# Phio Pharmaceuticals Announces Study Results at the 37th Annual Meeting of the Society for Immunotherapy of Cancer (SITC) on November 10th and 11th

November 10, 2022

*Phio's INTASYL™ compounds demonstrated activity against multiple protein targets including PD-1, BRD4, CTLA-4, TIGIT and CTGF.*

*INTASYL™ compounds demonstrated preclinical activity in both Direct-to-Tumor applications (PH-894, PH-109 and CTLA-4) and Adoptive Cell Therapy applications (PH-762 and PH-804).*

MARLBOROUGH, Mass., Nov. 10, 2022 /PRNewswire/ -- Phio Pharmaceuticals (Nasdaq: PHIO), a clinical stage biotechnology company whose proprietary INTASYL™ RNAi platform technology makes immune cells more effective in killing tumor cells, today announced the results of several studies of its INTASYL™ compounds.

Logo - https://mma.prnewswire.com/media/786567/Phio_Pharmaceuticals_Logo.jpg

INTASYL compounds are chemically modified siRNA's that provide efficient, spontaneous cellular uptake and potent, long lasting intracellular activity targeting a broad range of cell types and tissues.

INTASYL drugs precisely target specific proteins that reduce the body's ability to fight cancer, without the need for specialized formulations or drug delivery systems. INTASYL demonstrated preclinical efficacy in both Direct-to-Tumor and Adoptive Cell Therapy (ACT) applications.

INTASYL is the only self-delivering RNA interference (RNAi) technology focused on immuno-oncology therapeutics. Phio is developing several INTASYL compounds, one of which is in an on-going Phase 1b clinical trial for the treatment of advanced melanoma.

The posters will be presented on November 10$^{th}$ and 11$^{th}$ at the 37th Annual Meeting of the Society for Immunotherapy of Cancer (SITC), which is being held in Boston, MA from November 8 – 12, 2022.

About the Posters

1. **Abstract #788 titled: A Phase 1b study to evaluate the safety, tolerability, pharmacokinetics and anti-tumor activity of neoadjuvant use of PH-762 administered intratumorally in subjects with advanced melanoma**

   **About PH-762:** PH-762 is an INTASYL compound that reduces the expression of PD-1, a protein that inhibits T cells' ability to kill cancer cells. By suppressing PD-1, the T cells are re-activated to kill cancer cells. PH-762 is being developed as a standalone drug therapy (Direct-to-Tumor) and also in combination with ACT.

   **About the poster:** This trial in progress poster reports on the clinical trial design and updates on the continuing enrollment in its Phase 1b study of PH-762 for the treatment of patients with advanced melanoma. The study is being conducted at the Gustave Roussy Institute, one of the largest cancer centers in Europe. Topline safety data from the first group of subjects is expected to be announced during the first quarter of 2023. [Review the poster]

2. **Abstract # 1402 titled: PH-894, an INTASYL™ self-delivering siRNA targeting BRD4, has dual functions to sensitize tumor cell killing and activate CD8 T cells**

   **About PH-894:** PH-894 is an INTASYL compound that silences BRD4, a protein that controls gene expression in both T cells and tumor cells, thereby effecting the immune system as well as the tumor. What sets this compound apart is its dual mechanism: INTASYL PH-894 suppression of BRD4 in T cells results in T cell activation; additionally, suppression of BRD4 in tumor cells results in tumors becoming more sensitive to T-cell killing.

   **About the poster:** This poster presentation includes data further exploring the antitumor mechanism of PH-894, a self-delivering RNAi compound that specifically silences the BRD4 gene. In this study, Phio showed that using PH-894 can activate T cells to improve their cancer cell killing ability and to target tumor cells to make them more sensitive to killing. [Review the poster]

3. **Abstract #1431 titled: Intratumoral PH-109 INTASYL™; self-delivering RNAi targeting connective tissue growth factor (CTGF) provides efficacy in vivo in a mouse model of metastatic breast cancer**

   **About PH-109:** PH-109 is an INTASYL compound that suppresses the Connective Tissue Growth Factor (CTGF) protein, a protein associated with poor prognosis in breast cancer.

**About the poster:** The poster presentation announces proof-of-concept *in vivo* data showing efficacy of intratumorally administered PH-109, in an orthotopic 4T1 model of metastatic mammary cancer. These results show that PH-109 reduced tumor growth and reduced metastatic lung lesions compared to the control arms. Mice were also treated with the chemotherapy drug, doxorubicin. In contrast to doxorubicin, PH-109 showed no evidence of toxicity. [Review the poster]

4. **Abstract #537 titled: Local immunotherapy with INTASYL™ self-delivering RNAi targeting CTLA-4 provides robust tumor control in vivo**

   **About CTLA-4**: CTLA-4 is a protein that inhibits the ability of T cells to kill tumor cells. The CTLA-4 targeting INTASYL compound demonstrated dose-associated anti-tumor activity in two tumor models *in vivo*. Local delivery may avoid/minimize the severe systemic adverse events associated with current CTLA-4 therapeutics.

