

AGRI 5710/5705: Graduate Module Course

Chemistry of Natural Compounds

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Course Objectives:

The aim of this course is giving an introduction to plant secondary metabolites, including

- An overview of plant secondary metabolism
- Classes, functions and biosynthesis of terpenoids, phenolics and alkaloid
- Introduction to biologically active major plant secondary metabolites

Course Description:

This graduate module provides a basic knowledge about the perspectives of plant secondary metabolites with a connection to the current scientific knowledge and their ecological functions, biosynthesis and metabolic control, biological activity and economic impact.

Lecture and Laboratory Outline

This graduate module consists of combination of lectures, discussions, reading/writing assignments, a mini-review and a presentation. Lectures, class discussions, and assignments will cover introduction to plant secondary metabolism, biosynthesis, class and functions of terpenoids, phenolics and alkaloids, and introduction to biologically active major plant secondary metabolites.

The writing of a mini-review will provide an opportunity to explore and expand knowledge on a specific topic within plant secondary metabolites. Students will share the information of the literature review with the class in an oral presentation toward the end of the course.

Evaluation Methods:

Participation in class activities	10%
Assignments (paper discussion)	10%
Writing a mini-review	60%
Oral Presentation	20%

Assignments: Research Paper Discussion and Mini-review

The mini-review will consist of a 15-20 (double-spaced) pages essay written about a specific plant secondary product of your choice.

You are encouraged to discuss the topic and content of your mini-review with the instructor before you begin on writing.

Presentation:

You will present a 20 min talk to the class on the topic you have written your mini-review. Students are encouraged to deliver a PowerPoint presentation. Students must deliver a copy of the PowerPoint presentation (as a CD-copy or e-copy to nfaraone@dal.ca) a day before the scheduled time for your presentation.

Prerequisites

An undergraduate course of Organic Chemistry or Biochemistry.