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SRLV traces in red deer

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Small Ruminant Lentiviruses (SRLV) cross the species barrier, infecting ovine and caprine species and causing different degrees of losses in the small ruminant industry. Lentiviruses crossing the barrier, from domesticated to wild-life species or vice versa, might adapt to the new host increasing their virulence. This study represents a first step in determining red deer susceptibility to SRLV infection, as this species might constitute an important reservoir. Blood samples from deer of different Northern Spain areas were obtained for serological and PCR determinations. Anti-SRLV antibodies were found by different standard and home-made ELISAs, slightly modified in order to detect deer IgG. However, evidence of infection could not be confirmed by different PCRs covering SRLV and BIV sequences. In an effort to demonstrate the presence of virus and/or possible virus blockade, in-vitro studies were performed employing red deer skin fibroblasts (SF). Entry assays using CAEV-AP virions pseudotyped with envelopes from SRLV strains showed the ability of SRLV to enter SF, with significant strain differences. Experimental infection with different SRLV strains was attempted and the cytopathic effect, RT activity in culture supernatants and presence of viral DNA (by PCR) assessed at 16 h, day 7 and day 10. Provirus was detected; however, no RT activity was found, suggesting low or no production of viral particles. These data provide evidence for a partial susceptibility to SRLV infections at cell and host (*Cervidae*) levels and strongly suggest the existence, in deer, of effective restriction mechanisms against SRLV production *in vitro* and *in vivo*.

Biography

L Sanjosé is recipient of a pre-doctoral fellowship of the Spanish Ministry of Economy and Competitiveness (FPI) at the Institute of Agrobiotechnology (CSIC-UPNA-Government of Navarra). Her research on animal health is carried out in the fields of immunology, genetics and virology. Her thesis entitled "Innate and acquired immunity, pathogenic mechanism and epidemiological factors in infections by small ruminant lentiviruses (SRLV)" involves the study of parameters of acquired immune response, restriction factors and the development of new diagnostic techniques. She (Zaragoza, 1985) graduated in Veterinary Sciences, obtained her Master's degree in Veterinary Sciences Research at the Complutense University of Madrid (Madrid, Spain) and has different Congress contributions. Presently, she is working in the experimental phase of her pre-doctoral period, being enrolled at the Public University of Navarre doctoral study program.

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