

Endocrine and Metabolic Diseases

CAPS 424

2:00 – 3:45 pm Tuesdays and Thursdays, via Zoom (CANVAS)

CAPS 424 – Endocrine and Metabolic Diseases – will examine how cells, tissues, organs and organ systems communicate with each other using hormones. We will study the types of hormones, how they signal within tissues, and the roles of various hormones in regulating processes including metabolism, growth, stress, and reproduction. We will also examine how endocrine alterations can lead to disease states, along with approaches for disease diagnosis and treatment. Each topic in the course is taught by experts in that area including clinician scientists and industry leaders who are developing innovative new diagnostics and therapies.

INSTRUCTORS

Timothy Kieffer PhD (Course Coordinator), Department of Cellular & Physiological Sciences, Department of Surgery, Life Sciences Institute, tim.kieffer@ubc.ca

Bruce Verchere PhD, Department of Pathology and Laboratory Medicine, Department of Surgery, BC Children's Hospital Research Institute, bverchere@bcchr.ca

Dan Luciani PhD, Department of Surgery, BC Children's Hospital Research Institute, dluciani@bcchr.ca

Elizabeth Rideout PhD, Department of Cellular & Physiological Sciences, Life Sciences Institute, rideoute@mail.ubc.ca

William Gibson MD, PhD, Department of Medical Genetics, BC Children's Hospital Research Institute, wtgibson@bcchr.ca

Pawel Kindler PhD, Department of Cellular & Physiological Sciences, Life Sciences Institute, pawel.kindler@ubc.ca

Jon Havelock MD, Department of Gynecologic Reproductive Endocrinology and Infertility, Pacific Centre for Reproductive Medicine, JHavelock@pacificfertility.ca

Victor Viau PhD, Department of Cellular & Physiological Sciences, Life Sciences Institute, viau@mail.ubc.ca

Dina Panagiotopoulos MD, Division of Endocrinology, Department of Pediatrics, BC Children's Hospital Research Institute, dpanagiotopoulos@cw.bc.ca

CONTACTS FOR QUESTIONS

For general course related questions, contact Timothy Kieffer. For course content specific questions, contact the relevant instructor. Please use the email addresses provided above as instructors may not see messages posted on Canvas. ****Include "CAPS 424" in the subject line of all emails!**

Anticipated response times are < 24hrs.

SCHEDULE

All lectures will be live (2:00 to 3:45 pm) on the dates scheduled below, via scheduled Zoom links. Relevant background material and slides will be posted on Canvas.

DATE	TITLE	LECTURER
Jan. 12	Introduction	Kieffer
Jan. 14	Peptide hormone biosynthesis/processing	Verchere
Jan. 19	Receptors	Luciani
Jan. 21	Intracellular signalling pathways 1	Luciani
Jan. 26	Intracellular signalling pathways 2	Luciani
Jan. 28	Downstream effectors of signalling I: mRNA translation	Rideout
Feb. 2	Downstream effectors of signalling II: lipid metabolism	Rideout
Feb. 4	Adipose tissue and adipokines	Kieffer
Feb. 9	Regulation of energy balance & body weight	Gibson
Feb. 11	<i>Mid-term exam (material Jan 12 to Feb 9)</i>	Kieffer
Feb 16, 18	Mid-term Break	
Feb. 23	Pancreas I – Enteroinsular Axis	Kieffer
Feb. 25	Pancreas II - Regulation of Insulin and Glucagon	Kieffer
Mar. 2	Pancreas III – Diabetes	Kieffer
Mar. 4	Reproductive endocrinology I	Kindler
Mar. 9	Reproductive endocrinology II	Kindler
Mar. 11	Reproductive endocrinology III	Kindler
Mar. 16	Clinical perspective on fertility	Havelock
Mar. 18	Adrenal and the SNS	Viau
Mar. 23	Hypothalamus/pituitary	Viau
Mar. 25	Opioid peptides	Viau
Mar. 30	Clinical perspective on adrenal & pituitary malfunction	Panagiotopoulos
Apr. 1	<i>Student presentations</i>	All faculty
Apr. 6	<i>Student presentations</i>	All faculty

STUDENT ASSIGNMENT & EVALUATIONS

All course material will be posted on the course website which you will access through your Canvas dashboard: www.canvas.ubc.ca/login

Your marks will be derived from two exams (each worth 35%) and a 5 min recorded presentation (20% mark from faculty, 10% mark from peers).

