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**Dr Vincent Martin**

Department of Biology, Concordia University  
Canada Research Chair in Microbial Genomics and Engineering

**Mercredi le 09 mai à 11h00**  
**Auditorium Hydro-Québec, salle 1210 pavillon Marchand**  
**Université Laval**

**Drugs from bugs: The large scale sequencing of plant transcriptomes  
and the reconstitution of natural product biosynthetic pathways in  
yeast**

Plants can be considered the world's best chemists in terms of their ability to produce an immense diversity of molecules based on a myriad of skeletal structures and functional group combinations. The unparalleled biosynthetic capacity of plants has long been exploited through their use as traditional medicines and later the medical and commercial application of pure plant metabolites including pharmaceuticals, flavours and fragrances. The number of enzymes involved in creating metabolic diversity in plants is staggering. Remarkably, this catalytic diversity has remained largely untapped for the industrial production of high-value chemicals. Large-scale and ultra-high throughput DNA sequencing provides a means to accelerate the discovery of these unique enzymes for the biosynthesis of complex plant metabolites, enabling their production in microbial hosts. This presentation will describe a pipeline for the large scale sequencing of plant transcriptomes and the discovery and reconstitution of plant derived alkaloid biosynthetic pathways in *S. cerevisiae*.

Hôtes: Pr Michel Guertin et PROTEO

**Cordiale bienvenue à toutes et à tous!**