

BISP 170, Spring Quarter, 2016

Bioscholars Seminar: "Medical Controversies"

Instructor: Dr. Kathleen French

Seminar meetings

Mon 3:30-6:00 PM

Bonner Hall 2130

General course description: *2 units, letter graded (or P/NP)* Each year, this student-organized seminar course considers several aspects of a current topic in biology. This year we'll consider "Medical Controversies" and discuss cutting-edge (or even ancient) therapeutic approaches that may become widely used. We'll consider the process by which results obtained in the basic sciences are translated into safe and effective clinical practice, including the constraints that must be satisfied before any procedure, drug, or device can legally and ethically be used to treat patients. Speakers will also discuss their own contributions to progress toward new therapies.

Contacting your instructor: Email: kfrench@ucsd.edu Office: Pacific Hall 3123B (Please be sure to include BISP 170 in the subject line of any e-mail that you send to me, otherwise it may end up in my SPAM filter and I may never read it!)

Schedule for Spring Quarter, 2016

Week	Date	Speaker	Topic
1	March 28	The BioScholars Seminar Planning Committee	An introduction to BISP 170; How to successfully read papers from the primary research literature
2	April 4	Dr. Kathleen French (Biological Sciences/Neurobiology)	An introduction to medical controversies: using bacterial infections to treat brain tumors--a good idea?
3	April 11	Dr. Antonio Gonzalez Peña (UCSD Med/Pediatrics)	The gut microbiome and the potential usefulness of fecal transplants
4	April 18	Dr. Michael Kalichman (UCSD Med/Pathology)	Research, medicine, and ethics
5	April 25	Dr. Stephanie Cherqui (UCSD Med/Pediatrics)	The complications of gene therapy
6	May 2	Dr. Ethan Bier (Biological Sciences/Cell and Developmental Biology)	The promise and potential dangers of genome editing using CRISPR-CAS9 techniques
7	May 9	Dr. Thomas Marcotte (UCSD Med/Psychiatry)	The promise and challenges of using marijuana therapeutically
8	May 16	Students in the course	Wrap-up: Each student will BRIEFLY describe the content of his or her final paper

PAPERS ARE DUE BY 5 P.M. ON MAY 27. TURN THEM IN AT DR. KATHY FRENCH'S OFFICE (Pacific Hall 3123B). This timing is intended to finish up the course, leaving your 10th week of the quarter free of any requirements in BISP 170!

Course Assignments and Grading Your course grade (letter or P/NP will be determined this way:

1. Attendance (25%)

For 8 weeks, the class will meet weekly for approximately 2 hours. Each student can miss one session, but more than one absence will seriously degrade the course experience and could lower the letter grade or result in a grade of no-pass. **The official record of attendance is a sign-in sheet that will be available at every class meeting. Please be SURE to sign in every week.**

2. Readings and discussion questions (25%)

Each speaker will choose approximately two papers from the primary research literature, and these papers should be read before the speaker's talk. Each assignment will be posted on the course Web site at least one week before the speaker talks to us, and PDF versions of the papers will be sent via e-mail to students who are registered in the course. **(Please notice!! The URL for the Web site is classes.biology.ucsd.edu/bisp170.SP16, and it is not password-protected so anyone can open it.)** Every student in the class is expected to have read the assigned papers before the associated class session, and based on their reading, each student will write and submit TWO (or more) interesting questions that they would like to discuss in class. Questions should be sent to Dr. Kathy French (kfrench@ucsd.edu), and they will be due **by 6 p.m. on the Sunday night before each class meeting (that is, the evening just before our speaker talks)**. Please think about your questions: you may be called on to ask one of your questions during the discussion.

3. Final paper (50%)

Each student will write a paper that elaborates on a topic of his or her choice, but the topic should be based on the talk given by one of the speakers during the course. The papers must be properly formatted AND must include citation of **at least ONE source from the primary research literature** that extends beyond the reading assignment for that topic. This paper--and any others that are cited--must be from the peer-reviewed scientific literature (not from a Website like WebMD). The paper must be 3 pages long, with 1-inch margins, written in 12-pt Times New Roman or 11-pt Arial, and double-spaced. A **hard copy** of the paper is due **by 5 p.m. on Friday, May 27**. Turn your paper in to Dr. Kathy French or at her office (Pacific Hall 3123B) if you don't do it in person. No electronic copies.

Learning Goals

We expect that this course will:

- develop students' skills in discussing important topics in medicine, especially their broader ethical implications
- foster in students the oral and written skills that contribute to successful scientific communication
- promote students' development as scientifically trained individuals who are also sensitive to the social, political, cultural, and ethical context of scientific research
- educate students about the continuing contributions of scientists at UCSD and other local institutions to research that addresses the medical and ethical challenges of today