

Research project IZSve 14/14

Serological tools for the management of an eradication programme aiming at eradicating the Small Ruminant Lentivirus (SRLV) infection in goats at a regional level (province of Bolzano): laboratory and field evaluation of the available ELISA reactions

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Caprine arthritis encephalitis virus (CAEV) and Maedi-Visna virus (MVV) are retroviruses belonging to the ovine/caprine lentivirus group of the genus Lentivirus, now referred to as Small Ruminant Lentiviruses (SRLV). Once considered to be species specific, both CAEV and MVV were later shown to efficiently cross the species barrier. SRLVs can be divided into five phylogenetic groups (A → E), which show a significant immunological diversity.

In Italy, Compulsory serological programmes for CAEV eradication in goats have been initiated in the province of Bolzano. Up to date a complete eradication did not succeed, mainly due to unsatisfactory performance of the commercial ELISAs, strictly related to the heterogeneity of the SRLV strains.

New ELISA reactions have been recently developed, which show a broader reactivity and, at least to some extent, enable a serological differentiation. These new diagnostic tools have to be evaluated in the context of a large-scale eradication programme, in comparison with the ELISAs previously used as well as with the genomic characterisation of the SRLV strains circulating in the geographic areas targeted by the programmes.