

## RETROSPECTIVE IS901 RFLP ANALYSIS OF *MYCOBACTERIUM AVIUM* SUBSP. *AVIUM* ISOLATES FROM DOMESTIC ANIMALS

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*Mycobacterium avium* complex (MAC) organisms are often isolated from granulomatous lesions observed during routine abattoir meat inspections. In Slovenia, the most frequently affected animals in the past years were pigs. The objective of this study was to get an insight into genetic diversity of strains causing mycobacteriosis and avian tuberculosis in domestic animals. In total, 62 MAC isolates from pigs (n=56), poultry (n=5) and cattle (n=1), collected over a six-year period (1998-2003), were first identified as *M. avium* subsp. *avium* with IS901 PCR and then genotyped with IS901 restriction fragment length polymorphism (RFLP) analysis using restriction endonucleases *Pvu*II and *Pst*I. The results were subjected to computer-assisted analysis with BioNumerics software (Applied Maths).

Seven *Pvu*II RFLP profiles, comprising 8-11 bands, and 11 *Pst*I RFLP profiles, comprising 11-14 bands, were discovered and compared with the profiles collected in the database of OIE reference laboratory for avian tuberculosis in Brno, Czech Republic. The profiles were designated according to the nomenclature established and used in the reference laboratory. Our contribution to the database was 2 new *Pvu*II- and 8 new *Pst*I RFLP profiles.

Isolates from animals from individual farms, from animals from different farms and isolates from different animal species shared identical profiles. The latter suggests inter-specific transmission of the infection, albeit this was not proved in our case. Isolates collected at the time of an outbreak on individual farms shared identical genotypes that were discovered also in sporadic cases prior to outbreaks. This suggests either a common source of infection or transmission of infection among the animals. Considering the fact that the isolates with identical profiles were discovered on the farms prior to outbreaks, environmentally acquired infection is more probable than animal-to-animal transmission of infection.