

EPIDEMIOLOGICAL STUDIES ON BIOLOGICAL AGENTS IN MACROSCOPICALLY HEALTHY SMALL RUMINANT MAMMARY GLANDS

**Biasibetti E.\***, Spuria L.\*, Bisanzio D<sup>‡</sup>., Biasato I\*, Bianco P.<sup>§</sup>, Caruso C.<sup>@</sup>, Di Blasio A.<sup>@</sup>, Lamberti M.<sup>#</sup>, Masoero L.<sup>@</sup>, Dondo A.<sup>@</sup>, Capucchio M.T<sup>\*</sup>

*\*Department of Veterinary Sciences, University of Torino, Italy and ‡Big Data Institute, Nuffield Department of Medicine, University of Oxford, UK and §ASLTo4, Italy and #ASLCn1, Italy and @Istituto Zooprofilattico Sperimentale di Piemonte, Liguria e Valle d'Aosta, Italy.*

**Introduction:** The importance of small dairy ruminants has increased, especially because they represent an important alternative to supply dairy products for human consumption. A microbiological and pathological study was carried out to evaluate the biological agents isolated from macroscopically healthy udders of regularly slaughtered small ruminants correlating their presence with the histological features observed.

**Materials and Methods:** Eighty-nine macroscopically healthy udders of small ruminants were randomly collected between October 2013 and February 2016 in Piedmont region (North of Italy). After the macroscopical evaluation one fragment of parenchyma was collected, fixed in 10% formalin for histopathological examination, the remaining tissue was used to perform bacteriological, virological and mycological investigations. Multinomial logistic regression was applied to evaluate the association among lesions and positivity to different isolates, and bacteria.

**Results:** Twenty-five samples were microbiologically negative; in the positive udders, 138 different bacterial species were isolated. Coagulase-negative staphylococci-CNS were the most prevalent bacteria isolated (46.42%), followed by environmental opportunists (34.76%), other (10.14%) and pathogens (8.68%). Histologically the absence of lesions were observed in 28 samples, the remaining 61 udders showed different types of mastitis: chronic non suppurative mastitis (50.56%), chronic mixed mastitis (13.48%) and acute suppurative mastitis (4.5%). Lentivirus infection was present in 39.3% of samples. Histological lesions were significantly associated to small ruminant species and Lentivirus and CNS infections.

**Conclusions:** The results suggest that unaffected glands of small ruminants are a reservoir of biological agent. This information can be a help to improve hygiene and quality of dairy products, and consequently consumers' welfare.

NOTES