Virus and host determinants of HIV-1 infection and AIDS pathogenesis

Blaak, H.

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Blaak H, Ran LJ, Rentsma R, Schuitemaker H. Susceptibility of in vitro stimulated PBMC to infection with NSI HIV-1 is associated with levels of CCR5 expression and β-chemokine production. (1999) Submitted for publication

Blaak H, Van ’t Wout AB, Brouwer M, Hooibrink B, Hovenkamp E, Schuitemaker H. In vivo HIV-1 infection of CD45RA+CD4+ T cells is established primarily by syncytium-inducing variants and correlates with the rate of CD4+ T cell decline. (1999) Submitted for publication


First of all, publications on HIV-1 infection and its impact on the immune system have been extensively researched. The key players in HIV-1 transmission are the CD4+ T lymphocytes and macrophages. The viral envelope glycoprotein, gp120, binds to chemokine receptors on the cell surface, leading to viral entry and infection. The viral life cycle involves multiple stages, including attachment, entry, reverse transcription, integration, and replication. The immune response to HIV-1 is complex and involves innate and adaptive immune mechanisms. The development of vaccines and antiretroviral therapies has significantly improved the management of HIV-1 infection. However, the emergence of drug-resistant strains continues to pose a challenge. Further research is needed to understand the pathogenesis of HIV-1 and to develop new therapeutic strategies.