

Mycoplasma synoviae partial secretome

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Mycoplasma synoviae is an important avian pathogen, which causes synovitis in a variety of birds, especially chickens and turkeys thus inflicting economical losses in avian farming and industry. So far, no efficient vaccine is available and diagnostics must undergo a series of tests making it laborious and time consuming. As secreted proteins of pathogenic bacteria are key factors in host colonization and might serve as target for both vaccination and diagnostics we sought to identify possible secreted M.synoviae proteins under in vitro conditions by mass spectrometry. For that we cultivated *M. synoviae* strain 53 in complete Frey broth, washed three times in a modified protein-free Frey medium and incubated in this modified medium for further 48hours. Bacteria were then pelleted by gentle centrifugation and pellet and supernatant were analysed separatedly by 2D electrophoresis (2DE). 2DE spots were then submitted to MALDI-TOF analysis. 23 out of 246 spots rendered unambiguous identifications of 5 distinct proteins in the secreted fraction. These proteins, namely elongation factor Tu; pyruvate dehydrogenase E1 component, beta subunit; cell division protein; elongation factor G and molecular chaperone DnaK are also found in cell fractions extracts, though in quite different ratios as those observed in the extracellular fraction. This suggests that those proteins might be secreted by Mycoplasma synoviae.

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