CHEM 4820

BIOMEDICAL SCIENCE RESEARCH SEMINARS & PRESENTATIONS

FALL SEMESTER 2017  CALL NUMBER: 94931
FRIDAYS 2:00 – 3:00 (2-3:40) PM IN KING HALL LECTURE HALL 2
CALIFORNIA STATE UNIVERSITY, LOS ANGELES

COURSE INSTRUCTORS

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Dr. Jamil Momand  Annenberg SC La Kretz Hall 270  (jmomand@calstatela.edu; 343-2361)
Dr. Edith Porter  Annenberg SC La Kretz Hall 335  (eporter@calstatela.edu; 343-6353)
Dr. Robert Vellanoweth  Annenberg SC La Kretz Hall 272  (vllnwth@calstatela.edu; 343-2148)
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Dr. Katrina Yamazaki  Annenberg SC La Kretz Hall 312  (kyamaza@calstatela.edu; 343-2086)

COURSE LEARNING OBJECTIVES

The goals of this course include development of listening and critical skills so that students become active participants in dialogues with seminar presenters. Research seminars are an important medium for presentation of new scientific results, frequently before they have been published. The intent here is that the student will learn to critically evaluate new information presented in the seminar format, and participate in the give-and-take of scientific discourse. The second goal is that students become skilled in presenting aspects of their research projects in both the poster format, and also as brief (15-20 minute) oral presentations.

This weekly seminar series is by design multidisciplinary, and provides opportunities to broaden students’ scientific perspectives. These seminars cover the work of academic and industrial biomedical, behavioral, and mathematical scientists. There are also opportunities for students to develop their own communication skills through presentation in poster sessions and oral talks. The course requires your active participation.

SPRING SEMESTER SEMINARS

The seminar series schedule is listed at http://www.calstatela.edu/centers/moreprograms/biomed_sem.htm, the MORE Programs’ website. Clicking on a seminar title links you to an abstract provided by the speaker, and bibliographic reference to pertinent publications. Clicking on the speaker’s name connects you to the speaker’s website. Clicking on the presenter’s department links you to the speaker’s departmental webpage. Plan to come to each seminar prepared to participate. Please check this website throughout the semester. It will be updated as missing information (such as seminar abstracts, titles) is received.

August 25  Getting the Most out of Professional Meetings
Professor Carlos Gutierrez, Department of Chemistry & Biochemistry
Director, MORE Programs

Sept. 1  Why cancer cells metastasize?
Professor Hani Goodarzi, Department of Biochemistry & Biophysics, Department of Urology, and Helen Diller Family Comprehensive Cancer Center, UC San Francisco

Sept. 8  Inorganic and Materials Chemistry at Wayne State University
KH D2072
Professor Federico Rabuffetti, Department of Chemistry, Wayne State University
Sept. 15  MORE Programs Research Retreat

Sept. 22  Effects of environmental chemicals on male reproduction
         Professor Martine Culty, Department of Pharmacology and Pharmaceutical Sciences,
         University of Southern California

Sept. 29  Characterization of the *Drosophila melanogaster*-specific Sdic region: a case
         example of how recently evolved genes can facilitate species adaptation
         Professor Jose Ranz, Department of Ecology and Evolutionary Biology, UC Irvine

Oct. 6   Targeting the Cell Division Cycle in Cancer
         Professor Jorge Torres, Department of Chemistry & Biochemistry, UCLA

Oct. 13  Lysosomal nitrosative stress: A novel mechanism for obesity-associated
         hepatic insulin resistance
         Professor Ling Yang, Department of Anatomy & Cell Biology, Carver College of
         Medicine, University of Iowa Health Care

Oct. 20  Multifunctional Metal-Organic Frameworks: from Catalysis to Drug Delivery
         Professor Liu, Department of Chemistry & Biochemistry, Cal State LA

Oct. 27  Regulation of the MYC oncoprotein by histone acetyltransferases
         Professor Ernest Martinez, Department of Biochemistry, UC Riverside

Nov. 3   TBA
         Professors Stefan Keslacy and Christine Dy, Department of Kinesiology & Nutritional
         Science, Cal State LA

