

Meeting abstract

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The role of STAT6 in human T cell transformation by herpesvirus saimiri

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Herpesvirus saimiri (HVS) induces T-cell lymphoma in New World primates. HVS subgroup C strains growth transform human T-cells *in vitro*. Oncoproteins StpC and Tip are essential for transformation. The lymphocyte tyrosine kinase Lck is the major interaction partner of Tip and phosphorylates Tip at specific tyrosine residues. We find that STAT6 is activated by Tip together with Lck, requiring either Tip residues, Y114 or Y127 for increased activation and both for full activation.

Our analysis addresses whether Tip or the Y114F and/or Y127F mutant mediate interactions between STAT6 and Lck or other Src family members. The components are expressed and purified using the Strep-tag system to identify additional factors involved in complex formation by affinity chromatography. Furthermore, respective fluorescent fusion proteins are made to observe colocalization patterns and interaction within living T cells by fluorescence resonance energy transfer. These studies on the association of Tip, Lck, and STATs can resolve further regulatory mechanisms involved in viral transformation process.