



MEETING ABSTRACT

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Tax-mediated re-routing of the HTLV-1 p13 protein to nuclear speckles

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Human T-cell Leukemia Virus type-1 (HTLV-1) is highly immunogenic and has low variability so tight regulation of its expression is essential for virus maintenance *in vivo*. HTLV-1 replication is positively regulated by Tax and Rex, and negatively by the p30 and HBZ proteins. Here, we demonstrate that HTLV-1 encodes another negative regulator of virus expression, the p13 protein. Expressed separately, p13 localizes to the mitochondria, but in the presence of Tax, p13 is stabilized, and re-routed to the nuclear speckles. The p13 protein directly binds Tax, decreases Tax binding to the CBP/p300 transcriptional co-activator and, by reducing Tax transcriptional activity, suppresses viral expression. These findings suggest that HTLV-1 has evolved a complex mechanism to control its own replication through regulation of positive and negative viral proteins. Further, these results emphasize the importance of studying the function of the HTLV-1 viral proteins, not only in isolation, but also in the context of full viral replication.

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