Pharming announces publication of data from Phase 3 Study of leniolisib in patients with APDS in ASH's Blood

Leniolisib was well tolerated and significant improvement over placebo was notable in the co-primary endpoints, reflecting a favorable impact on patients' immune dysregulation and deficiency

The peer-reviewed publication heightens international understanding of APDS, a rare and recently characterized immunodeficiency

Leiden, The Netherlands, December 7, 2022: Pharming Group N.V. ("Pharming" or "the Company") (EURONEXT Amsterdam: PHARM/Nasdaq: PHAR) announces today that the positive results of a Phase 3 clinical trial of the investigational drug leniolisib, an oral, selective phosphoinositide 3-kinase delta (PI3Kδ) inhibitor, in adult and adolescent patients with activated phosphoinositide 3-kinase delta syndrome (APDS), a rare primary immunodeficiency, have been published in *Blood*,[1] the peer-reviewed international medical journal of the American Society of Hematology. Data from this study was previously announced on February 2, 2022.

The paper, entitled 'Randomized, Placebo-Controlled, Phase 3 Trial of PI3Kδ Inhibitor Leniolisib for Activated PI3Kδ Syndrome', outlined results from the multinational, triple-blind, placebo-controlled, randomized clinical trial, which enrolled 31 patients with APDS aged 12 years or older. Patients were randomly assigned in a 2:1 ratio to receive 70 mg leniolisib or placebo twice daily for 12 weeks. Improvement over placebo was significant in the co-primary endpoints which evaluated reduction in lymph node size and increase in naïve B cells, reflecting the impact on immune dysregulation and correction of immunodeficiency in these patients, respectively. The adjusted mean change (95% CI) between leniolisib and placebo for lymph node size was -0.25 (-0.38, -0.12; P=0.0006; N=26) and for percentage of naïve B cells was 37.30 (24.06, 50.54; P=0.0002; N=13). Leniolisib was well tolerated, and fewer patients receiving leniolisib reported study treatment-related adverse events (mostly grades 1-2) compared to those receiving placebo (23.8% vs 30.0%).

Vicki Modell, co-founder of the Jeffrey Modell Foundation, an international, non-profit, organization dedicated to helping individuals and family members affected by primary immunodeficiency disorders, commented:

"Pharming continues to provide significant support for the immunodeficiency community. The Jeffrey Modell Foundation is dedicated to early diagnosis and finding meaningful treatments for primary immunodeficiency, and we are acutely aware of the challenges faced by people with APDS. The publication of study results in this patient population in such a distinguished and widely read journal advances these goals."

Anurag Relan, MD, MPH, Chief Medical Officer of Pharming, commented:

"As we continue to seek a better understanding of APDS as a recently characterized rare disease, we remain committed to sharing our findings with researchers and doctors around the world. With this

commitment in mind, we are pleased the results of this Phase III clinical trial in leniolisib have been published in the flagship journal of the American Society of Hematology.

The APDS patient population, and their families, have lived with unmet needs and without targeted therapies, and the publishing of this study is an integral step in improving the patient journey for this community. We are proud to share these results which demonstrated leniolisib to be a well-tolerated, targeted therapy for APDS. We thank all of our study participants and investigators for their efforts and the essential role they played in the development of leniolisib."

About Activated Phosphoinositide 3-Kinase δ Syndrome (APDS)

APDS is a rare primary immunodeficiency that affects approximately 1 to 2 people per million. APDS is caused by variants in either of two genes, *PIK3CD* or *PIK3R1*, that regulate maturation of white blood cells. Variants of these genes lead to hyperactivity of the PI3Kδ (phosphoinositide 3-kinase delta) pathway.[2,3] Balanced signaling in the PI3Kδ pathway is essential for physiological immune function. When this pathway is hyperactive, immune cells fail to mature and function properly, leading to immunodeficiency and dysregulation.[2,4] APDS is characterized by severe, recurrent sinopulmonary infections, lymphoproliferation, autoimmunity, and enteropathy.[5,6] Because these symptoms can be associated with a variety of conditions, including other primary immunodeficiencies, people with APDS are frequently misdiagnosed and suffer a median 7-year diagnostic delay.[7] As APDS is a progressive disease, this delay may lead to an accumulation of damage over time, including permanent lung damage and lymphoma.[5-8] The only way to definitively diagnose this condition is through genetic testing.

