

MICROBIOLOGIE, INFECTIOLOGIE ET IMMUNOLOGIE

CONFÉRENCE

Université 
de Montréal

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Bioinformatic methods for analyzing genomic, transcriptomic and clinical data for the study of drug resistance mechanisms and their relationship with biofilm formation

Genes from the Chaperon-Usher pathway, allowing the assembly of fimbriae at the surface of bacteria involved in adhesion and biofilm formation, are mainly found in genomes from Gram negative bacteria. The development of a new strategy of annotation and classification, the evolutive analysis and the ancestral state reconstruction allowed to determine the dynamics of these systems implying multiple gains and losses, and homologous recombination events within complete genomes, of a genus or a species.

To understand the relationship between biofilm formation and antibiotic resistance in *P. aeruginosa*, analysis of transcriptomic data from clinical and laboratory strains allows i) to establish specific expression signatures in clinical strains according to the stage of infection in the patient and ii) to determine the regulon of the response regulator PprB from the two-component system PprA/B.

Jeudi 23 octobre 2014 à 11h30
Pavillon Claire-McNicoll, salle Z-210

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