APB to treat chronic respiratory diseases – A therapeutic breakthrough

Project summary

APB is a novel anti-inflammatory compound inhibiting chronic inflammatory lung disease. Preclinical data reveal a striking inhibition of smoker's lung disease (COPD), a chronic lung inflammation complicated by cancer. APB also attenuates interstitial and idiopathic pulmonary fibrosis (IPF).

Pharmacological profile of APB: It is a novel, orally active, butyrate-based compound inhibiting inflammation, lung fibrosis tumor growth with a protracted pharmacological action.

APB has the following features:

- **Inhibition of COPD and IPF** in models of chronic lung inflammation such as COPD and interstitial lung fibrosis including IPF in mice and *in vitro* prevents activation of human fibroblast cultures.
- **Adverse effects** no adverse effects in patients at 50mg daily for several months (compassionate use in cancer patients, unpublished).
- **Mode of action:** APB is an agonist of the HCAR2 receptor and activates histone degradation, thereby inhibits inflammation, fibrosis and tumor growth.
- **IP protection** in Europe and Japan (EP15716808) and the US application is pending.
- **Drug substance**: Synthesis and large-scale production is inexpensive and fully established.

Medical need of new drugs to treat COPD and fibrotic lung diseases

COPD and interstitial lung fibrosis are major chronic inflammatory lung diseases affecting a large part of the population representing an important global health burden. For COPD alone, 300 Mio individuals are globally affected. There is a major medical need and current medication is not satisfactory (such as Nintedanib, Pirfenidone, PDE4 inhibitors, bronchodilators and steroids).

Our preclinical data strongly support that APB halts chronic respiratory diseases. APB is a highly promising lead, and will occupy an important place in the future for COPD and lung fibrosis.

Business opportunity in lung inflammation and fibrosis

COPD and IPF represent high public health costs. APB represents a promising novel therapeutic approach and business opportunity in the global market.

Development plans of APB

Further validate the therapeutic pharmacological efficacy, toxicology studies (2 species), PK/PD studies in rodents and volunteers have to be extended for the preclinical dossier and out-licensing..

In summary, the development of APB is a great opportunity for investment in the health market for a major therapeutic medical need associated with a high return on investment.

Bernhard Ryffel, MD, PhD, Head of Pharmacology, Scientific Consultant of IBR Inc, +33 6 29 25 22 87
PhenoTec AG, 6302 Zug, Switzerland www.phenotec.com
10/02/2024