About Leniolisib

Leniolisib is a small-molecule inhibitor of the delta isoform of the 110 kDa catalytic subunit of class IA PI3K. PI3Kδ is expressed predominately in hematopoietic cells and is essential to normal immune system function through conversion of phosphatidylinositol-4-5-trisphosphate (PIP2) to phosphatidylinositol-3-4-5-trisphosphate (PIP3). Leniolisib inhibits the production of PIP3 and PIP3 serves as an important cellular messenger activating AKT (via PDK1) and regulates a multitude of cell functions such as proliferation, differentiation, cytokine production, cell survival, angiogenesis, and metabolism. Unlike PI3Kα and PI3Kβ, which are ubiquitously expressed, PI3Kδ and PI3Kγ are expressed primarily in cells of hematopoietic origin. The central role of PI3Kδ in regulating numerous cellular functions of the adaptive immune system (B-cells and, to a lesser extent, T cells) as well as the innate immune system (neutrophils, mast cells, and macrophages) strongly indicates that PI3Kδ is a valid and potentially effective therapeutic target for immune diseases such as APDS. To date, leniolisib has been well tolerated during both the Phase 1 first-in-human trial in healthy subjects and the Phase II/III registration-enabling study in patients with APDS.

About Pharming Group N.V.

Pharming Group N.V. (EURONEXT Amsterdam: PHARM/Nasdaq: PHAR) is a global biopharmaceutical company dedicated to transforming the lives of patients with rare, debilitating, and life-threatening diseases. Pharming is commercializing and developing an innovative portfolio of protein replacement therapies and precision medicines, including small molecules, biologics, and gene therapies that are

in early to late-stage development. Pharming is headquartered in Leiden, Netherlands, and has employees around the globe who serve patients in over 30 markets in North America, Europe, the Middle East, Africa, and Asia-Pacific.

For more information, visit www.pharming.com and find us on LinkedIn.

Forward-Looking Statements

This press release may contain forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance, or events to differ materially from those expressed or implied in these statements. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", ''anticipate'', ''believe'', ''could'', ''estimate'', ''expect'', ''goals'', ''intend'', ''may'', "milestones", ''objectives'', ''outlook'', ''plan'', ''probably'', ''project'', ''risks'', "schedule", ''seek'', ''should'', ''target'', ''will'' and similar terms and phrases. Examples of forward-looking statements may include statements with respect to timing and progress of Pharming's preclinical studies and clinical trials of its product candidates, Pharming's clinical and commercial prospects, and Pharming's expectations regarding its projected working capital requirements and cash resources, which statements are subject to a number of risks, uncertainties and assumptions, including, but not limited to the scope, progress and expansion of Pharming's clinical trials and ramifications for the cost thereof; and clinical, scientific, regulatory and technical developments. In light of these risks and uncertainties, and other risks and uncertainties that are described in Pharming's 2021 Annual Report and the Annual Report on Form 20-F for the year ended December 31, 2021, filed with the U.S. Securities and Exchange Commission, the events and circumstances discussed in such forward-looking statements may not occur, and Pharming's actual results could differ materially and adversely from those anticipated or implied thereby. All forward-looking statements contained in this press release are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Any forward-looking statements speak only as of the date of this press release and are based on information available to Pharming as of the date of this release. Pharming does not undertake any obligation to publicly update or revise any.

References

1. Rao VK, et al. Blood. 2022. https://doi.org/10.1182/blood.2022018546.

2. Lucas CL, et al. Nat Immunol. 2014;15:88-97.

3. Elkaim E, et al. J Allergy Clin Immunol. 2016;138(1):210-218.

4. Nunes-Santos C, Uzel G, Rosenzweig SD. J Allergy Clin Immunol. 2019;143(5):1676-1687.

5. Coulter TI, et al. J Allergy Clin Immunol. 2017;139(2):597-606.

6. Maccari ME, et al. Front Immunol. 2018;9:543.

7. Jamee M, et al. Clin Rev Allergy Immunol. 2019;May 21.

8. Condliffe AM, Chandra A. Front Immunol. 2018;9:338.

For further public information, contact:

Pharming Group, Leiden, The Netherlands

Michael Levitan, VP Investor Relations & Corporate Communications

Heather Robertson, Investor Relations & Corporate Communications Manager

E: investor@pharming.com

FTI Consulting, London, UK

Victoria Foster Mitchell/Alex Shaw/Amy Byrne

T: +44 203 727 1000

LifeSpring Life Sciences Communication, Amsterdam, The Netherlands

Leon Melens

T: +31 6 53 81 64 27

E: pharming@lifespring.nl

US PR

Ethan Metelenis

E: Ethan.Metelenis@precisionvh.com

T: +1 (917) 882 9038

EU PR

Dan Caley

E: Dan.caley@aprilsix.com

T: +44 (0) 787 546 8942