

BICD 194

Stem cells, regeneration, and regenerative medicine

Spring Quarter, 2014

Brief course description: In this course, you will learn how to critically read, present, and discuss scientific literature in the field of stem cell and regeneration research and regenerative medicine. Our goal is engaging discussions about a wide range of topics, spanning from flatworm regeneration to stem cell therapy.

Instructor: Eva-Maria S. Collins, emscollins@physics.ucsd.edu

Please include BICD194 in your subject line of any emails concerning the class.

Office location/hours: Urey Hall 7218 - Wednesdays 9-10AM or by appointment.

Seminar time and location: Wednesdays, 11:30AM-1:00PM, York 3010

Assignments: Except for the introductory seminar in the first week and the final discussion in the last week, students will give group-presentations about assigned scientific papers, which will then be discussed in detail by the entire class. Presentations will be peer-reviewed and a short summary of the discussion will be required from every student. This course is highly interactive and everyone is expected to participate in the discussions.

Seminar format: Each week, as member of a group, students will present an assigned research paper and lead a discussion about it. Every student will present twice during the quarter: a group presentation and a final (solo) presentation. Expect a min. of 4 hrs of reading per week, and more time when presenting. **Guidelines for presentations and the reading list for the quarter will be provided in the first meeting.** Papers can be downloaded from the web in pdf format.

Presentations: As member of a group, you will participate in an approx. 60-minute long presentation of an assigned research paper. The group should aim for about 45min presentation and 15min discussion. Each member of the group must be prepared to answer questions and lead a discussion of their portion of the group presentation. Because the background of students may differ, part of your job as a presenter is to bring everyone to the same level by providing the necessary background for understanding the part of the paper you are in charge of.

To ensure a smooth presentation, members of a group must meet at least once before class to practice their presentation. I suggest exchanging phone numbers and email addresses so you can easily get in touch outside class. Every group should assign a “presentation leader” who will be

in charge of putting all slides together as the final presentation, which should consist of around 4-5 slides per member about a particular part of the paper. The presentation leader will also be in charge of setting up the designated group computer on the day of the presentation.

You are expected to read EVERY paper before class and actively participate in its discussion. After each presentation (except your own), you will write a short evaluation of the presentation and a summary (1 page max) of the in-class discussion. You will have approx. 30min in class for this, but can also do this after class if you prefer. **These evaluations and summaries will count toward 15% of your course grade.** Evaluations/summaries need to be TYPED and handed in as print-copy at the beginning of next week's class (no emails please!).

Course overview:

week 1 – introductory lecture (Prof. Collins)
week 2 – Student presentations and discussions 1 – stem cells
week 3 - Student presentations and discussions 2 - stem cells
week 4 - Student presentations and discussions 3 – regeneration
week 5 - Student presentations and discussions 4 – regeneration
week 6 - Student presentations and discussions 5 - induced pluripotent stem cells
week 7 - Student presentations and discussions 6 - induced pluripotent stem cells
week 8 - Student presentations and discussions 7 – regenerative medicine
week 9 - Student presentations and discussions 8 – regenerative medicine
week 10 - Final presentations (all students)

Final presentations: In the last week of this course, every student is required to give a short 5-10min presentation based on the topics we discussed in class.

Grading policy: There will be **no final exam**. The grade for this class will be a combination of student group presentation (40%), in-class participation (30%), evaluations/summaries (15%), and final (solo) presentation (15%).

Expectations for an A: Perfect attendance, excellent presentations, well-written summaries and active participation in the discussions.

Attendance:

You are expected to attend all seminars. Attendance will be taken at the beginning of class. You need to sign up in the provided sign-up sheet. If you know ahead of time that you will not be able to present on the assigned date, you are expected to find another student for swapping spots and inform the instructor ahead of time. Acceptable excuses for missing a class which will not affect your grade are: documented medical emergency; family emergency; university sponsored event; religious holiday.