



Phio Pharmaceuticals Initiates In Vivo Studies of INTASYL Based Antivirals Against SARS-CoV-2

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Advancement of additional studies is based on positive results from in vitro studies and the ongoing COVID-19 pandemic

MARLBOROUGH, Mass., Feb. 22, 2022 /PRNewswire/ -- Phio Pharmaceuticals Corp. (Nasdaq: PHIO), a clinical-stage biotechnology company developing the next generation of therapeutics based on its proprietary self-delivering RNAi (INTASYL™) therapeutic platform, today announced the start of efficacy animal studies with INTASYL-based antiviral compounds against SARS-CoV-2 infection, the virus that causes COVID-19. The studies will further investigate the efficacy of Phio's INTASYL technology for treating SARS-CoV-2 infection in a validated mouse (*"in vivo"*) model of airway epithelial cell infection, after earlier positive findings in laboratory tests (*"in vitro"* studies) conducted by two independent research facilities. Considering the ongoing pandemic is fueled by new viral variants, the INTASYL-based antiviral compounds are designed to be effective against existing and future variants.

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Novel drugs designed using the INTASYL technology provide an efficient hit to lead process by bioinformatics-based drug design using a proprietary algorithm. This process requires the design of ~20 compounds for a single target which can then be screened to provide a lead compound for optimization. The INTASYL antiviral compounds being studied to treat SARS-CoV-2 infection are designed against three targets, including two virus-related targets and one novel host-related target. These compounds were tested and activity confirmed in laboratory tests with two different *in vitro* models of SARS-CoV-2 infection at two independent laboratories. Based on these *in vitro* data, three compounds, one per target, have been selected for further *in vivo* testing.

"The rapid identification of lead compounds for testing in this validated *in vivo* model of SARS-CoV-2 infection highlights the efficiency and flexibility of the INTASYL platform," said Dr. Simon Fricker, VP of Research and Development. "While our main development focus is on our immuno-oncology programs, considering the ongoing pandemic and the ease by which we can develop new INTASYL-based drugs, we felt an obligation to explore our ability to contribute to the fight against the global COVID-19 pandemic. We believe the data we've collected to date on our compound that targets the human host cells is exciting considering its potential to treat infections regardless of the viral variant."

"Gene silencing represents a promising antiviral development strategy," added James Cardia, Phio's VP of Business Operations, "However, the progress in this field has been slow due to the difficulties of getting traditional siRNA into their target cells and intracellular site of action. Therefore, the spontaneous delivery of INTASYL compounds to a wide variety of cells provides another strong argument in favor of developing antiviral therapy based on the platform. Considering the data from completed and ongoing studies, we believe there may be an avenue to unlock the value of INTASYL outside of our focus areas through additional strategic development collaborations."

About Phio Pharmaceuticals Corp.

Phio Pharmaceuticals Corp. (Nasdaq: PHIO) is a clinical-stage 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 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 ability to successfully develop a therapy targeting SARS-CoV-2 infection, the impact to our business and operations by the ongoing coronavirus pandemic, the development of our product candidates, 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, results from our preclinical and clinical activities, 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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