Pulmonary Vascular Diseases and Fibroproliferative Pulmonary Disorders: Targets or Agents to Advance Drug Discovery

Pfizer’s Worldwide R&D organization is interested in establishing research collaborations with academic organisations and biotechnology companies that have identified and validated novel therapeutic targets, agents or approaches against existing or novel pathways driving inflammation and remodeling in pulmonary hypertension and/or pulmonary fibrosis.

Key Success Criteria:
Preferred partners will have developed their initial rationale based upon data reported on, or obtained from, profiling of the native disease condition in humans at the level of genetic or biochemical observations.

Partners may also have:
- small molecule inhibitors or biologics targeting novel or established pathways; and/or
- key capabilities and technologies to facilitate drug discovery in these therapeutic areas.

Background:
The Inflammation and Remodeling Research Unit (I&R RU) at Pfizer is focused on developing therapeutics that will treat chronic inflammatory disorders with a focus on chronic respiratory and kidney indications.

Pulmonary hypertension is a progressive disease of various origins that is associated with a poor prognosis and results in right heart dysfunction. In all its variant presentations, this disease is estimated to affect up to 100 million people worldwide. Pfizer has a portfolio of programs aimed at treating the inflammation and remodeling observed in pulmonary hypertension, with a predicted outcome of disease modification and ultimately disease reversal.

Pfizer is interested in developing differentiated therapeutic products for idiopathic pulmonary hypertension and the other classifications of pulmonary hypertension including its involvement in interstitial lung disease, Chronic Obstructive Pulmonary Disease (COPD), and Chronic Thrombo-Emolic Pulmonary Hypertension (CTEPH).

Pfizer’s interest in interstitial lung diseases also includes Idiopathic Pulmonary Fibrosis (IPF). This progressive lung disease of unknown etiology results in excessive deposition of fibrotic tissue and loss of pulmonary architecture and is characterized by shortness of breath, respiratory failure, and ultimately death.

Pfizer is interested in differentiated approaches (targets, pathways or interventions) that would alter the course of IPF, and directly or indirectly reduce patient morbidity and/or mortality. Pfizer seeks partners with novel mechanisms that regulate fibroblast activation and migration, fibrocyte differentiation and recruitment,
myofibroblast proliferation, extracellular matrix modulation and remodeling, oxidative stress and inflammatory signals.

**Possible Approaches:**
- Identification of therapeutic targets (from human genetic data, clinical observation, knockout/knockdown or mutagenesis studies) that are supported by disease-relevant *in-vitro or in-vivo* studies;
- Generation of biologics or small molecules with activity in disease-relevant *in-vitro and in-vivo* studies; or
- Access to populations of patients where population/patient evidence exists of maladaptive vs tolerance to disease drivers (e.g., adaptive immune responses exacerbated by particulates from pollution, or effects of chronic hypoxia driven by high-altitude living).

**Approaches Not of Interest:**
Pfizer is not interested in pursuing hypotheses based solely upon *in-vitro or in-vivo* data where no robust measurable clinical data supports the hypothesis and/or there is no linkage to the disease mechanism.

**Preferred Collaboration Type:**
The details of agreement will be negotiated between Pfizer and the solution provider. In addition to research funding, Pfizer may also offer access to research reagents and Pfizer’s extensive internal drug discovery capabilities.

**IP Requirements:**
This will depend on the nature of the proposal.

**How to submit a Proposal:**
Your proposal should be in the form of a concise non-confidential abstract/executive summary that briefly describes the technical approach and provides information on technology performance and background on the applicant and their team (including their related experience). To submit a proposal, please use the Respond button located on the Need page and complete the required Response Template. By submitting a proposal, you acknowledge and confirm that you have consulted with your Technology Transfer Office, Business Development Office or any other required group and that you have their approval to submit the response. All Personal Information disclosed to Pfizer within a response will be utilized in accord with principles and polices as described at [http://www.pfizer.com/general/privacy](http://www.pfizer.com/general/privacy). By submitting a proposal, you also acknowledge that Pfizer, in its sole discretion, may select or reject a proposal or any portion thereof. Your NineSights community profile should contain all required information in order to provide us with appropriate contact information for your proposal. For questions about NineSights privacy and security, please feel free to post in our Community Help forums.