

ADVANCED TOPICS IN SIGNAL TRANSDUCTION AND CELL CYCLE REGULATION

BCHM 5801, Spring 2020 (3 credits)

INSTRUCTORS: Faculty of the Signaling and Cellular Regulation Training Program

COORDINATOR: Jim Goodrich

OFFICE: JSCBB B321

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CLASS TIMES: Tuesdays and Thursdays, 2:00-3:15 pm, JSCBB B331

COURSE MATERIALS: Lecture notes

OFFICE HOURS: By appointment, JSCBB B321

COURSE WEBSITE: <https://cuboulder.instructure.com/courses/57566>

EXAMS AND GRADING:

Student presentation	40%
Class participation	10%
Final exam (take home)	50%

ORGANIZATION AND GOAL OF THE COURSE: Lectures and discussion on topics in signaling and cellular regulation, by CU-Boulder's own masters in this field. We will cover fundamental pathways and mechanisms as well as new directions. Our goal is for students to learn how to design a research program to discover and characterize a novel signaling pathway.

SCHEDULE:

January 14, 16	Jim Goodrich	Introduction; Control of Pol II transcription termination
January 21, 23	Justin Brumbaugh	Chromatin signaling, post-transcriptional regulation
January 28, 30	Leslie Leinwand	Using pythons to define novel signaling pathways
February 4, 6	Jingshi Shen	Insulin signaling and membrane trafficking
February 11, 13	Rob Batey	RNA-based mechanisms of genetic regulation
February 18, 20	Jen Kugel	Binding and kinetics in signaling
February 25, 27	Lee Niswander	Regulation of developmental signaling
March 3, 5	Jim Goodrich	Student presentations
March 10, 12	Jim Goodrich	Student presentations
March 17, 19	Rui Yi	Mammalian development, stem cell maintenance
March 24, 26	Spring Break - No class	
March 31, April 2	Ed Chuong	Innate immune signaling
April 7, 9	Gia Voeltz	ER dynamics and signaling
April 14, 16	Robin Dowell	Transcription factors and transcriptional regulation
April 21, 23	Chris Ebmeier	Mass spec proteomics applied to signaling
April 28, 30	Sabrina Spencer	MAPK and cell-cycle signaling
May 11	SCR Symposium	

UNIVERSITY POLICIES

Accommodation for Disabilities

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your faculty member in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the [Disability Services website](#). Contact Disability Services at 303-492-8671 or dsinfo@colorado.edu for further assistance. If you have a temporary medical condition or injury, see [Temporary Medical Conditions](#) under the Students tab on the Disability Services website.

Classroom Behavior

Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation or political philosophy. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. For more information, see the policies on [classroom behavior](#) and the [Student Code of Conduct](#).

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the policy may include: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. All incidents of academic misconduct will be reported to the Honor Code (honor@colorado.edu); 303-492-5550). Students who are found responsible for violating the academic integrity policy will be subject to nonacademic sanctions from the Honor Code as well as academic sanctions from the faculty member. Additional information regarding the Honor Code academic integrity policy can be found at the [Honor Code Office website](#).

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

The University of Colorado Boulder (CU Boulder) is committed to fostering a positive and welcoming learning, working, and living environment. CU Boulder will not tolerate acts of sexual misconduct, intimate partner abuse (including dating or domestic violence), stalking, or protected-class discrimination or harassment by members of our community. Individuals who believe they have been subject to misconduct or retaliatory actions for reporting a concern should contact the Office of Institutional Equity and Compliance (OIEC) at 303-492-2127 or cureport@colorado.edu. Information about the OIEC, university policies, [anonymous reporting](#), and the campus resources can be found on the [OIEC website](#). Please know that faculty and instructors have a responsibility to inform OIEC when made aware of incidents of sexual misconduct, discrimination, harassment and/or related retaliation, to ensure that individuals impacted receive information about options for reporting and support resources.

Religious Holidays

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. See the [campus policy regarding religious observances](#) for full details.