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Biofilm and avian mycoplasma species: a potential critical point in the containment of pathogens

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Mycoplasma gallisepticum (MG), *Mycoplasma synoviae* (MS), *Mycoplasma meleagridis* (MM) and *Mycoplasma iowae* (MI) are important pathogens for the poultry industry. Present knowledge of their control of infection is based on the classical evidence of horizontal and vertical transmission. Up to now the control strategy for mycoplasmas has been achieved by creating mycoplasma-free breeders involving interrupting vertical spread and the application of strict biosecurity measures including avoiding direct contact with infected birds, avoid closeness between personnel and equipment in different bird flocks, etc..
Despite these specific measures, new outbreaks of avian mycoplasmosis, in particular *Mycoplasma synoviae*, are frequently reported demonstrating that these control measures are inadequate on their own in the containment of the spread of these microorganisms. It was previously believed that the lack of a cell wall made mycoplasmas highly fragile in the environment and readily susceptible to disinfection. However, recently some authors have shown that some Mycoplasma species, including the avian mycoplasma (for example MG) are biofilm producers, which may well improve their resistance in the environment (McAuliffe et al. 2006). Therefore, in our opinion, it is worthy to elucidate the capacity of the most important avian mycoplasmas in particular the most prevalent genotypes, MS and MG, isolated in the Italian poultry industry to produce biofilm. These results will contribute to improve knowledge on epidemiology of avian mycoplasmosis mainly in DPPA areas (Densely Populated Poultry Area).