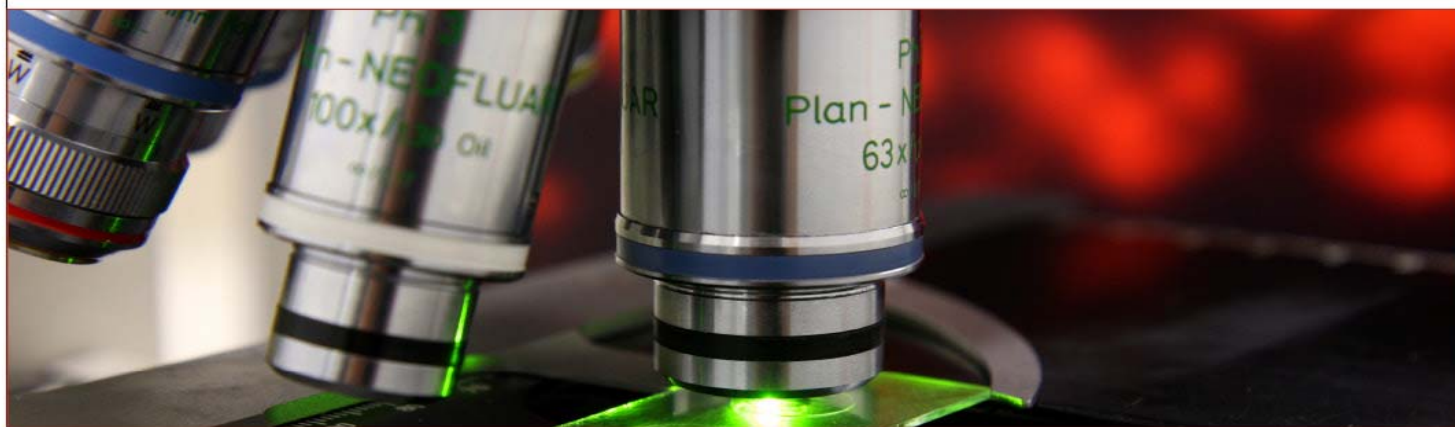


SÉMINAIRES ET CONFÉRENCES



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« Bioprospecting and Natural Product Biosynthesis in Gram-negative Bacteria »

For over fifty years natural products were the primary feedstock for new molecular probes and drugs. As the majority of these were made by bacteria or fungi this spurred a massive industrial effort to discover new microorganisms and characterize their metabolites. Unfortunately, amidst high costs and diminishing returns most of these efforts were discontinued decades ago.

Recent advances in bioinformatics allow us to see the biosynthetic capability of bacteria, revealing that many strains are far richer in biosynthetic gene clusters than expected. According to current estimates, only 10-20% of secondary metabolites are produced during laboratory growth. Prior screening has only found this minority, with the bulk of compounds unseen.

Through a combination of bioprospecting and genetic manipulations we are seeking out new natural products, with a particular focus on antibiotics from Gram-negative bacteria. This includes previously characterized *Photorhabdus* spp., from which we can learn the secrets to unlocking natural product biosynthesis, as well as newly discovered myxobacteria from across Québec.



Faculté de médecine
Département de biochimie
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Université 
de Montréal

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**Pavillon Roger-Gaudry
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