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(54) Title: CXCR4 RECEPTOR COMPOUNDS

(57) Abstract: The invention relates generally to compounds which are allosteric modulators (e.g., positive and negative allosteric modulators, and allosteric agonists) of the G protein coupled receptor for stromal derived factor 1 (SDF-I), also known as the CXCR4 receptor. The CXCR4 receptor compounds are derived from the intracellular loops and domains of the CXCR4 receptor. The invention also relates to the use of these CXCR4 receptor compounds and pharmaceutical compositions comprising the CXCR4 receptor compounds in the treatment of diseases and conditions associated with CXCR4 modulation such as bone marrow transplantation, chemosensitization, cancer, metastatic disease, inflammatory diseases, HIV infection and stem cell-based regenerative medicine.