



MannKind and Thirona Bio Join Forces to Evaluate Potential Inhaled Therapy for Fibrotic Lung Diseases

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MannKind will conduct formulation and preclinical studies of a new chemical entity owned by Thirona

In addition, MannKind purchased a convertible note issued by Thirona

WESTLAKE VILLAGE, Calif. and SAN DIEGO, June 10, 2021 (GLOBE NEWSWIRE) -- MannKind Corporation (Nasdaq: MNKD) and Thirona Bio, Inc. today announced that they have entered into a transaction that is intended to advance the development of a novel compound with potential for multiple indications.

FBM5712 is a novel small molecule inhibitor of the ALK-5 kinase (the transforming growth factor- β (TGF- β) receptor kinase), which is being developed by Thirona as a topical product intended to prevent and/or reduce skin fibrosis. "TGF- β is also implicated in lung fibrotic diseases and ALK-5 has been validated as a potential target for idiopathic pulmonary fibrosis," said Thomas Hofmann, M.D., Ph.D., Chief Scientific Officer of MannKind Corporation.

Under the terms of the collaboration agreement, the companies will evaluate the therapeutic potential of Thirona's locally acting TGF- β inhibitor for the treatment of pulmonary fibrosis. MannKind will formulate FBM5712 as a dry powder formulation. If initial studies are promising, MannKind can exercise certain rights to seek a full license to the compound for clinical development and commercialization for the treatment of fibrotic pulmonary diseases.

In addition to the collaboration agreement, the companies entered into a convertible promissory note purchase agreement to support Thirona's Series A financing.

"This collaboration with MannKind gives Thirona the opportunity to potentially expand the development of FBM5712 into fibrotic lung diseases with a new formulation," said Dr. Gordon Foulkes, Thirona Bio's Founder and Chief Executive Officer. "We remain focused on the dermatological applications of this drug – targeting scleroderma, keloid scars and certain cancers – and now look forward to exploring lung indications with the experienced MannKind team."

"We recently announced our goal of launching a new product from our pipeline every year between 2025 and 2030," said Michael Castagna, PharmD, Chief Executive Officer of MannKind Corporation. "We are excited by the opportunity to evaluate FBM5712 and to assess its potential to support our pipeline ambitions."

About Thirona Bio

Thirona Bio is focused on the development of drugs for fibrotic diseases. Target indications include scleroderma, keloid scars and certain cancers where there are no effective therapies. The Company's unique approach uses a potent, topically applied drug to inhibit TGF- β "locally", thereby minimizing the potential risk of systemic exposure. The Company is headquartered in San Diego, California. More information can be found at www.thironabio.com.

About MannKind Corporation

MannKind Corporation (Nasdaq: MNKD) focuses on the development and commercialization of inhaled therapeutic products for patients with endocrine and orphan lung diseases. MannKind is currently commercializing Afrezza® (insulin human) Inhalation Powder, the Company's first FDA-approved product and the only inhaled ultra rapid-acting mealtime insulin in the United States, where it is available by prescription from pharmacies nationwide. Afrezza is also available by prescription in Brazil, where it is commercialized by the Company's partner Biomm SA. MannKind was established in 1991, and is headquartered in Westlake Village, Calif. with a manufacturing and R&D facility based in Danbury, Conn. The Company also employs field sales and medical representatives across the U.S. Please visit mannkindcorp.com to learn more.

Forward-Looking Statements

This press release contains forward-looking statements that involve risks and uncertainties. Words such as "believes," "anticipates," "plans," "expects," "intends," "will," "goal," "potential" and similar expressions are intended to identify forward-looking statements. These forward-looking statements are based upon MannKind's current expectations. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation, the risks that MannKind may not obtain a satisfactory return (or any return) on its investment in Thirona and that testing a product candidate may not yield successful results or results that are consistent with earlier testing. For a discussion of additional factors, please refer to MannKind's annual report on Form 10-K for the year ended December 31, 2020 as well as MannKind's other filings with the SEC. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this press release. All forward-looking statements are qualified in their entirety by this cautionary statement, and MannKind undertakes no obligation to revise or update any forward-looking statements to reflect events or circumstances after the date of this press release.

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