Nov. 17  Cell Signaling by Protease-activated Receptors
         Professor Joann Trejo, Department of Pharmacology, UC San Diego

Dec. 1   TBA
         Professor Matthew Jackson, Department of Psychology, Cal State LA

Administrative Notes

These seminars are opportunities for you to interact with a broad range of academic and industrial
biomedical scientists and their work. Some speakers also serve as graduate school recruiters, and can provide an
initial contact between you and prospective graduate programs. The University provides some funds for
students to *join seminar speakers for lunch or dinner*. Please contact Lisa Bautista, MORE Programs Grant
Project Administration Coordinator (lbautis3@calstatela.edu; 343-2395) a week in advance if you are interested
in taking advantage of this opportunity to further interact with a particular speaker.

Every seminar is critiqued as a developmental activity. Each session you will receive a form to critique the
seminar. The completed critique form, including your signature, is the official attendance document, and record
of your development as an active listener. *Please be sure to turn it in at the conclusion of the seminar to get
credit for your participation in that seminar (it will not be accepted at any other time).* You must pick up an
evaluation form at the start of the seminar to get credit. If there are multiple speakers, a critique form will be
provided for each.

The seminars start at 2 PM. Please be there on time, particularly as a courtesy to the speaker.

Cell Phones, Laptops, iPads/Tablets
Plan on giving your full attention to the speakers and their work. Keep your laptops and iPads turned off. Please put your cell phones on “vibrate” mode or turn them off during seminar. If you receive a call, ignore it if possible, and call back after the seminar. If you must take the call, discreetly exit the lecture hall, and return after the call.

**Your Role as Active Participant**

Your role in the Biomedical Sciences Seminar Series is not as part of a passive audience but rather as an active participant. Indeed in its best result, the seminar is a dialog between the presenter and the participants. You are expected to be actively involved extracting information from the seminar and contributing to the dialog. Look at seminars as occasions to explore interesting topics in a more active and satisfying way than either reading or listening to lectures. Research on learning shows that we remember far more of what is orally discussed than what is passively listened to or read.

To get something out of a seminar, be prepared to put something in:

a) **Do prior reading.** Background information on the seminar - an abstract provided by the seminar speaker, and bibliographic references to pertinent publications - is available to you in advance by clicking on the seminar title on the MORE Programs Biomedical Sciences Seminar web page (http://www.calstatela.edu/centers/moreprograms/biomed_sem.htm). If you have no background at the time you come to the seminar, you will be unprepared to be part of the discussion that is the essence and purpose of the seminar.

b) **Listen carefully.** An important, and obvious, requisite for success in getting a lot out of a seminar is active listening. Stay focused on the topic.

c) **Take notes** - particularly with a view to points on which you would like to get further clarification or support. An article on taking effective seminar note is attached to this syllabus: Walker, J.H. “Taking notes in seminars - a new improved method” *Biochemical Education* 1999, 27, 211-213. You may wish to start keeping a journal of your seminar notes.

d) **Ask questions.** Be prepared to make your views known. You may feel ill informed or not entirely comfortable with the topic, but what you ask may prompt someone else to speak, and then someone else. Through this process, you and your colleagues will begin to become better informed. There is a hierarchy of questioning (low= 1; high= 5):

1. questions dealing with simple facts and classification
2. questions about simple fact relationships
3. questions about more complex (such as necessary/sufficient) relationships
4. questions about causal relationships or hypotheses, questions about experimental outcomes, questions about controls, questions about relationships between variables, questions about experimental trouble shooting
5. questions formulated with well-defined variables; questions that offer a solution or prediction (that have an embedded hypothesis).

e) **Present a Poster.** Half of MORE and LSAMP-BD participants will present at the First Spring Semester Poster Session; the other half during the other Spring Semester Poster Session. This is detailed later in this syllabus.

f) **Present a Seminar.** If you are a graduating senior or second year MS student, plan on presenting your work in the Spring Semester. Students that did off-campus research will present a poster in the Spring.

