

Poster Abstract

HIV-1 Infection: The Functional Importance of SDF1, CCR2 and CCR5 in Protection and Therapeutics

Ranjeet Singh Mahla

Department of Biological Sciences, Indian Institute of Science Education and Research Bhopal, 462023, India

Email: ranjeet@iiserb.ac.in.; Phone: +91-9589081337

The acute or chronic infection of HIV1 resulting to AIDS pandemics is one of the major causes of morbidity and mortality worldwide. The infection, prevalence and propagation of HIV1 depends both on adaptive mutation in virus and host genetic factors. Virus infection to human CD4+ immune cells together is assisted and restricted by various host factors. Presence of mutations in CCR2, CCR5 and CXCR4 ligand SDF1 are associated to protection against HIV1 infection and restriction to AIDS progression. Globally, individuals in various populations harbouring CCR2 (64I), CCR5 (Δ 32) and SDF1-3'A mutations are less susceptible to HIV1 infection and decipher delayed onset of AIDS. Natural ligands MIP1- α , RANTES, MIP1- β are inhibitory to HIV1 infection. CCR2, CCR5 and SDF1 inhibitors are emerging therapeutics.