







Special Issue Reprint

Spumaretroviruses

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Foamy viruses, currently referred to as spumaretroviruses, are the most ancient retroviruses as evidenced by traces of viral sequences dispersed in all vertebrate classes from fish to mammals. Additionally, infectious foamy viruses circulate in a variety of mammalian species including simian, bovine, equine, caprine, and feline. Foamy viruses have many unique features which led to the division of the retrovirus family into two subfamilies, the Orthoretrovirinae and Spumaretrovirinae. In vitro, foamy viruses have a broad host range and in vivo, human infections have been described due to cross-species transmission from infected nonhuman primates. Thus far, there are no reports of virus-induced disease in humans or in the natural host species. These unique properties of foamy viruses have led researchers to develop foamy viruses as gene therapy vectors to study virus-virus and virus-host interactions for identifying factors involved in virus replication, transmission, and immune regulation that could influence potential clinical outcomes in humans as well as for using endogenous foamy virus sequences in the analysis of host species evolution.





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