g) **Suggest.** We welcome suggestions for speakers or topics for future seminars. Please send these to Dr. Carlos Gutierrez at cgutier@calstatela.edu or to Lisa Bautista at lbautis3@calstatela.edu. We also welcome suggestions for improvement of the series. Contact any of the course instructors, or alternatively use the “Comments or Suggestions” box on the seminar webpage http://www.calstatela.edu/centers/moreprograms/biomed_sem.htm.
Off-Campus Seminar Opportunity

We have implemented a proposal by the Student Advisory Committee that allows you to participate in a different seminar in your discipline. You may substitute any one seminar in the schedule for a seminar at another institution. UCLA, UC Irvine, UC Riverside UC Santa Barbara and UC San Diego, USC (main campus and health sciences campus), the City of Hope, and Caltech are likely sites. Peruse their seminar web pages and plan to attend.

If you plan to take advantage of this opportunity, please let your MORE Coordinator know by email at least one week in advance, with a copy to your faculty research mentor. To receive credit for attending that seminar, you must turn in to the MORE Programs Office not later than a week after the missed Cal State LA MORE seminar a completed seminar evaluation form that has been countersigned by your faculty research mentor.

Seminar websites for UCLA, UC Irvine, UC Riverside UC Santa Barbara, UC San Diego, USC and Caltech are at the end of this syllabus. Website page URLs change frequently. If you are having difficulties accessing the seminars web pages with the URLs provided, just go to the home page of the institutional department you are interested in looking up and click on their seminars button.

Lunch or Dinner With the Seminar Speakers

The University provides a small fund for interested students to accompany seminar speakers to lunch or dinner. The intent here is to give students who are particularly interested in the seminar speaker’s research topic, or the speaker’s institution for PhD study, the opportunity to meet and interact with the speaker in an informal setting. If you are interested in going to lunch with a particular speaker, please let Lisa Bautista know (lbautis3@calstatela.edu) not later than one week prior to the seminar.

Hosting the Seminar Speaker

Participating students manage the seminars. A student will be asked to be the official host for the speaker. We will try to match the student host’s interest with the seminar speaker’s research area. The student host will organize the group of interested students that take the seminar speaker to lunch (the MORE Programs Office will provide the funds for lunch). The student host introduces the speaker before the seminar, and manages the question and answer session. The student host gives preference to student questions, allowing faculty members to ask questions after student questions are exhausted. If you are interested in serving as host to a particular off-campus speaker, let Lisa Bautista know (lbautis3@exchange.calstatela.edu) as soon as possible, but not later than one two weeks prior to the presentation of the seminar. Student hosts for on-campus speakers will be selected from the presenter’s research group.

Spring 2017 Poster Sessions

To give students an opportunity to develop skills presenting their research results in a poster format, and to give all seminar participants a sense of the breadth of research conducted by their colleagues, three seminar periods in the Spring Semester are devoted to poster sessions:

• Poster Session I. Posters by MORE Students that spent the summer of 2017 conducting research off-campus. January 26, 2018. Note that you will also present a poster on your Cal State LA research in either Session II or III.

• Poster Session II. MORE Programs General Poster Session I, March 2017

• MORE Programs General Poster Session II, April 2017

All students in CHEM 4820 participate in the two MORE Programs General Poster Sessions each academic year (both in the Spring), either as a poster presenter, or as a critic of the presentations. Students will present a poster on their research results in one of the two Spring Semester MORE Programs General Poster Sessions. Those individuals who have just joined their research group as a freshman, and other individuals who have been in the MORE Programs less than one semester will make a prospective presentation on what their project will be.
**Spring Semester Poster Presenters:** Plan to have your poster printed on our large-format printer well in advance, as there will surely be a rush on its use close to the poster session date.

If you are part of the group that conducted research off-campus and will present at the January poster session, email your file ready for printing to Lisa Bautista lbautis3@calstatela.edu **not later than noon Monday, January 22.** Contact Lisa far in advance to arrange for printing, since she also has other responsibilities and is not always available (http://www.calstatela.edu/centers/moreprograms/tech.html for instructions). *Expect the occurrence of glitches, and build into the process sufficient time to resolve them.*

Be sure your poster is up in its assigned space in the lobby of the La Kretz Building by 1:30 PM and that you are there ready to discuss your work and answer questions at 2 PM.

