

3rd International Congress on

Bacteriology and Infectious Diseases

August 04-06, 2015 Valencia, Spain

Relationship between antigenic diversity of *Mycoplasma synoviae* field strains and antibiotic susceptibility

Boutheina Ben Abdelmoumen Mardassi, Awatef Béjaoui-Khiari, Amina Ben Allaya, Nabih Bel Hadj, Béhija Mlik and Imen Chniba
Institut Pasteur de Tunis, Tunisia

Mycoplasma synoviae is an important pathogen of both chickens and turkeys which causes synovitis, airsacculitis and egg shell apex abnormalities in chickens and may result in significant economic losses in the poultry industry. *Mycoplasma synoviae* has a great capacity to change its surface exposed antigens. Two major immunodominant and surface exposed membrane proteins, MSPB and MSPA were proved to be antigenically variable and considerable variation in their size and expression was reported within and among several strains of *M. synoviae*. This antigenic variation may contribute to the inefficiency of sero diagnostic tools and therefore jeopardize control and antibiotic therapy programs. In this study we sought to analyze the antigenic variability and its association with the antibiotic susceptibility of 23 Tunisian field isolates of *Mycoplasma synoviae*. Antigenic variability was determined by Western blot and colony blotting using anti-sera directed against MSPA and MSPB domains. All field strains were antigenically homogenous with the same antigenic pattern but significantly different from that of *M. synoviae* reference strain. Enrofloxacin, doxycyclin, oxytetracyclin and aivlosin are among the most widely antibiotic families used in poultry in Tunisia. *In vitro* susceptibility of the 23 *Mycoplasma synoviae* field isolates for these antibiotics was determined by the micro broth dilution method. Resistance to enrofloxacin with MIC ≥ 32 $\mu\text{g/ml}$ was demonstrated for all isolates while a decrease of susceptibility to aivlosin for 50% of isolates was observed. This study argues for the predominance in Tunisia of a single serotype of *M. synoviae* that is fully resistant to enrofloxacin and less sensitive to aivlosin.

Biography

Boutheina Ben Abdelmoumen Mardassi is a Doctorate in Veterinary Medicine from National School of Veterinary Medicine at Sidi Thabet, Tunis-Tunisia. She has completed her PhD from Biotechnology Research Institute at Montreal (BRI) and Montreal University in Canada. She was Post Doctorate from Armand-Frappier Institute at Montreal, Quebec, Canada. Since 2000, she is a Permanent Researcher and a Head of *Mycoplasmas* Laboratory at Pasteur Institute of Tunis. She has published more than 15 papers in avian and human scientific journals.

boutheina.mardassi@pasteur.rns.tn

Notes: