The Chinese University of Hong Kong
Non-confidential Abstract of Technology Disclosure

Title:

Utilization of a Novel TNF-and Steroid-modulator BRE (TNFRSF1A modulator) to Alleviate and Counter Conditions Associated with Tissue Damage, Inflammation and Other Effects

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Inventor:

Professor Kenneth K.H. LEE, Department of Anatomy, et. al

Patent Status:

US Patent Pending

Non-confidential abstract:

The present invention relates generally to the field of modulation of cytokines and steroid hormones and other effects by a novel gene product and related products and agents. Cytokines such as TNF and Fas, and steroid hormones such as cortisone, testosterone and estrogen, mediate the development and progression of many diseases. To develop new drugs that may regulate the action and function of these signaling molecules is a major approach in current targeted pharmaceutics. In particular, this invention relates to the function and the use of a cytokine- and steroid-modulator BRE (Brain and Reproductive Organ Expressed gene), as well as reagents and molecules that modulate the activity and function of BRE, which in turn affect the action of cytokines, steroid hormones and signal transducers that are important in mediating various diseases.

Advantage:

TNF plays important roles in the pathology of many diseases. Currently there are three biological drugs that block the inflammation and other effects of tumor necrosis factor alpha (TNF alpha) in rheumatoid arthritis and other diseases. These are injectable protein drugs, namely, infliximab (Remicade), etanercept (Enbrel) and Adalimumab (Humira). Remicade is a chimeric antibody against TNF and Enbrel is a soluble form of TNF-receptor-2, which will bind to TNF and inactivate its function. On the other hand, Humira is a synthetic protein, similar to human protein, that binds to TNF in the body and thereby blocks the effects of TNF. These protein drugs are antibody against TNF-alpha and TNF-binding protein respectively. They target only the ligant TNF, and affect the N-terminal region of the TNF-receptor1. Our BRE protein targets a novel region of the TNF-receptor1. The BRE-reagents that are being disclosed (antisense-, sense-, oligomers, antibodies and inhibitors of BRE), will be extremely useful in patients developing resistance to the currently available drugs.

For further queries, please contact:

Mr Billy Lam
Technology Licensing Coordinator
Tel: (852) 2609 8882
Fax: (852) 2603 5451
Email: billylam@cuhk.edu.hk

Address:
Technology Licensing Office
The Chinese University of Hong Kong
Room 226, Pi Ch'iu Bldg, Shatin, New Territories
Hong Kong SAR