained efforts to develop this technology, Predictive Oncology has been able to file expansive intellectual property (IP) protection for its novel GPCR expression platform," said Dr. Larry DeLucas, SVP of Biologics for Predictive Oncology. "We believe that this technology will open significant partnering opportunities for our company, and we look forward to working with drug discovery and development companies that are targeting GPCRs to expand their portfolios and replenish their pipelines."

Predictive Oncology plans to combine this proprietary GPCR expression system with its current High-Throughput Self-Interaction Chromatography (HSC™) protein solubilization technology to enable the rapid identification of solution conditions that maintain purified GPCRs in a soluble and stable form. The company believes this can overcome many of the difficulties seen with existing expression technologies.

"We are very pleased to introduce our new platform to potential pharma partners targeting GPCRs of interest," stated Raymond Vennare, Chief Executive Officer of Predictive Oncology. "This technology represents a significant advancement over previous expression methodologies which, once launched later this year or in early 2025, will allow us to contribute to the advancement of new cancer therapeutics while tapping into a multi-billion-dollar annual market opportunity for GPCRs in the U.S. alone."

About Predictive Oncology
Predictive Oncology is on the cutting edge of the rapidly growing use of artificial intelligence and machine learning to expedite early drug discovery and enable drug development for the benefit of cancer patients worldwide. The company's scientifically validated AI platform, PEDAL, is able to predict with 92% accuracy if a tumor sample will respond to a certain drug compound, allowing for a more informed selection of drug/tumor type combinations for subsequent in-vitro testing. Together with the company's vast biobank of more than 150,000 assay-capable heterogenous human tumor samples, Predictive Oncology offers its academic and industry partners one of the industry's broadest AI-based drug discovery solutions, further complimented by its wholly owned CLIA lab and GMP facilities. Predictive Oncology is headquartered in Pittsburgh, PA.

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Forward-Looking Statements:
Certain matters discussed in this release contain forward-looking statements. These forward- looking statements reflect our current expectations and projections about future events and are subject to substantial risks, uncertainties and assumptions about our operations and the investments we make. All statements, other than statements of historical facts, included in this press release regarding our strategy, future operations, future financial position, future revenue and financial performance, projected costs, prospects, changes in management, plans and objectives of management are forward-looking statements. The words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "would," "target" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Our actual future performance may materially differ from that contemplated by the forward-looking statements as a result of a variety of factors including, among other things, factors discussed under the heading "Risk Factors" in our filings with the SEC. Except as expressly required by law, the Company disclaims any intent or obligation to update these forward-looking statements.

[1]Grand View Research. https://www.grandviewresearch.com/industry-analysis/g-protein-coupled-receptors-gpcrs-market;

[2] Persistence Market Research: https//www.persistencemarketresearch.com/market-research/q-protein-coupled-receptors-market.asp

[3] https://pubmed.ncbi.nlm.nih.gov/34194261/