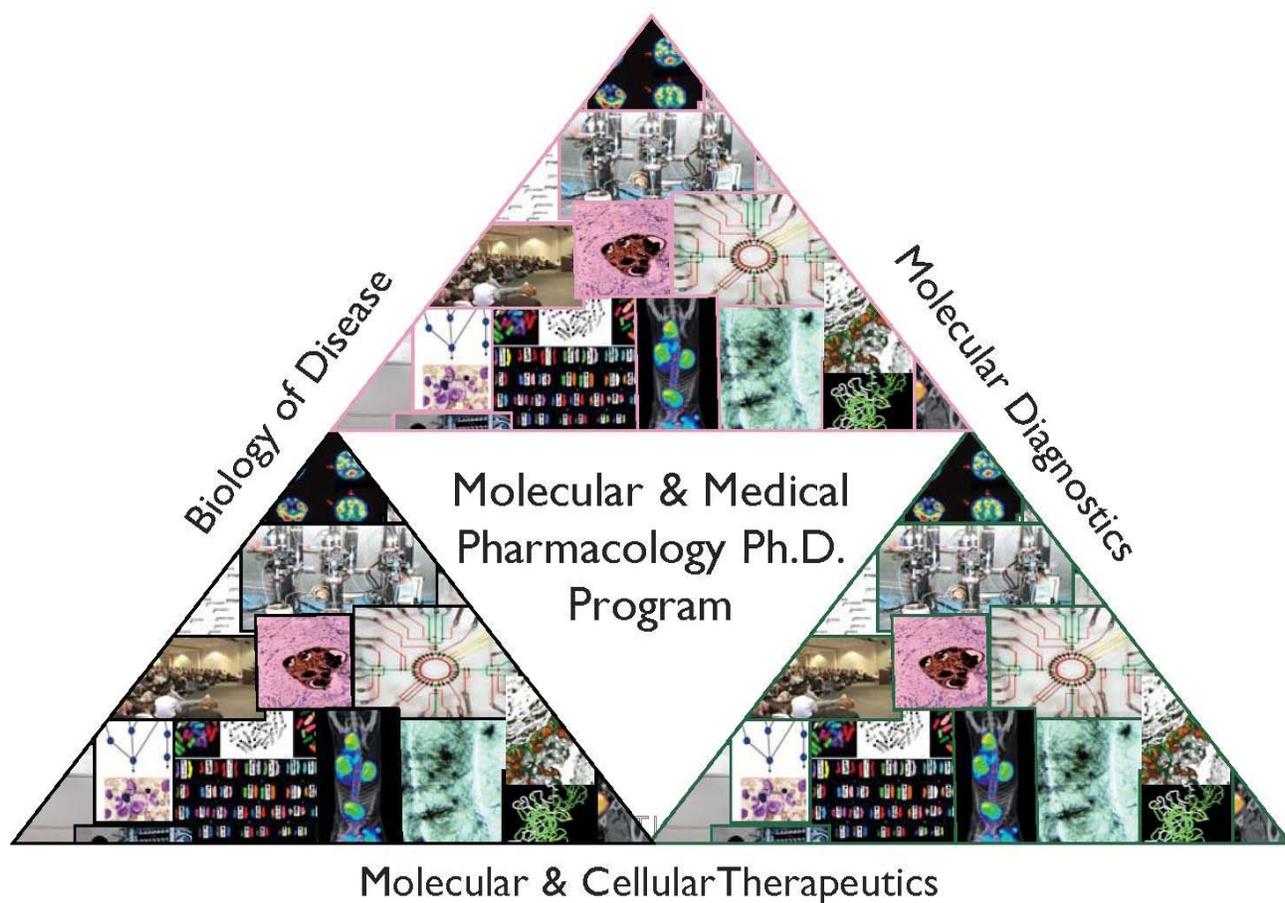


UCLA

DEPARTMENT OF

MOLECULAR AND MEDICAL

PHARMACOLOGY



GRADUATE STUDENT HANDBOOK

UCLA Molecular and Medical Pharmacology Graduate Student Handbook 2018-2019

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UCLA Molecular and Medical Pharmacology Ph.D program Program Requirements

Advising

Pre-Advancement to Candidacy (ATC): A graduate adviser is assigned for new entering graduate students or students in their first year of study. Students must obtain approval from this adviser for enrollment in courses each quarter. The adviser also is available to discuss overall academic progress. By the beginning of the second year, students choose a faculty member to serve as adviser for their dissertation research.