   **About the poster:** The poster presentation demonstrates proof-of-concept *in vivo* data showing intratumoral efficacy of a novel INTASYL targeting murine CTLA-4 in two syngeneic mouse tumor models. These study results showed a dose-dependent anti-tumor effect that was comparable to that seen with antibodies. The Company expects treating intratumorally with an INTASYL compound targeting CTLA-4 may have less toxicity than with current antibody treatment, while maintaining similar efficacy. This shows that INTASYL can be used against multiple clinically proven checkpoint inhibitors – CTLA-4 and PD-1. [Review the poster]

5. **Abstract #493 titled: PH-804, an INTASYL™ self-delivering RNAi compound that targets TIGIT enhances NK cell cytotoxicity to tumor cells**

   **About PH-804:** PH-804 is an INTASYL compound that targets TIGIT, a protein that inhibits the activity of Natural Killer (NK) cells.

   **About the poster:** The poster presentation discusses results from a pre-clinical study demonstrating that NK cells, when treated with PH-804, increased activation and enhanced the ability of NK cells to kill cancer cells. [Review the poster]

6. **Abstract #409 titled: Manufacturing of a clinical scale CD8 TIL product, AGX148, with and without gene silencing of PD-1 using self-delivering RNAi INTASYL™ PH-762**

   **About the poster:** This poster presentation by AgonOx, Inc., in collaboration with Phio and the Providence Cancer Institute's Cell Processing Facility, shows that it has completed three full scale IND-enabling manufacturing runs of its ACT product, AGX148, CD8 tumor infiltrating lymphocytes (TIL) that are highly enriched for tumor-reactivity (DP TIL), with and without Phio's PH-762, an INTASYL compound that knocks down PD-1 protein expression on cells. These manufacturing runs demonstrate the ability to scale up clinical grade DP TIL and that DP TIL treated with PH-762 demonstrated durable silencing of PD-1 in vivo. PD-1 knockdown also enhanced the activity of DP TIL in in vitro tumor co-culture assays. This step forward in manufacturing is an important part of AgonOx's movement towards the clinic and will support an IND application with the FDA. AgonOx expects to start a clinical trial evaluating the safety, tolerability, and efficacy of AGX148 combined with PH-762 in subjects with advanced solid malignancies.

**About Phio Pharmaceuticals Corp.**

Phio Pharmaceuticals Corp. (Nasdaq: PHIO) is a clinical stage biotechnology company whose proprietary INTASYL™ RNAi technology makes immune cells more effective in killing tumor cells. INTASYL is the only self-delivering RNAi technology focused on immuno-oncology therapeutics. INTASYL drugs precisely target specific proteins that reduce the body's ability to fight cancer, without the need for specialized formulations or drug delivery systems.

For additional information, visit the Company's website, www.phiopharma.com.

**Forward Looking Statements**

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as "intends," "believes," "anticipates," "indicates," "plans," "expects," "suggests," "may," "would," "should," "potential," "designed to," "will," "ongoing," "estimate," "forecast," "target," "predict," "could" and similar references, although not all forward-looking statements contain these words. Forward-looking statements are neither historical facts nor assurances of future performance. These statements are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results may differ materially from those indicated in the forward-looking statements as a result of a number of important factors, including, but not limited to, the impact to our business and operations by the ongoing coronavirus pandemic, military conflict between Ukraine and Russia, inflationary pressures, rising interest rates, recession fears, the development of our product candidates, results from our preclinical and clinical activities, our ability to execute on business strategies, our ability to develop our product candidates with collaboration partners, and the success of any such collaborations, the timeline and duration for advancing our product candidates into clinical development, the timing or likelihood of regulatory filings and approvals, the success of our efforts to commercialize our product candidates if approved, our ability to manufacture and supply our product candidates for clinical

activities, and for commercial use if approved, the scope of protection we are able to establish and maintain for intellectual property rights covering our technology platform, our ability to obtain future financing, market and other conditions and those identified in our Annual Report on Form 10-K and subsequent Quarterly Reports on Form 10-Q under the caption "Risk Factors" and in other filings the Company periodically makes with the SEC. Readers are urged to review these risk factors and to not act in reliance on any forward-looking statements, as actual results may differ from those contemplated by our forward-looking statements. Phio does not undertake to update forward-looking statements to reflect a change in its views, events or circumstances that occur after the date of this release, except as required by law.

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