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PL4 ISOLATION AND MOLECULAR IDENTIFICATION OF MYCOBACTERIUM BOVIS AND MYCOBACTERIUM CAPRAE FROM SLAUGHTERED REACTOR CATTLE

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Introduction: Bovine tuberculosis (bTB) is a chronic disease in cattle caused by mycobacteria belonging to the *Mycobacterium tuberculosis* complex (MTBC). The causative agents can infect other domestic and wild animal species, as well as humans. Taking into account the zoonotic potential, the disease has a considerable impact in the public health, especially in developing countries.

The aim of this study was to isolate and identify the mycobacteria belonging to MTBC from cattle slaughtered due to a positive tuberculin skin test.

Material and Methods: The research was performed on organs sampled from slaughtered reactor cattle due to a positive tuberculin skin test. The organs were processed and inoculated on Lowenstein Jensen and Stonebrinks media slants. The suspect colonies were determined as *Mycobacterium* sp. by 16s rRNA. The identification of the mycobacteria from MTBC was performed using protocols that target the large sequence polymorphisms and single nucleotide polymorphisms.

Results: Using the implemented protocols, *Mycobacterium bovis* and *Mycobacterium caprae* were isolated and identified from the sampled organs. The causative agents were isolated from organs with typical tuberculous lesions as well as from organs with no visible lesions.

Conclusion: The laboratory methods (isolation, identification and typing

of mycobacteria) should be performed consequently to the slaughter of the reactor cattle in order to give a better insight to the etiology and epidemiology of the bovine tuberculosis.