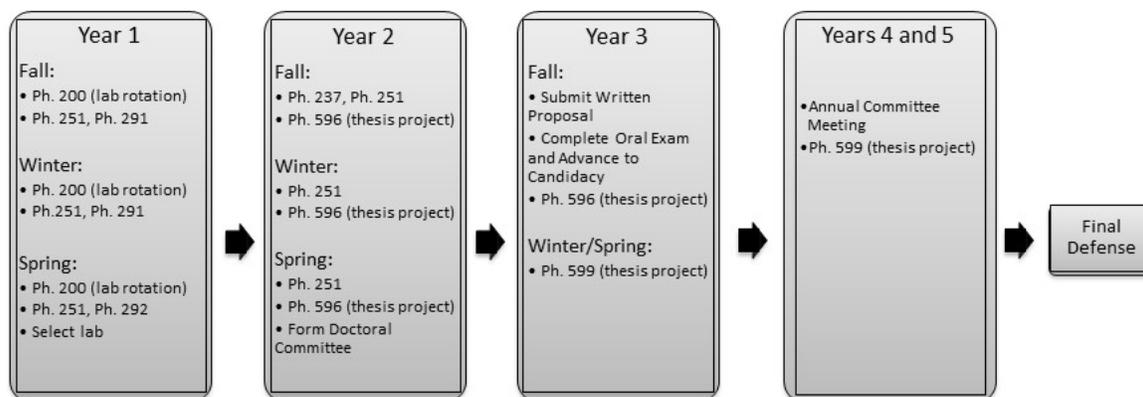
Course Requirements and Laboratory Rotations

Required: Molecular and Medical Pharmacology 200 (three quarters), 237, 251 (must be taken every quarter during first and second year), 291, 292.

Recommended Electives: Molecular and Medical Pharmacology 211A-211B, M241, M248, M255, 288; Molecular Biology 298; a course in biostatistics.

Students are required to maintain a grade-point average of 3.0 in all course work and to achieve grades of B or better in all Molecular and Medical Pharmacology courses. One grade of less than B in a required Molecular and Medical Pharmacology course results in probationary status; the course must be repeated with a grade of B or better. Students are required to earn a B or better in M Pharm 292 qualifying class. Students who do not earn a passing grade in M Pharm 292 will be dismissed from the Ph.D. program. All required course work should be completed by the end of the sixth quarter.

Molecular and Medical Pharmacology Graduate Program Requirements



See course descriptions on Page 4

Laboratory Rotations: The department requires students to participate in three laboratory rotations (Molecular and Medical Pharmacology 200), one per quarter, during the first year to become familiar with a variety biomedical and of pharmacological research areas and techniques. During the first year in the department, students participate in projects of the laboratories of their and the faculty's choosing.

Students also become familiar with the literature relevant to the various research projects and thus establish a basis for the selection of their own research areas. Under special circumstances, with petition to and approval by the Graduate Training Committee, a student may be permitted to partake in a fourth rotation. At the end of the third or fourth rotation, students are required to join a laboratory, where they will conduct their thesis research.

Examinations are given in all courses except seminars and research. These are in the form of written examinations, oral examinations, term papers, and/or laboratory practicals.

Teaching Experience

Seminar presentations to department faculty and students are required of all students in the graduate program at least once a year. One quarter as a teaching assistant is required. Students in the Medical Scientist Training Program are not subjected to the teaching assistant requirement.

Written and Oral Qualifying Examinations

Academic Senate regulations require all doctoral students to complete and pass university written and oral qualifying examinations prior to doctoral advancement to candidacy. Also, under Senate regulations, the University Oral Qualifying Examination is open only to the student and appointed members of the doctoral committee. In addition to university requirements, some graduate programs have other pre-candidacy examination requirements. What follows in this section is how students are required to fulfill all of these requirements for this doctoral program.

All committee nominations and reconstitutions adhere to the [Minimum Standards for Doctoral Committee Constitution](#).

