# Phio Pharmaceuticals Announces Preclinical Data Demonstrating PH-762 Enhances Persistence of T cells for Tumor Cell Killing as Presented by Helmholtz Munich at the 9th Immunotherapy of Cancer Conference

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MARLBOROUGH, Mass., Sept. 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 that its research partner, Helmholtz Munich, presented preclinical data showing that Phio's lead clinical product PH-762, an INTASYL compound targeting PD-1, increases the T cell population expressing stem cell-like characteristics, which in doing so, is expected to improve T cell persistence *in vivo*, therefore, resulting in enhanced duration of anti-tumor activity. These data were presented at the 9th Immunotherapy of Cancer Conference (ITOC) annual meeting, which is being held September 22 to 24, 2022 in Munich, Germany.

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"A well-known hurdle in adoptive cell therapy (ACT) with T cells is the poor persistence of effector T cells in patients, which are key players in killing tumor cells. These data demonstrate that PH-762 enhances the population of T cells that have more stem-like characteristics. As has been reported in literature, stem-like T cells are more resilient and result in an ACT product with prolonged tumor killing activity," said Dr. Simon Fricker, Phio's VP of Research and Development. "Increasing the frequency of this cell population by downregulating PD-1 using our PH-762 INTASYL compound is expected to enhance the population of T cells that fight cancer by increasing their proliferative activity, persistence, responsiveness and cell differentiation – characteristics that are believed to improve the immune system's capacity to kill cancer cells."

"These new data complement the robust data set we've generated over the past several years for PH-762 in the treatment of melanoma by reducing the expression of PD-1, a clinically validated target for immunotherapy. Currently, Phio is conducting a first-in-human clinical trial of PH-762 to treat patients with advanced melanoma," concluded Dr. Fricker.

This preclinical study assessed the potential of PH-762 to downregulate PD-1 to increase the frequency of a CD8 T cell population with a stem-like associated marker profile. T cells were incubated with PH-762 and co-cultured with an autologous renal cell carcinoma tumor cell line. Results showed that PH-762 treatment reduced PD-1 surface expression in T cells compared to control and PH-762 mediated PD-1 silencing increased the population of T cells that expressed stem-like markers, including higher expression levels of certain surface markers that identify stem cell memory T cells.

ITOC is a European meeting providing a global platform for translational research in the field of immuno-oncology as well as a forum for discussion of early clinical translation and to address its unique challenges. The presentation detailing these data is titled, "*RNAi mediated PD-1 knockdown induces a TCF-1 positive population in activated human CD8 T cells with stem-like associated marker profile*."

## About PH-762

PH-762 activates immune cells to better recognize and kill cancer cells by reducing the expression of PD-1, a clinically validated target for immunotherapy. PD-1 is expressed by T cells and prevents them from killing cancer cells. When PH-762 reduces PD-1 expression, the "brakes" on the immune system are released and T cells are activated to kill the cancer cells. PH-762 is being developed as a standalone drug therapy with local intratumoral administration. In addition, it is also being developed as a critical component of cellular immunotherapy, more specifically, to improve tumor cell killing capability of adoptively transferred tumor infiltrating lymphocyte (TIL) therapy.

## 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 microenvironment. The Company's 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.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, 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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