Presentations will be submitted as 5 min recordings made using Kaltura Capture. They are due to be uploaded on Canvas by 12:00 noon April 1; the system will not allow submissions after 12:00. Detailed instructions for using Kaltura Capture and submitting your assignment are located on Canvas and are also linked below:

[Install Kaltura Capture](#)

[Record Screen and Webcam with Kaltura Capture](#)

[Submit a Video Assignment using Kaltura](#)

Your presentation can be on any topic in the field of Endocrinology that you think may be both informative and of interest to your peers. For instance, you may explain how a particular endocrine disease impacts patients lives, the mechanisms by which a current treatment works, or explain a new treatment strategy under development. It should contain content that is at a depth commensurate with the course material; i.e. beyond textbook level. Use the 5 min time slot effectively, with an appropriate balance of introduction and details of your topic. Do not have too much text on your slides; images / drawings can be effective. See the [marking rubric](#) for further tips. Note, you should record both yourself speaking and the slides.

You are required to watch all presentations and give them a rating with brief feedback. Class time (April 1 and April 6) is set aside for this, although since presentations are recorded, you can assess them any time at your convenience on Canvas. Your peer reviews are due by 12:00 noon, April 8. Peer Review instructions are found here: [How to Submit a Peer Review](#)

Course expectations: attend all classes, read any assigned background materials in advance, participate in class discussions, submit assignment on time.

Final Marks will be calculated based upon the following:

5 min presentation = 20% of final mark

Peer evaluations on presentation = 10% of final mark (average mark from all students)

Mid-term exam = 35% of final mark

Final exam = 35% of final mark

**presentation must be uploaded to Canvas by 12:00 noon April 1. Any anticipated delays in submission should be discussed and pre-approved with the course coordinator as far in advance of the deadline as possible given the particular circumstances causing the delay, and penalties will be decided on a case-by-case basis. Without approval at least 24hrs prior to the deadline, late submissions will not be accepted, and a mark of 0 will be given.

ONLINE ETIQUETTE

- *In synchronous meetings*
 - **ARRIVE EARLY** Join the session a few minutes before the start time to ensure that your Internet connection, webcam, and microphone are functioning properly.
 - **MUTE YOUR MIC** Please mute your microphone as it may pick up on background noises which can distract other participants.
 - **TURN OFF YOUR VIDEO** This may help the quality of the session by reducing internet usage
 - **USE THE CHAT FEATURE** If you would like to ask a question, please type your question into the chat box. The instructor will review questions / comments at intervals throughout each class.
- *On discussion boards*
 - **NO PROFANITY or DEROGATORY TERMS** Everyone in the class and your instructional team can see course discussion boards. Please be polite and professional in your messaging.
 - **RESPECTFUL ENVIRONMENT** As per the UBC statement on Respectful Environment, disrespectful behaviour will not be tolerated. Do your part to ensure that everyone feels comfortable using the discussion board as a resource.

RECORDING OF SYNCHRONOUS VIDEO LECTURES

Live (synchronous) lectures will be recorded for use by students enrolled in this course. Please be aware that student participation, such as chat messages, will be captured as part of these recordings.

Recording will only be used during regular classes, and will be stored only on the instructor's computer and in the Canvas shell for the course.

USE OF INTEGRITY STATEMENTS

You may be asked to agree to an academic integrity statement as part of testing or other assessment activities. As a student in a professional program, doing your part to adhere to course rules and upholding the academic integrity of your educational experience is in your best interest. Every effort will be made to ensure that assessment is fair for all students in the course. You can do your part by following the rules set out by your course instructors, and seeking assistance or clarification if you have any questions.

UBC POLICY ACADEMIC INTEGRITY

The academic enterprise is founded on honesty, civility, and integrity. As members of this enterprise, all students are expected to know, understand, and follow the codes of conduct regarding academic integrity. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences. For more information, see Appendix 1 ("Ethical Research Practices: Upholding Academic Integrity") and <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,286,0,0>

ACADEMIC CONCESSION

The University is committed to supporting students in their academic pursuits. Students may request academic concession in circumstances that may adversely affect their attendance or performance in a course or program. Students who intend to, or who as a result of circumstance must, request academic concession must notify their instructor, dean, or director as specified in the link below.

<https://students.ubc.ca/enrolment/academic-learning-resources/academic-concessions>

STATEMENT ON UNIVERSITY'S VALUES AND POLICIES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious, spiritual and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here: <https://senate.ubc.ca/policies-resources-support-student-success>

LAND ACKNOWLEDGMENT

This course is held on the UBC Point Grey (Vancouver) campus, which sits on the traditional, ancestral, unceded territory of the x^wməθk^wəyəm (Musqueam) First Nation.