

## CONFERENCE

May 7 at 11.30AM  
Room N-833

Université de Montréal, Pavillon Roger-Gaudry.  
2900 boul. Édouard Montpetit (Chemin de la tour), Montréal.

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### **Circulation of Antibiotic Resistance in European Coastal Environments**

Coastal ecosystems are heavily impacted by human activities, resulting in elevated levels of microbial and chemical pollution. Watersheds further transport and concentrate contaminants into coastal waters. In densely populated coastal regions, such exposure increases the risk of disease emergence and transmission. In particular, water- and foodborne diseases caused by *Vibrio* species, naturally abundant in coastal waters, have increased in recent years, likely driven by rising water temperatures. Combined with the limited understanding of antimicrobial resistance (AMR) in marine environments, these concerns have motivated our recent studies on AMR in European coastal ecosystems. Our results reveal that coastal *Vibrio* populations harbor a high diversity of previously underexplored antimicrobial resistance genes (ARGs). The persistence of these genes in the absence of clear antibiotic selection pressure remains puzzling. Although their mobilization appears to be rare, changing ecological conditions could facilitate their transfer, turning coastal environments into potential sources of ARG spillover. These findings highlight the urgent need for enhanced surveillance strategies to mitigate the risk of antibiotic-resistant infections in coastal regions.