ESA Patentverwertungsagentur Sachsen-Anhalt GmbH

Technology Offer

JAK2-mutation associated CMN – novel compounds for treatment

Abstract

Chronic myeloproliferative neoplasia (CMN) is associated with the JAK2-V617F mutation. Novel compounds and a new concept are provided for the treatment of thrombosis and splenomegaly which are the most common and severe complications of CMN.

Background

Chronic myeloproliferative neoplasia is a malignant hematopoietic disease. Sub-entities include Polycysthaemia vera (PV), Essential thrombocytosis (ET) and Primary Myelofibrosis (PMF). These disorders are in the case of PV to 95 %, and ET and PMF to 50 % related to an activating mutation in JAK2 – JAK2-V617F. The major cause of morbidity and mortality in these patients is thrombosis. A further complication is splenomegaly.

Problem / Solution

JAK kinase inhibitors have shown to improve the symptoms but not in all patients in longer terms. Further problems are that the inhibitors are not specific and cause side effects.
The invention provides new compounds and a new concept for the treatment or prophylaxis especially of the associated complication thrombosis. Furthermore, the often developing splenomegaly may also be addressed.

Advantages over the state of the art

- The present invention represents a direct approach to modulate the activity of components directly involved in the development of disease related disorders.
- Compared to the use of JAK inhibitors the therapy will have less side effects.
- A therapy will help to avoid or to treat thrombosis.
- A therapy may help to relieve pain associated with splenomegaly.

Cooperation opportunities

ESA PVA is – in the name of the Medical Faculty of the Otto-von-Guericke-University Magdeburg - seeking partners who would be interested in developing the compounds for the treatment of patients. Scientific assistance for an industrial partner can be assured in a proper way within the frame of further the development for the market and market entry.

Further reading

Edelmann B, et al. JAK2-V617F promotes venous thrombosis through β1/β2 integrin activation. *J Clin Invest.* 2018;128(10):4359-4371.

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MEDIZINISCHE FAKULTÄT

Technology / Field of application

- Therapy of disorders associated with JAK2-V617F
- Human medicine

Market

- Pharmaceutical Industry

Developmental status

Proof of Concept

Patent Status

Application

Reference No.:

- ESA-FMEMD109 -

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