The written and oral qualifying examinations are a two-step process:

The first step will be the M Pharm 292 course in proposal writing. All first year Pharmacology Home Area students matriculating towards a Ph.D. degree in Molecular Pharmacology are required to enroll in M Pharm 292 in their first year. Students will learn to write and orally defend a proposal. The proposal shall be on a topic unrelated to any of their rotation projects. Specifics for preparation of the proposal, evaluation of the written documents, and nature of the oral defense will be discussed during the M Pharm 292 course. Students who do not earn a passing grade in M Pharm 292 will be dismissed from the Ph.D. program.

The second step of the qualifying exam will be on the thesis topic. Students will prepare a written proposal, and defend the proposal in an oral examination. Specifically, the written examination consists of submitting a written research proposal to the student's doctoral committee, at least one week before the proposed date of the University Oral Qualifying Examination. The research proposal must be written according to the NIH grant application format (a copy of the ATC Guidelines can be obtained from the Student Affairs Officer). The University Oral Qualifying Examination consists of defending the proposal to the doctoral committee. Students must pass this examination by December 1st of their third year.

Advancement to Candidacy

Students are advanced to candidacy upon successful completion of the written and oral qualifying examinations.

Annual Committee Meeting

After passing the ATC, students are required to hold an annual committee meeting each winter or spring quarter and present a progress report to the committee. Students must submit the progress report to the committee two weeks prior to the meeting. These annual meetings should focus on accomplishments and roadblocks in the past year. The annual committee meeting is chaired by the student's faculty mentor, who is an active, engaged participant at these meetings. At the end of the annual meeting, each committee member must complete a brief evaluation form and return it to the faculty mentor. The faculty mentor will then go over the feedback with the student, and submit a brief committee meeting report to the Student Affairs Officer.

Publications

After passing the ATC, it is strongly recommended that students complete at least one or two first-authored papers before finishing their studies.

Pre-Defense Meeting

Prior to scheduling the final oral examination, each student must have a pre-defense meeting. After this meeting the committee members should give their approval for a defense within a certain time frame.

Doctoral Dissertation

Every doctoral degree program requires the completion of an approved dissertation that demonstrates the student's ability to perform original, independent research and constitutes a distinct contribution to knowledge in the principal field of study.

Final Oral Examination (Defense of Dissertation)

Not required for all students in the program. The decision as to whether a defense is required is made by the doctoral committee.

Time-to-Degree

- (1) Students must select a thesis adviser by the beginning of the second academic year.
- (2) Students must complete all course requirements by December 20th of the third academic year.
- (3) Students must take the written and oral qualifying examinations and pass by December 1st of the third academic year.
- (4) The time to final completion of the graduate program is expected to be 15 quarters.

DEGREE	NORMATIVE TIME TO ATC (Quarters)	NORMATIVE TTD	MAXIMUM TTD
Ph.D.	7	15	21

Termination of Graduate Study and Appeal of Termination

University Policy

A student who fails to meet the above requirements may be recommended for termination of graduate study. A graduate student may be disqualified from continuing in the graduate program for a variety of reasons. The most common is failure to maintain the minimum cumulative grade point average (3.00) required by the Academic Senate to remain in good standing (some programs require a higher grade point average). Other examples include failure of examinations, lack of timely progress toward the degree and poor performance in core courses. Probationary students (those with cumulative grade point averages below 3.00) are subject to immediate dismissal upon the recommendation of their department. University guidelines governing termination of graduate students, including the appeal procedure, are outlined in *Standards and Procedures for Graduate Study at UCLA*.

Special Departmental or Program Policy

A student's progress is evaluated on performance in course work and on the qualifying examinations. A grade below B in M Pharm 282 or a total of three grades below B in any of the other required courses results in recommendation to the graduate dean for dismissal. Failure to identify a faculty mentor by the beginning of the Fall quarter of the second year also results in dismissal. Performance on the ATC is graded Pass, Fail and Deferral. Deferral means that a student is asked to repeat some part or all of the examination. All deferrals must be completed by December 20th of the third academic year. If a student receives a Fail, the student may appeal the decision in writing to either the Graduate Training Committee or the departmental chair. The written appeal is reviewed by either the Graduate Training Committee or an ad hoc committee within the department.

UCLA is accredited by the Western Association of Schools and Colleges and by numerous special agencies. Information regarding the University's accreditation may be obtained from the Office of Academic Planning and Budget, 2107 Murphy Hall.