**3-Minute Presentation.** One of the course instructors will come by your poster. Since there are some 10-20 presentations in 20-25, they will not have much time to spend at your poster. Please prepare and be ready to give a Three Minute Presentation that addresses the following:

a. What is the hypothesis that organizes your research?

b. What experiments did you perform to test the hypothesis?

c. What do you think the results mean, and what further studies do they suggest?

This is a difficult exercise that will likely take you some time to accomplish. It is difficult to organize your thoughts into such a limited time so that they convey the sense of your work to an educated but non-expert audience. Achieving the clarity that the exercise demands will train you in precise and effective communication that will serve you well as you prepare to attend conferences, graduate school interviews, or just conversations about your work with peers and faculty members.

You may want to visit the following URLs that offer tips on preparing effective research posters.

- **Advise for Constructing Scientific Posters** Dr. Colin Purrington, Swarthmore University. http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm
- **Creating a Poster Using MS PowerPoint** University of Washington School of Public Health and Community Medicine http://depts.washington.edu/mphp/practice/ppposter.html
- **Creating Effective Poster Presentations** George R. Hess (NC State University) and Leon H. Liegel (Oregon State University). Includes several examples incorporating various design features along with additional presentation and design resources. http://www.ncsu.edu/project/posters/IndexStart.html
- **Creating Posters for Humanities & Social Sciences** Lewis-Clark State College. Suggestions on poster design and presentation. http://www.lcsc.edu/ss150/poster.htm
- **Creating Large Format Posters Using PowerPoint**, Department of Biomedical Communications, Wake Forest University School of Medicine. http://www.wfubmc.edu/biomed/tipsheets/ppt_poster.html
- **Guidelines for Preparing Scientific Posters in the Digital Age**, SciFor Inc. -- some good design ideas from an online service that offers poster preparation and printing services. Their Poster Gallery offers some good design examples. http://www.scifor.com/Guidelines.htm
- **Creating a Large-Format Poster in PowerPoint**, Social Science Research Lab, Brown University. http://ssrl.brown.edu/support/design/large_posters

*If you ARE NOT scheduled to present a poster on a specific poster session, you are required to do on-the-spot brief critiques of two posters, and a more detailed analysis of a third poster. Instructions for the brief critiques, and for the more detailed analysis of posters are available on the Biomedical Sciences Seminar Series webpage < http://www.calstatela.edu/centers/moreprograms/biomed_sem.htm.*

**Course Grading**

The course is graded Credit/No Credit (Cr/NC) based on your participation, which is evaluated by:

1) The degree of your involvement as gauged by the quality of your answers to the seminar critique form (sample attached to this syllabus). This is a developmental activity: graduate students are expected to provide more sophisticated answers than undergrads; those that have been in the MORE Programs a while are expected to write better answers than newer student participants.
Attendance. To participate, you must be present. Please schedule your other commitments, including conducting research so that it does not conflict with your participation in the seminar course. Attendance is measured only by your turning in a completed critique form. Missing more than one seminar unexcused will result in a NC grade. There are, of course, several situations that are reasonable for missing a seminar, such as medical emergencies, and travel to professional meetings. If you plan to be absent and seek to be excused, please contact your coordinator (listed below) before the seminar. Only these individuals are authorized to excuse an absence. Please do not make your request to the MORE Programs Office Staff; they are not authorized to entertain this.

MARC U-STAR Scholars  
Prof. Vicki Kubo-Anderson (vkuboan@calstatela.edu; 343-2324) and Linda Tunstad (ltunsta@calstatela.edu; 434-2307)

Junior/Senior MBRS RISE Scholars  
Dr. Krishna Foster (kfoster@calstatela.edu; 343-2326)

Frosh/Soph MBRS RISE Scholars  
Prof. Edith Porter (epporter@calstatela.edu; 343-6353)

MBRS RISE MS-to-PhD Scholars  
Dr. Jamil Momand (jmomand@calstatela.edu; 343-2361)

NIH Bridges to the PhD Scholars  
Dr. Robert Vellanoweth (vllnwh@calstatela.edu; 343-2148)

NSF LSAMP Bridge to the Doctorate  
Dr. Margaret Jefferson (mjeffer@calstatela.edu; 343-2059) and Dr. Katrina Yamazaki (katrina.yamazaki@calstatela.edu; 343-2086)

Other Students  
Dr. Carlos Gutierrez (cgutier@calstatela.edu; 343-2356)

3) Interaction with the speaker: asking questions at the seminar; going to lunch or dinner; meeting after the seminar.

