



9. **Human studies statement:** Students in the course are not expected to participate as subjects or researchers. See also [Section E.5](#) of the University Calendar.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. Students are expected to be familiar with <http://www.ucalgary.ca/pubs/calendar/current/sc-5-1.html> of the on-line calendar.

See also <http://www.ucalgary.ca/pubs/calendar/current/e-5.html>.

#### 10. OTHER IMPORTANT INFORMATION FOR STUDENTS:

- (a) **Misconduct:** Academic misconduct (cheating, plagiarism, or any other form) is a very serious offence that will be dealt with rigorously in all cases. A single offence may lead to disciplinary probation or suspension or expulsion. The Faculty of Science follows a zero tolerance policy regarding dishonesty. Please read the sections of the University Calendar under [Section K](#). Student Misconduct to inform yourself of definitions, processes and penalties.
- (b) **Assembly Points:** In case of emergency during class time, be sure to FAMILIARIZE YOURSELF with the information on [assembly points](#).
- (c) **Student Accommodations:** Students needing an Accommodation because of a Disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available at [http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities\\_0.pdf](http://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf).
- Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to the Associate Head of Biological Sciences, Dr. H. Addy by email [addy@ucalgary.ca](mailto:addy@ucalgary.ca) or phone 403 220-3140.
- (d) **Safewalk:** Campus Security will escort individuals day or night (<http://www.ucalgary.ca/security/safewalk/>). Call 220-5333 for assistance. Use any campus phone, emergency phone or the yellow phones located at most parking lot pay booths.
- (e) **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). As one consequence, students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information see also <http://www.ucalgary.ca/secretariat/privacy>.
- (f) **Student Union Information:** VP Academic Phone: 403 220-3911 Email: [suvcaca@ucalgary.ca](mailto:suvcaca@ucalgary.ca)  
SU Faculty Rep. Phone: 403 220-3913 Email: [science1@su.ucalgary.ca](mailto:science1@su.ucalgary.ca), [science2@su.ucalgary.ca](mailto:science2@su.ucalgary.ca) and [science3@su.ucalgary.ca](mailto:science3@su.ucalgary.ca);  
Student Ombuds Office: 403 220-6420 Email: [ombuds@ucalgary.ca](mailto:ombuds@ucalgary.ca); <http://ucalgary.ca/provost/students/ombuds>
- (g) **Internet and Electronic Device Information:** You can assume that in all classes that you attend, your cell phone should be turned off unless instructed otherwise. Also, communication with other individuals, via laptop computers, Blackberries or other devices connectable to the Internet is not allowed in class time unless specifically permitted by the instructor. If you violate this policy you may be asked to leave the classroom. Repeated abuse may result in a charge of misconduct.
- (h) **U.S.R.I.:** At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses ([www.ucalgary.ca/usri](http://www.ucalgary.ca/usri)). Your responses make a difference - please participate in USRI Surveys.

Department Approval \_\_\_\_\_ ORIGINAL SIGNED \_\_\_\_\_ Date \_\_\_\_\_

UNIVERSITY OF CALGARY  
DEPARTMENT OF BIOLOGICAL SCIENCES  
COURSE INFORMATION SHEET

**BIOLOGY 505**  
**MEDICINAL PLANT BIOCHEMISTRY**

TERM: Winter 2016 SECTION NO: L01

PREREQUISITES: Biology 331 and Biochemistry 393

ANTIREQUISITES: Credit for Biology 505 and Botany 503 will not be allowed.

A student may not register in a course unless he/she has a grade of at least C- in each prerequisite course.

COURSE COORDINATOR: Dr. D.K. Ro

LECTURERS: Dr. D.K Ro BI 393 220-7099  
Dr. J. Hagel BI 475 220- 5238

LECTURES: MWF 12:00 EDC 264

TEXT: Recommended: Plant Biochemistry and Molecular Biology. Hans-Walter Heldt., Oxford University Press, 1997.

Biochemistry & Molecular Biology of Plants. Buchanan, B., W. Grissem & R. Jones, American Society of Plant Physiologists, 2000.

MARK DISTRIBUTION: A. Composition of Final Grade

Midterm Exam	25 %	(Feb 12, 2016; In-class exam)
Seminar	20 %	
Term Paper	20 %	
Final Exam	35 %	

B. Final Exam

There will be a Final Examination scheduled by the Registrar's Office.

C. Components of course for which a passing grade is essential

A passing grade is required for the final examination and laboratory reports.

GRADING SCALE:

A+	>90%
A	85%
A-	80%
B+	77%
B	73%
B-	70%
C+	67%
C	63%
C-	60%
D+	55%
D	50%
F	<50%

TENTATIVE LECTURE SCHEDULE

<u>Date</u>	<u>Topic</u>	<u>Instructor</u>
January 11	Introduction – Natural products	DKR
January 13	Bioactivities of natural products	DKR
January 15	Terpenoid introduction	DKR
January 18	Terpenene synthase mechanism.	DKR
January 20	Terpenoid metabolism I	DKR
January 22	Terpenoid metabolism II	DKR
January 25	Terpenoid metabolism III	DKR
January 27	Terpenoid regulation	DKR
January 29	Terpenoid application	DKR
February 1	Carotenoid principle	DKR
February 3	Carotenoid biosynthesis I	DKR
February 5	Carotenoid biosynthesis II	DKR
February 8	Carotenoid application	DKR
February 10	Review I	DKR
February 12	In-class exam	DKR
February 15-19	READING WEEK	
February 22	Benzylisoquinoline alkaloids introduction	JH
February 24	Benzylisoquinoline alkaloids metabolism	JH
February 26	Benzylisoquinoline alkaloids biotechnology	JH
February 29	Monoterpenoid indole alkaloids introduction & metabolism	JH
March 2	Monoterpenoid indole alkaloids metabolism & biotechnology	JH
March 4	Amphetamine protoalkaloids	JH
March 7	Introduction of phenylpropanoid	DKR
March 9	Bioactive phenylpropanoid	DKR
March 11	Phenylpropanoid biosynthesis I	DKR
March 14	Phenylpropanoid biosynthesis II	DKR
March 16	Phenylpropanoid regulation	DKR
March 18	Phenylpropanoid metabolic engineering	DKR
March 21	Plant lipid I	DKR
March 23	Plant lipid II	DKR
March 25	GOOD FRIDAY	
March 28	Antibiotics	DKR
March 30	Non-ribosomal peptide I	DKR
April 1	Non-ribosomal peptide II	DKR
April 4	Polyketide I	DKR
April 6	Polyketide II	DKR
April 8	Plant insulin (Guest lecture)	DKR
April 11	Plant biotechnology (Guest lecture)	DKR
April 13	Review II	DKR