



Phio Pharmaceuticals Presents Positive In Vivo Data Showing Strong Tumor Control for the Intratumoral Delivery of INTASYL™ RNAi Targeting PD-1

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Data presented at the AACR Annual Meeting 2021

MARLBOROUGH, Mass., April 10, 2021 /PRNewswire/ -- Phio Pharmaceuticals Corp. (Nasdaq: PHIO), a biotechnology company developing the next generation of immuno-oncology therapeutics based on its proprietary self-delivering RNAi (INTASYL™) therapeutic platform, today announced new *in vivo* data showing intratumoral (IT) treatment with the murine PD-1 targeting INTASYL (mPH-762) inhibits tumor growth in a dose dependent fashion in PD-1 responsive and refractory models. Furthermore, on target efficacy was supported by modulation of immune cell populations toward antitumor phenotypes. The Company believes these data further support the potential for INTASYL mPH-762 to provide strong local immune checkpoint blockade (ICB), without the dose immune-related adverse effects (irAEs) seen with systemic ICB antibody therapy. Phio is planning to advance this program with a first-in-human clinical study of PH-762 as a directly administered drug in patients with advanced melanoma at the Gustave Roussy Institute, which is scheduled to be initiated in the fourth quarter of 2021.

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"We are pleased to announce new *in vivo* data today that show INTASYL mPH-762 offered strong tumor control in Hepa 1-6 and CT26 models, which are PD-1 responsive and PD-1 refractory models, respectively. The modulation of key immune cell populations in the tumor microenvironment (TME) by local application of INTASYL mPH-762 provides further evidence that the desired efficacy to treat these cancers can be attained by direct intratumoral administration. Such local administration can have several advantages such as avoiding dose limiting systemic side effects which are often dose-limiting," stated Dr. Simon Fricker, Phio's VP of Research. "These data further support our excitement around this asset and to bring PH-762 to patients, starting with our first clinical study later this year."

All INTASYL treatments were well tolerated. Treatment with mPH-762 inhibited tumor growth in both CT26 and Hepa 1-6 models in a dose dependent manner compared to control treated tumors, with mPH-762 providing tumor growth inhibition analogous to systemic anti-PD-1 monoclonal antibody (mAb) use. Hepa 1-6 is a PD-1 inhibition-responsive hepatoma model and CT26 is a PD-1 inhibition-refractory colon cancer model. Dose-correlating on-target silencing of PD-1 protein expression across key TME cell populations was observed under treatment with mPH-762, but not with anti-PD-1 mAb. The modulation of tumor immune cell populations toward antitumor phenotypes, supporting on target efficacy, included significantly increasing overall %CD45⁺ and %NK1.1⁺ / CD45⁺ populations and increasing median M1 (immunostimulatory) / M2 (immunosuppressive) polarized tumor associated macrophage ratios.

These data were presented today during the AACR Annual Meeting 2021 in a poster titled "*Intratumoral INTASYL™ self-delivering RNAi targeting PD-1 provides in vivo tumor control and mechanistic modulation of tumor microenvironment analogous to that of systemic anti-PD-1 antibody*". An archived version of the poster presentation will be made available on the "[Investors – Events and Presentations](#)" section of the Company's website ([click here](#)).

About Phio Pharmaceuticals Corp.

Phio Pharmaceuticals Corp. (Nasdaq: PHIO) is a biotechnology company developing the next generation of immuno-oncology therapeutics based on its self-delivering RNAi (INTASYL™) therapeutic platform. The Company's efforts are focused on silencing tumor-induced suppression of the immune system through its proprietary INTASYL platform with utility in immune cells and the tumor micro-environment. Our goal is to develop powerful INTASYL therapeutic compounds that can weaponize immune effector cells to overcome tumor immune escape, thereby providing patients a powerful new treatment option that goes beyond current treatment modalities. For additional information, visit the Company's website, www.phioharma.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 are neither historical facts nor assurances of future performance. These statements are based only on our current beliefs, expectations and assumptions regarding the impact to our business and operations by the recent coronavirus outbreak, results from our preclinical and clinical activities, the development of our product candidates, the ability to obtain future financing, 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, 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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