**OTHER SEMINAR SERIES**

We encourage you to attend the weekly departmental seminar series of your major department at Cal State LA. Websites for these series follow:

- Chemistry & Biochemistry  
  [http://www.calstatela.edu/dept/chem/seminar.htm](http://www.calstatela.edu/dept/chem/seminar.htm)
- Biological Sciences  
  [http://www.calstatela.edu/academic/biol/bio510.htm](http://www.calstatela.edu/academic/biol/bio510.htm)

In addition, major research institutions in Southern California offer outstanding seminars in a broad range of biomedical and behavioral disciplines. Below are webpages to many of these. If you are aware of other seminar series that should be listed, please inform your coordinator and provide the URL.

**UCLA**

- Biological Chemistry  
  [http://www.biolchem.ucla.edu/Symposia/symposia.htm](http://www.biolchem.ucla.edu/Symposia/symposia.htm)
- Biomathematics/Computational Biology  
  [http://www.biomath.medsch.ucla.edu/seminars/](http://www.biomath.medsch.ucla.edu/seminars/)
- Biostatistics  
  [http://www.ph.ucla.edu/biostat/course/seminars/seminars.htm#current](http://www.ph.ucla.edu/biostat/course/seminars/seminars.htm#current)
- Bioinformatics  
  [http://www.bioinformatics.ucla.edu/seminars/seminars.htm](http://www.bioinformatics.ucla.edu/seminars/seminars.htm)
- Chemistry & Biochemistry  
  [http://www.chem.ucla.edu/dir/twic.html](http://www.chem.ucla.edu/dir/twic.html)
- Human Genetics  
  [http://www.genetics.ucla.edu/home/guest.htm](http://www.genetics.ucla.edu/home/guest.htm)
- Microbiology Immunology, and Molecular genetics  
  [http://www.mimg.ucla.edu/events.html](http://www.mimg.ucla.edu/events.html)
- Molecular Biology  

**U of Southern California**

- Chemistry  
  [http://chem.usc.edu/dept/events.html](http://chem.usc.edu/dept/events.html)
- Pharmaceutical Sciences  
- Neuroscience Graduate Program  
  [http://www.usc.edu/dept/nbio/ngp/courses/seminars.shtml](http://www.usc.edu/dept/nbio/ngp/courses/seminars.shtml)
- Biology  
  [http://biosci.usc.edu/seminars/](http://biosci.usc.edu/seminars/)

**UC Irvine**

- Chemistry  
- School of Biological Sciences  
  [http://www.bio.uic.edu/events/](http://www.bio.uic.edu/events/)
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<tr>
<td>Ecology and Evolutionary Biology</td>
<td><a href="http://ecoevo.bio.uci.edu/seminar%20Winter%202003.htm">http://ecoevo.bio.uci.edu/seminar%20Winter%202003.htm</a></td>
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<td>Molecular Biology and Biochemistry</td>
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<td>Cognitive Sciences</td>
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<td>Psychology and Social Behavior</td>
<td><a href="http://psb.soececo.uci.edu/pages/tags/events">http://psb.soececo.uci.edu/pages/tags/events</a></td>
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<td>Developmental and Cell Biology</td>
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**UC San Diego**

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<td>Biological Sciences</td>
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<td><a href="http://psy.ucsd.edu/pages/events/index.html">http://psy.ucsd.edu/pages/events/index.html</a></td>
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**Caltech**

Caltech lists all of its seminars on its Calendar at [http://today.caltech.edu/calendar/](http://today.caltech.edu/calendar/)

**UC Riverside**

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**UC Santa Barbara**

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<tr>
<td>Biomolecular Science and Engineering</td>
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<td>Molecular, Cellular and Developmental Biology</td>
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