Graduate Course Descriptions

- **200. MM Pharm Introduction to Laboratory Research (4-8 units).** Individual projects in laboratory research for beginning graduate students. At end of each term students submit to their supervisor a report covering research performed. Pharmacology graduate students must take this course three times during their first two years in residence. Letter grading. (Fall, Winter, Spring)
- **237. MM Pharm Integration of the Biology of Disease, Molecular Diagnostics and Therapeutics (6 units).** Detailed examination of principles of pharmacology and mechanisms of drug action at organismal, tissue, cellular, and molecular levels, with emphasis on pharmacodynamics and pharmacokinetics, and drug discovery and development process. In-depth discussion of certain therapeutic agents will be done to illustrate the fundamental concepts. Letter grading. (Fall)
- **M248. MM Pharm Introduction to Biological Imaging (4 units).** Same as Biomedical Physics M248. Lecture three hours; laboratory one hour; outside study, seven hours. Exploration of role of biological imaging in modern biology and medicine, including imaging physics, instrumentation, image processing, and applications of imaging for a range of modalities. Practical experience provided through a series of imaging laboratories. Letter grading. (Winter)
- **M251. MM Pharm Seminars (MM Pharm Fridays) (2 units)**
DMMP graduate students present and discuss their research progress in a seminar format. The objectives of M251 are to highlight the science done in DMMP and to help students improve their presentation skills by providing them with the opportunity to speak to a diverse audience. M251 is mandatory for all 1st and 2nd year students. Letter grading. (Fall, Winter, Spring)
- **252 A. MM Pharm Molecular Mechanism of Human Diseases I, Concurrent with 252 B (4 units).** (Same as Molecular, Cellular, and Integrative Physiology M252A.) Lecture, four hours. Preparation: prior satisfactory molecular biology coursework. Co-requisite: course M252B. Fundamental concepts and methodologies in modern biology, with emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to cancer biology, infectious disease, and modern biological approaches. Letter grading. (Fall)
- **252 B. MM Pharm Molecular Mechanism of Human Diseases I, Concurrent with 252 A (2 units).** (Same as Molecular, Cellular, and Integrative Physiology M252B.) Seminar, two hours. Co-requisite: course M252A. Reading, review, and discussion of primary research literature addressing fundamental concepts and methodologies in modern biology, with particular emphasis on implications and relevance to human diseases of topics presented in course M252A. Letter grading. (Fall)
- **254 A. Biological Chemistry Concepts in Molecular Biosciences, Concurrent with 254 B (3 units).** Lecture, three hours; discussion, two hours. Five-week course covering four basic experimental approaches of biochemistry and molecular biology in context of various specific topics, including (1) structural biology, with protein and nucleic acid structure and molecular recognition, (2) use of cell-free and purified in vitro systems to dissect reaction mechanisms, (3) biochemical approaches to dissecting complex reactions/pathways in cells, and (4) enzymology and protein chemistry. Letter grading. (Fall) (Section C Winter)
- **254 B. Biological Chemistry Concepts in Molecular Biosciences, Concurrent with 254 A (3 units).** Five-week course. Lecture, three hours; discussion, two hours. Enforced prerequisite: course 254A. Important biological problems that have been genetically analyzed in different organisms or small number of related problems. Major genetic approaches used in relevant organisms, including both forward and reverse genetic approaches, genetic interactions between genes (genetic enhancers and suppressors), transgenic technology, and systematic genomic strategies. Letter grading. (Fall) (Section D Winter)

