**Conclusions:**

NK cell subsets from carriers of *h*/y*B*57 inhibit HIV infection in autologous CD4 T cells more effectively than those from *l*/x*B*57 carriers and Bw6hmz. This suggests that NK cell education influences the potency of NK cell mediated inhibition of HIV replication. The inhibition of viral replication in autologous infected CD4 T cells involves responses by KIR3DL1 subset and is partially due to secretion of CC-chemokines.