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(54) Title: AN INFECTIVE ENDOGENOUS RETROVIRUS IN ASSOCIATION WITH DEMYELINATING DISEASES E.G. MULTIPLE SCLEROSIS

(57) Abstract: Retroviral sequences were characterised by RT-PCR with gag and env primers on RNA from RT-positive retroviral particles produced by multiple sclerosis (MS) derived B-lymphoblastoid cell lines. Sequence variants with high homology to the potentially functional subgroup RGH of the human endogenous retrovirus RTVL-H/HERV-H family were found. The same sequences were also specifically found in the particulate fraction of a series of MS patient plasma samples and were absent in controls. South-Western blots demonstrated the presence of a nucleic acid binding protein, corresponding in size and function to the nucleocapsid protein, Gag NC, of other retroviruses. Indications for transmission of the retrovirus to mononuclear blood cells from healthy human individuals and non-human animals were found. Cell cultures derived from peripheral blood from MS patients contained 5-15 % CD3+ T-cells and a specific splice variant of the env sequence comprising a region of the pol region was identified in such cultures.



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