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(54) Title: ANTI CXCR4 ANTIBODIES FOR THE TREATMENT OF HIV

(57) Abstract: The present invention relates to novel isolated antibodies, or the derived compounds or functional fragments of same, capable of binding to CXCR4 but also of inducing conformational changed of the CXCR4 homodimers and able to inhibit HIV-1 primary isolate replication in PBMC. More particularly, the present invention relates to the 515H7 and 301aE5 monoclonal antibodies, specific to the CXCR4 protein, as well as their use for the treatment of HIV infection. Pharmaceutical compositions composed of such antibodies and a process for the selection of such antibodies are also covered.