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Isolation and molecular characterization of *Mycobacterium avium* subspecies *paratuberculosis* from ruminants and non-domestic non-ruminant animals

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Mycobacterium avium subspecies *paratuberculosis* (MAP) is a global pathogen that causes serious economic problems to the veterinary field and possesses a climbing public health concern. Johne's disease (JD) is a serious, chronic and untreatable intestinal infection of ruminants caused by MAP. The current study investigates an outbreak of JD in a mixed breeding cattle – camel farm in Sinai Peninsula. Fecal samples were collected from 24 dairy cattle and from 15 one humped Arabian camels suffered from diarrhea. Moreover, intestinal tissue samples were provided from 7 cats and 2 rats that were caught from the same farm and were euthanized before necropsy. Samples were examined using traditional culture and IS900 PCR techniques together with the application of BstEII-IS900 RFLP for typing of obtained isolates. Interestingly, MAP was recovered from cattle (n=8) and for the first time from camels (n=3) and non-domestic cats (n=3) reared under local conditions in Egypt. The segregation of isolates from 3 hosts in a single farm with BstEII-IS900 RFLP reflects similarities and differences in the prevalence and diversity of obtained genotypes. The obtained results denote an outbreak of JD in such a farm and highlight the potential role of non-ruminant and non-domestic animals in the epidemiology of MAP, a subject which needs further investigation and might have a public health importance being cat a common member of many families. In addition, studying the epidemiology of MAP in unstudied species like camel would be a unique contribution to the global picture of MAP epidemiology and warrants further studies.

Biography

Salem M is an Assistant Professor of animal Infectious diseases at Cairo University-Egypt and King Faisal University-KSA. He completed his PhD at the Justus-Liebig-University Giessen-Germany. Besides his experience in leading research groups, he has a training experience. He delivered diverse academic, research and business related training at a variety of institutions, companies and agencies.

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