

# Biology Seminar



Western  
UNIVERSITY · CANADA

12:30 - 1:30 pm  
Friday, March 11, 2022  
Via Zoom



**Mehran Dastmalchi**  
Assistant Professor  
Department of Plant Science  
McGill University

## A metabolic shift brought on by a lesion-mimic phenotype

Plants produce a diverse array of specialized metabolites, contributing to or inspiring many medicines in use today. The study of plant metabolism has revealed the secrets of plants such as opium poppy and *Catharanthus roseus*, responsible for a host of analgesic and anticancer drugs. The first step in leveraging plant biochemistry is knowledge of the genes, enzymes, and auxiliary components required to convert simple compounds to complex drugs. In this talk, I will describe a *C. roseus* mutant with an interesting chemical and lesion-mimic phenotype. Such studies can constitute crucial first steps in looking for “unknown unknowns” in plant metabolic pathways. I will allude to findings from previous work on morphine biosynthesis as signposts along the path to discovery.