- **254 C. Biological Chemistry Concepts in Molecular Biosciences, Concurrent with 254 D (3 units).** Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B. Molecular mechanisms underlying complex problems in cell biology. Experimental approaches used to define mechanisms involved in protein targeting, cell structure and subcellular organization, cell communication, and intracellular signaling. Analysis of pathways that connect these cellular processes.
- **254 D. Biological Chemistry Concepts in Molecular Biosciences, Concurrent with 254 C (3 units).** Five-week course. Lecture, three hours; discussion, two hours. Enforced requisites: courses 254A, 254B, 254C. Application of biochemical, molecular biological, genetic, and cell biological approaches to understand specialized topics in life and biomedical sciences, including developmental disease, stem cell biology, synaptic transmission in nervous system, cancer, and heart disease.
- **262 A. MM PHARM Molecular Mechanisms of Human Diseases II, Concurrent with 262B (4 units).** (Same as Molecular, Cellular, and Integrative Physiology M262A.) Lecture, four hours. Preparation: prior satisfactory molecular biology coursework. Co-requisite: course M262B. Fundamental concepts and methodologies in modern biology, with emphasis on implications and relevance to human disease and integration of biology with mechanisms underlying disease development and applications in therapy as they apply to neurological, cardiovascular, and metabolic diseases. Letter grading. (Winter)
- **262 B. MM PHARM Molecular Mechanisms of Human Diseases II, Concurrent with 262A (2 units).** (Same as Molecular, Cellular, and Integrative Physiology M262B.) Seminar, two hours. Co-requisite: course M262A. Reading, review, and discussion of primary research literature addressing fundamental concepts and methodologies in modern biology, with particular emphasis on implications and relevance to human diseases of topics presented in course M262A. Letter grading. (Winter)
- **286. MM Pharm Business of Science (1 units) Seminar,** one hour. Limited to graduate students. Further exploration of topics discussed in course 287, allowing students to interact with speakers and bring their individual concerns to table. Past and present students encouraged to enroll. S/U grading. (Fall and Spring)
- **287. MM Pharm Business of Science (2 units).** This course introduces students to principles of business and entrepreneurship in technology sectors. The objective is to provide students with the basic business skills and knowledge required to effectively perform in a commercial environment and within an academic environment that is increasingly involved in industry partnerships. (Fall and Spring)
- **288. MM Pharm Gene Therapy (4 units).** Lecture and journal presentation and discussion, two hours per week. Introduction to basic concepts of gene and cell therapy, wherein treatment of human disease is based on transfer of genetic material or transplantation of cells and tissues into an individual. Discussion of molecular basis of disease, gene delivery vectors, stem cells and replacement therapies, and animal models. Pass/Fail. (Spring)
- **291. MM Pharm Special Topics in Pharmacology (4 units).** Examination in depth of topics of current importance in pharmacology. Emphasis on recent contributions of special interest to advanced Ph.D. candidates and faculty. Letter grading. The main objective of the course is to teach students how to read and evaluate scientific articles.(Fall, Winter)
- **292. MM Pharm Research Projects, Proposals and Presentations (6 units).** Critically read primary papers and give formal scientific presentations. This course functions as a qualifying check point for students to prepare them for the PhD qualifying exam. (Spring)

- **375. MM Pharm Teaching Apprentice Practicum (1 to 4 units).** Pharmacology or ACCESS majors.
- **596. MM Pharm Directed Individual Research in Pharmacology (4 to 12 units).** Every quarter after completing rotations.
- **599. MM Pharm Research for and Preparation of Ph.D. Dissertation (4 to 12 units).** Every quarter after passing the qualifying exam and advancing to candidacy.

Undergraduate Course Descriptions

- **99. MM Pharm Independent Studies (2 to 8 units).** Prerequisites: consent of instructor and department chair. Special studies in Pharmacology. May include reading assignments and laboratory work. Designed for the training of students.
- **199. MM Pharm Independent Studies (2 to 8 units).** Prerequisites: consent of instructor and department chair. Special studies in Pharmacology. May include reading assignments and laboratory work. Designed for the training of students.

