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Insights into the biology of *Mycoplasma meleagridis* as revealed by its whole genome sequence

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Mycoplasma meleagridis belongs to the group of Mollicutes, a group of bacteria characterized by the absence of a cell wall. *Mycoplasma meleagridis* is a turkey restricted pathogen that causes chronic diseases with slow progression. This species causes considerable economic losses and antibiotic treatment often fails to eradicate these bacteria. Despite the fact that the pathogenic potential of *M. meleagridis* in poultry is very high, it remains the avian mycoplasma species whose sequence has not yet been determined. It is our hope that the availability of the complete genome sequence of this pathogen will lead to a better understanding its biology and to the development of more effective prevention and treatment strategies.

The genome size of *M. meleagridis* ATCC 25294 strain was 632,497 base pairs with an overall G+C content of 25.95 mol %. A total of 516 putative coding sequences (CDSs) were identified, representing 92.27 % coding density. According to the rapid annotation using subsystem technology, 235 (46 %) of the CDSs were subsystem covered, while 281 (54 %) were not. Functions have been assigned to 343 of the CDSs, whereas 173 are hypothetical. We noticed the use of the three start codons by *Mycoplasma meleagridis*: ATG (92.1 %), TTG (4.8%), and GTG (3.1 %). As in all Mycoplasma species sequenced so far, the opal stop codon UGA is read as tryptophan. A set of 32 tRNA genes, corresponding to all amino acids, was identified. The *M. meleagridis* genome contains only one copy of the rRNA genes. Phylogenic analysis based on the 16S rRNA sequence has confirmed the affiliation of *M. meleagridis* to the hominis group.

Biography

Boutheina Ben Abdelmoumen Mardassi is a doctor in veterinary medicine from National School of Veterinary Medicine at Sidi Thabet, Tunis- Tunisia. She has completed her Ph.D. from Biotechnology Research Institute at Montreal (BRI) and Montreal University in Canada. She did her Post-Doctorate from Armand-Frappier Institute at Montreal, Quebec, Canada. Since 2000, she is a permanent researcher and a head of Mycoplasmas laboratories at Institut Pasteur de Tunis. She has published more than 15 papers in avian and human scientific journals.

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