Retrovirology

Poster presentation

P16-51. Functional characterization of novel SIV epitope specific T cells

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Background

SIV infection of the rhesus macaque is currently the best animal model available for HIV infection in humans. However, the regions of SIV that are targeted by T cells, and the subsequent impact of specific targeting on disease progression, are insufficiently documented.

Methods

Serially truncated SIVmac239 peptides were used to identify novel epitopes to the 8 mer level, in an IFN-γ ELISPOT assay. MHC restriction analysis was performed using autologous and mismatched B cell lines. Epitope specific T cell lines were analysed for inhibition of virus replication in vitro in a virus suppression assay. Polychromatic flow cytometry was used to identify functional characteristics of epitope specific cells.

Results

Novel epitope specific CD8 T cell responses were identified to the 8 mer level in Indian rhesus macaques vaccinated with SIVmac239 genes as part of a pre-clinical vaccine study, using IFN-γ ELISPOT. The functional properties and differential impact of epitope specific cells on virus replication will be discussed.

Conclusion

The SIVmac239 proteome remains largely unmapped, despite this virus being used as a model in the rhesus macaque for HIV infection. This study provides an insight into novel SIV epitopes and the impact that targeting may have on disease progression.