

Technology: Anti-Chemokine Antibodies for Treatment & Detection of Cancers

Morehouse School of Medicine (MSM) Case No.: IP-0004

Patent No.: U.S. Patent 7,919,083 and 8,097,250

Patent Appl.: US 12/967,795, US 12/967,816, US 12/968,659, US 12/968,698, US 13/014,240, US 13/014,310, US 13/233,769, US 13/233,769, US 13/312,343, US 13/313,705, US 13/324,669, US 13/342,633, US 13/248,904, PCT US2011_06376, PCT US2011_064635, PCT US2011_064667

Abstract:

CCR2 CXCR4, CXCR5, CXCR6, and CXCR7 are 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. CCL2 binds CCR2, CCL25 binds CCR9, CXCL12 binds CXCR4, CXCL13 binds CXCR5, CXCL16 binds CXCR6, and CXCL11 and CXCL12 bind CXCR7 to support cancer cell proliferation, migration, invasion, and/or survival. CXCL13 is especially important in oncology, because it highly expressed during cancer progression and its receptor is significantly elevated on cancer cells.

Use of anti-CCL25/CCR9 antibodies for the treatment of melanoma is covered by MSM US Patent No. 7,919,083. Use of anti-CXCL13/CXCR5 antibodies for the treatment of melanoma is covered by MSM US Patent No. 8,097,250. Pending foreign and US applications teaching the use of other anti-chemokine antibodies to detect or treat melanoma, lymphoma, leukemia, myeloma, and carcinomas are assigned to MSM.

MSM is seeking a partnership that leverages MSM patent position with the most advanced anti-CXCL13 antibody candidate holder towards an oncology indication and develop new humanized anti-CCL2, -CXCL13, -CXCL16, and -CCL25 antibodies to treat cancers and similar antibodies to detect early stage cancers.

Applications:

- Treatment of the following cancers: carcinoma, leukemia, lymphoma, melanoma, and sarcoma

Value Proposition:

- Opportunity to be first in class
 - Pending applications for other anti-chemokine Mabs for use in oncology indications: melanoma, carcinoma, lymphoma, myeloma, leukemia, and cancer diagnostics
 - Demonstrated efficacy in proliferation, migration, invasion and survival in *in vitro* assays.
 - Demonstrated efficacy in mouse models of cancer
 - Demonstrated elevated of chemokines in saliva, urine, and serum of early and late stage cancer patients.
 - MSM was the first to show efficacy of anti-CXCL13 antibodies to treat and detect prostate cancer.
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