EuroSciCon

JOINT EVENT
3rd International Conference on
Digital Pathology
&
7th Global Summit on
Microbiology Research

August 13-14, 2018
Madrid, Spain

Abdelmoumen Boutheina Ben et al., Arch Clin Microbiol 2018, Volume 9
DOI: 10.4172/1989-8436-C4-015

AN EXPANDED MULTILOCUS SEQUENCE TYPING SCHEME (EMLST) FOR *MYCOPLASMA HOMINIS* TUNISIAN ISOLATES REVEALS TWO POPULATION CLUSTERS ASSOCIATED WITH CLINICAL MANIFESTATIONS

Abdelmoumen Boutheina Ben, Safa Boujemaa, Béhija Mlik and **Amina Ben Allaya**
Pasteur Institute of Tunis, Tunisia

Mycoplasma hominis **is a commensal of the human urogenital tract but it can be associated with invasive diseases in adults and neonates. To our knowledge, data on the population genetic structure of *M. hominis* is scarce, particularly with regards to the phylo-distribution of pathotypes and the evolutionary forces to which they are subjected. Here, we analyzed the genetic diversity and phylogenetic relationships among 59 *M. hominis* Tunisian clinical isolates, categorized as gynecological infections- or infertility-associated pathotypes. For this purpose, we compared three molecular typing schemes, multilocus sequence typing (MLST), multi-virulence-locus sequence typing (MVLST), and the combination thereof, expanded multilocus sequence typing (eMLST). The latter approach proved to be the most discriminatory and biologically informative, clearly segregating the *M. hominis* population into two distinct genetic lineages that were differentially associated with each pathotype. Such a clear dichotomy was supported by several phylogenetic and population genetic analysis tools. Recombination was found to take place, but not sufficient enough to break down the overall clonal population structure of *M. hominis,* most likely as a result of purifying selection. In summary, this study provides insightful data on the population structure of *M. hominis* and the evolutionary forces underpinning pathotypes distribution.**

Biography

Abdelmoumen Boutheina Ben is a Doctorate in Veterinary Medicine from the National School of Veterinary Medicine at Sidi Thabet, Tunis-Tunisia. She has completed her PhD from the Biotechnology Research Institute at Montreal and Montreal University in Canada. She completed her 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 18 papers in avian and human scientific journals.

boutheina.mardassi@pasteur.tn