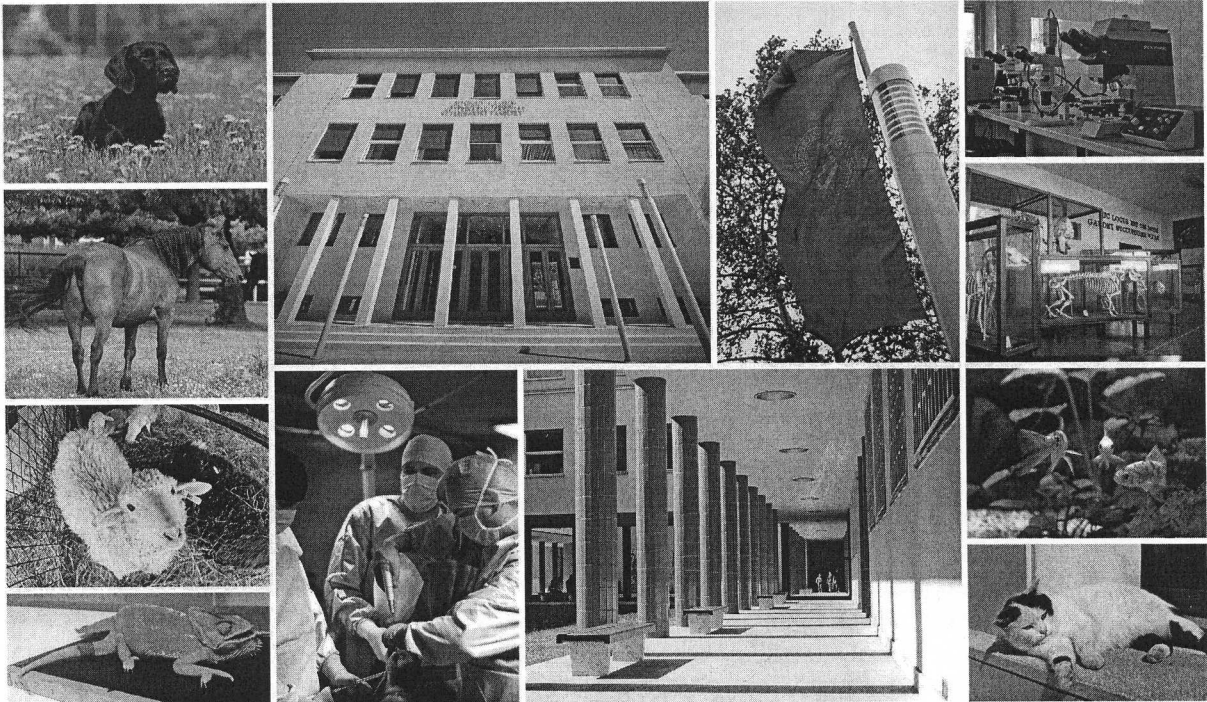




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BOOK OF ABSTRACTS

SUBCLINICAL MASTITIS IN SMALL DAIRY FARMS IN REPUBLIC OF NORTH MACEDONIA

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Subclinical mastitis is an asymptomatic udder infection distributed worldwide, with enormous losses in the dairy industry. The aim of this study was to determine the presence of subclinical mastitis in small dairy farms and to identify the most common bacteria associated with it.

Milk samples (n = 1,230) were obtained from 116 dairy cows (410 udder quarters) in three consecutive samplings 24–72 hours apart in seven dairy farms. The samples were cultured on routine bacteriological growth media and incubated for 24–48 hours, and the isolates were identified by the Axima-iD Plus MALDI-TOF MS Platform.

Subclinical mastitis was confirmed in 51 animals (43.9%), i.e. 111 infected quarters (27%). One hundred and eleven bacteria were isolated and 94 were identified to the species level. Seventeen bacteria were not identified by the SARAMIS software. The most frequent identified bacteria were *Streptococcus uberis* with 10.8% (12/111) and *Staphylococcus aureus* with 10.8% (12/111). *Staphylococcus haemolyticus* was identified in 9% (10/111), followed by *Staphylococcus simulans* in 8.1% (9/111), *Staphylococcus chromogenes* in 6.3% (7/111), *Staphylococcus epidermidis* in 4.5% (5/111), *Escherichia coli* in 3.6% (4/111), *Aerococcus viridans* in 3.7% (3/111), *Lactococcus lactis* in 1.8% (2/111), *Bacillus cereus* in 1.8% (2/111), *Enterococcus faecalis* in 1.8% (2/111), *Staphylococcus gallolyticus* in 1.8% (2/111) and *Enterococcus faecium*, *Staphylococcus xylosus*, *Micrococcus luteus*, *Arcanobacterium pyogenes*, *Streptococcus dysgalactiae*, *Staphylococcus hyicus*, *Streptococcus bovis/equines* and *Lactococcus garvieae* in 0.9% (1/111).

Subclinical mastitis is highly present in the selected small dairy farms. The most prevalent bacteria identified in the dairy farms (*Streptococcus uberis*, *Staphylococcus aureus* and coagulase-negative staphylococci) indicate that poor management and udder health practices, inadequate milking procedures and lack of mastitis control strategies greatly contribute to the occurrence and persistence of subclinical mastitis.

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