

University of Southern California

GERO592 Syllabus

Multidisciplinary Research Seminar in Aging

Spring 2023

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Class meeting time: Thursdays 12:00-1:00PM, GER224, Colloquium
Thursdays 1:00PM-1:50PM, GER224, Discussion

Office Hours: by appointment.

Class Description: A research seminar (colloquium) for doctoral and post-doctoral trainees aiming to introduce current topics in gerontology.

Course Objectives: The primary aim of this seminar is to provide students access to cutting edge research and to interact with leaders in the gerontology research field. The main goal of this course is to introduce students to the concepts of molecular and genetic regulation of healthy aging, lifespan, and age-related diseases.

Learning Strategies

The learning objectives will be accomplished by means of several strategies, including-but not limited to- the following:

- attending seminar lectures
- participating in meet the speaker Q&A discussions
- participating in sessions on literature review of invited speaker
- preparing and delivering a research presentation
- preparing and delivering a research proposal

Class Schedule:

Date	Speaker/Class	Topic
01/12/2023* Includes discussion with the speaker	Richard Morimoto Northwestern University 12-1PM, GER224 1-1:50PM, discussion	Stress and Proteostasis Discussion with the speaker
01/19/2023	Angela Gutchess Brandeis University 12-1PM, GER224 1-1:50PM, discussion	Age and culture on memory Syllabus Review
01/26/2023	Lauren Brown San Diego State University 12-1PM, GER224 1-1:50PM, discussion	Faculty Candidate Interview Discussion about faculty interviews
02/02/2023	Lynn Hasher University of Toronto	How attention changes with age

	12-1PM, GER224 1-1:50PM, no discussion	
02/09/2023* Includes discussion with the speaker	Anne Brunet Stanford University 12-1PM, GER224 1-1:50PM, discussion	Molecular basis of longevity Discussion with the speaker
02/16/2023* Includes discussion With the speaker	Gia Voeltz University of Colorado, Boulder 12-1PM, GER224 1-1:50PM, discussion	Endoplasmic reticulum shape and dynamics Discussion with the speaker
02/23/2023	Gretchen Akema Independent Consultant 12-1PM, GER224 Journal Club – Morimoto Lab 1-1:50PM, journal club	Gerontology's Interdisciplinary Power Mitochondrial Stress Restores the Heat Shock Response and Prevents Proteostasis Collapse during Aging
03/02/2023	No colloquium 12-1:50PM, GER224 Journal Club – Brunet Lab	Males shorten the life span of <i>C. elegans</i> hermaphrodites via secreted compounds
03/09/2023	No Colloquium 12-1:50PM, GER224 Journal Club – Voeltz Lab	Fission and fusion machineries converge at ER contact sites to regulate mitochondrial morphology
03/16/2023	No class – spring recess	
03/23/2023	Carolyn Gibson University of California, SF 12-1PM, GER224 1-2PM, no discussion	
03/30/2023	Derek Isaacowitz Northeastern University 12-1PM, GER224 1-2PM, no discussion	Attention and emotion through adult lifespan
04/06/2023* Includes discussion with the speaker	David Raichlen University of Southern California 12-1PM, GER224 1-2PM, discussion	Human evolutionary history on physiological variation Discussion with the speaker
04/13/2023	No colloquium Student Presentations 12-1:50PM, GER224, presentations	
04/20/2023	No colloquium	

	Student Presentations 12-1:50PM, GER224, presentations	
04/27/2023	No colloquium Student Presentations 12-1:50PM, GER224, presentations	

Grading:

Attendance:	10%
Participation:	20%
Journal Club:	20%
Presentation:	25%
Research Proposal:	25%

Attendance: Attendance to all colloquiums and discussion sessions is mandatory. You must have pre-approval to miss any colloquium or discussion sessions, except for cases of medical or emergency reasons, which can be addressed after an absence. All missed sessions must be made up with a writing assignment, which can be.

Research proposal:

Each student will write a research proposal on one of the topics that will be discussed during the colloquium seminar series. Students are free to pick whichever topic they want, and research proposals do not have to be identical to what the speaker has presented as long as there is some relevance to the topic. Students will write a specific aims page to briefly present a research topic. It should include sufficient background and introduction to justify the significance of the research topic, a testable hypothesis, brief experimental methods to test the hypothesis, and expected results that would validate the hypothesis. The specific aims cannot exceed 1 page, Arial, 11-point font, single-spaced, 0.5-inch margins. There is no penalization for using less than 1 page as long as the required materials are all present, but any submissions exceeding the allotted space will get an automatic failure. References can be put on a separate page and do not have any space limitations. Students will be graded on innovation, feasibility, and clarity. While grammar will generally not be a focus of grades, major errors in grammar/punctuation that make the material incomprehensible will affect the grade.

Presentations:

During the last 3 weeks of class, each student will do a short (10 min) presentation on their research proposal topic. Students are free to present in any style of their choosing, but should generally provide background, rationale/justification, potential experiments, and expected results. Presentations will be timed. While there is no minimum requirement for time, there will be a hard stop at 10 minutes, followed by 5 minutes of Q&A. The students will be graded on slide quality, presentation quality, clarity, and ability to field questions.

Journal Club:

There are three journal clubs scheduled during the course of the semester. You will be assigned primary literature papers published by seminar speakers, which you are responsible to read. Please have a firm understanding of the papers prior to coming to class, as your participation will be graded during these discussions. Discussion leaders will be assigned to each journal club.

Prerequisites:

The only pre-requisite for this course is scientific curiosity. Students are not expected to know anything specific about molecular biology or genetics. This class is not meant to teach advanced molecular biology or genetics (such classes are already in existence). The emphasis in this course is on practical implementation of scientific concepts.

Statement for Students with Disabilities:

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m.-5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity:

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. Scampus, the Student Guidebook, contains the Student Conduct Code in Section 11.00, while the recommended sanctions are located in Appendix A:

<http://www.usc.edu/dept/publications/SCAMPUS/gov/>. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: <http://www.usc.edu/student-affairs/SJACS/>.

Policy against Cheating:

We follow a zero-tolerance policy: any student engaging in cheating will fail the course and will be reported to the USC Student Judicial Affairs and Community Standards. All USC students are responsible for reading and following the Student Conduct Code.

<https://sjacs.usc.edu/students/academic-integrity/>

This policy does not apply to discussion or exchange of ideas. On the contrary, such interactions represent an important way to thoroughly understanding complex questions in molecular genetics. Students must write their own papers. All written assignments will be turned in through blackboard and analyzed for plagiarism.

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Resources:

Web page: A class website will be setup on Blackboard containing information about the course: syllabus, laboratory handouts, grades, miscellaneous information about weekly class activities, and an email directory of all people in the class. Use it as much as you find it useful. The web page can be accessed through the main stem <https://Blackboard.usc.edu>.