Research project IZS VE 01/12

Development of new direct methods for the detection of avian Mycoplasma species

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Mycoplasma gallisepticum (MG), *Mycoplasma synoviae* (MS), *Mycoplasma meleagridis* (MM) and *Mycoplasma iowae* (MI) are considered important pathogens for poultry industry. Nowadays the direct diagnosis of these bacteria is mainly based on biomolecular methods and culture isolation, which require specialized staff and laboratory equipment; moreover they are considered time consuming and no feasible for a rapid application under field conditions. For veterinary practitioners it could be very important to detect and rapidly confirm the suspect of mycoplasmosis in order to restrain the spread of Mycoplasma in the Densely Populated Poultry Area (DPPA) and start an appropriate therapy. Prevention of mycoplasmosis is mainly based on maintenance of Mycoplasma-free breeding stock and on the implementation of biosecurity measures to avoid their introduction into the farm.

The aim of this study is to develop a new diagnostic method for the field diagnosis of *Mycoplasma spp.*, using micro latex beads, coated with specific antibodies for *Mycoplasma spp.*, this method should quickly detect and identify the presence of Mycoplasma directly in biological specimens as well as in Mycoplasma culture media.