

Poster presentation

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## Protein-protein Interaction Between HTLV-I Tax Protein and the Components of the Cellular Secretory Pathway

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Tax protein has been shown to play an integral role in HTLV-1-induced diseases including adult T cell leukemia (ATL) and HTLV-1-associated myelopathy/tropical spastic paraparesis (HAM/TSP). Extracellular Tax has been detected in the cerebrospinal fluid of HAM/TSP patients, suggesting that cell-free Tax may be physiologically involved in the progression of neurologic disease. We have previously demonstrated the secretion of full-length Tax and its co-localization with the cytoplasmic organelles relevant to secretion. The present study elucidates the mechanism of Tax secretion. To identify Tax interacting proteins within cell, we have used an antibody array spotted with antibodies directed against cellular secretory pathway proteins. Upon reaction with protein extracts from Tax-treated cells, antibody array analyses have suggested the interaction of Tax with SCAMP1, SCAMP2, SNAP23, and COPII; proteins that facilitate transport between nucleus and cytoplasm, and between endoplasmic reticulum, Golgi complex, and plasma membrane. Subsequently, these specific protein-protein interactions have been confirmed by co-immunoprecipitation and GST pull-down assays. Collectively, these studies have demonstrated the interaction of Tax with multiple proteins in the secretory pathway and that Tax may be secreted and act as an extracellular effector molecule.