

Technology: Anti-Chemokine Antibodies for Treatment & Detection of Arthritis, Immune & Inflammatory Disorders

Morehouse School of Medicine (MSM) Case No.: IP-0003

Patent No.: U.S. Patent 7,964,194

Patent Appl.: US 13/104,654, US 13/105,335, US 13/105,406

Abstract:

CXCR3 is part of a family of small chemotactic cytokines that bind seven transmembrane G protein coupled receptors. Chemokines control the movement of immune cells, including those that cause immunological and inflammatory disorders. CXCL9, CXCL10, and CXCL11 bind CXCR3 to support inflammatory cell proliferation, migration, and/or survival. CXCL10 is especially important in Arthritis, Immune and Inflammatory Disorders (AIID), because of the proteoglycans (elevated during inflammation) it associates with when binding CXCR3.

Use of anti-CXCL10 antibodies for the treatment of arthritis, immune and inflammatory disorders covered in MSM's US Patent No. 7,964,194 (set to expire in 2028). US patent and pending foreign applications teaching the use of other anti-chemokine antibodies to treat AIID are assigned to MSM. A dominant and expanding patent position for the use of anti-chemokines) antibodies to detect and treat AIID.

MSM is seeking a partnership that leverages MSM patent position with the most advanced anti-CXCL10 antibody candidate holder towards AIID indication and develop new humanized anti-CXCL9, -CXCL11, -CXCL13, and -CCL25 antibodies.

Applications:

- Treatment of the following: AIID – arthritis, immune & inflammatory disorders, e.g., Inflammatory Bowel Diseases, Idiopathic Pulmonary Fibrosis, Autoimmunity, Liver Failure, Cystitis, CNS-Demyelinating Autoimmune Diseases , etc.

Value Proposition:

- Opportunity to be first in class
 - Pending applications for other anti-chemokine Mabs for use in AIID indications: US 13/105,654 (anti-CXCL13 Mab), US 13/105,335 (anti-CCL25 Mab), US 13/105,406 (anti-CXCL9 & -CXCL11 Mab's)
 - Demonstrated efficacy in inflammation, migration, and survival and inflammation-related assays.
 - Demonstrated efficacy and efficacious dose determined in mouse models and clinical colitis, cystitis, and other inflammatory diseases.
 - MSM was the first to demonstrate efficacy of anti-CXCL10 antibodies to treat colitis and cystitis as well as patent use for treatment of AIIDs.
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