

Human T lymphotropic viruses (HTLVs): Clinical and pathogenic properties



William W Hall

University College Dublin, Dublin, Ireland

The human T lymphotropic viruses type I (HTLV-I) and type II (HTLV-II) are closely related retroviruses which are associated with the development of lymphoproliferative disorders. HTLV-I has a preferential tropism for CD4+ T lymphocytes and is associated with adult T cell leukaemia/lymphoma (ATLL) an aggressive of CD4 T cell malignancy. HTLV-II has a preferential tropism for CD8+ T lymphocytes, and while the role of this virus in human disease remains unclear, infection has been associated with benign CD8+ T lymphoproliferative disorders. *In vitro* studies have demonstrated that the virus regulatory protein Tax plays a central role in cell transformation and proliferation, and that this appears to be due to the ability of the protein to deregulate both cell cycle controls and the transcription of a number of cellular genes. To further investigate this we have been investigating the properties of HTLV-I and HTLV-II Tax proteins both *in vitro* and *in vivo*. These studies will be described. Of note, the latter have allowed the development of an animal model of ATLL which will allow further investigation of the oncogenic properties of the HTLV Tax proteins.