Pharmacology Graduate Students

Name	E-Mail Address	Advisor
Abril Rodriguez, Gabriel	GAbrilRodriguez@mednet.ucla.edu	Ribas, Antoni
Abt, Evan	eabt@mednet.ucla.edu	Radu, Caius
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Han, Jiaying	jiayinghan@mednet.ucla.edu	Kohn, Don
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Jones, Anthony	AJJones@mednet.ucla.edu	Divakaruni, Ajit
Kim, Ashley	yeonjookim@mednet.ucla.edu	Ribas, Toni
Kim, Woosuk	woosukkim@mednet.ucla.edu	Radu, Caius
Lam, Alex	aklam@mednet.ucla.edu	Chow, Sam
Lee, Alexander	alexanderlee@mednet.ucla.edu	Prins, Rob
Lee, Min Sun	minslee@mednet.ucla.edu	Chow, Sam
Li, Suwen	suwenli@mednet.ucla.edu	Crooks, Gay
Lim, Raymond John	raymondlim@mednet.ucla.edu	Dubinett, Steve
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Morgan, Richard	RMorgan@mednet.ucla.edu	Kohn, Don
Morrow, Danielle	daniellemorrow@mednet.ucla.edu	Nathanson, David
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Sperry, Jantzen	jps5076@ucla.edu	Kornblum, Harley
Srole, Daniel	dsrole@mednet.ucla.edu	Chow, Sam
Ta, Lisa	LTa@mednet.ucla.edu	Witte, Owen
Taus, Ellie	etaus@mednet.ucla.edu	Yang, Otto
Terry, Allyson	aterry@mednet.ucla.edu	Reed, Elaine
Thaker, Shivani	SThaker@mednet.ucla.edu	Christofk, Heather
Truong, Brian	brtruong@mednet.ucla.edu	Lipshutz, Gerry
Tsai, Wen-Ting	wtsai@mednet.ucla.edu	Wu, Anna
Tsang, Jonathan	JTsang@mednet.ucla.edu	Nathanson, David
Veliova, Michaela	mveliova@mednet.ucla.edu	Shirihai, Orian

Name	E-Mail Address	Advisor
Wong, Ryan	rlwong@mednet.ucla.edu	Kohn, Don
Yin, Xiang	XYin@mednet.ucla.edu	Huang, Jing
Zhang, Vida	vzhang@mednet.ucla.edu	Chow, Sam
Zhou, Quan	Quanzhou@mednet.ucla.edu	Bensinger, Steven

General Referrals

Graduate Student and Postdoc Representatives

Provide leadership for the culture of the student body, plan meetings, promote interdepartmental relationships and coordinate special events, and participate in departmental planning and decision – making processes (e.g., faculty meetings, student recruitment)

Nebula Han Don Kohn Lab
Brian Truong Gerry Lipshutz Lab
Mehrdad Balandeh, Ph.D Sam Sadeghi Lab

Key Personnel

Chair

Michael E. Phelps x 56539 23-138 CHS

Vice Chairs

Sam Chow x 59600 23-133B CHS
Johannes Czernin x 63226 23-222 CHS
Arion Hadjioannou x 57877 4345 CNSI
Harvey Herschman x 58735 341 Boyer Hall
Caius Radu x 51205 AR-175 CHS

Department Chief Administrative Officer

Christine Wang x 71188 23-148 CHS

Department Chief Financial Officer

Sandy Ma x 53130 23-126 CHS

Graduate Training Committee

Advise graduate students regarding program requirements and research responsibilities. Organize and structure course curriculum and program requirements. Create and develop effective recruitment strategies. Evaluate applications of prospective graduate students. Assure that students are meeting the program requirements to remain in good standing and has the authority to dismiss students who are not.

Sam Chow (Chair) x 59600 23-133B CHS
Thomas Graeber x 66122 4341 CNSI
Harvey Herschman x 58735 341 Boyer
Don Kohn x 41964 3163 TSLB
Jennifer Murphy x 57548 4321 CNSI
David Nathanson x 58813 23-214 CHS
Rob Prins x 54207 13-252 Factor
Caius Radu x 51205 AR-175 CHS
Ren Sun x 45557 10-155A Factor
Ting-Ting Wu x 72218 10-24 Factor

Student Affairs Office

Advising services provided for graduate and undergraduate students. Administration, admissions, enrollment, registration, application processing, academic apprentice appointments, coordination of fellowship and grant programs, and special events.

Emily Fitch x 50390 23-385 CHS Student Affairs Officer

Administrative Support Staff

Bernadette Omote x 56539 23-132 CHS Assistant to Chairman Michael Phelps

Personnel Services

Gizela Lizares-Ybiernas	x 62719	B2-049 CHS	HR Manager/Academic Personnel Coordinator
Stacey Chiong	x 65016	B2-049 CHS	Staff Manager
Kathy Guerrero	x 54483	B2-049 CHS	Payroll/Parking Coordinator

Financial Services

Sandy Ma	x 53130	23-126 CHS	Chief Financial Officer
Suzan Farag	x 55449	23-145 CHS	Purchaser
Damilya Beckman	x 49471	23-145 CHS	Fund Manager
Melanie Ciampaglia	x 44766	23-170 CHS	Fund Manager
Mei Guan	x 59281	23-145 CHS	Fund Manager
Karen Lum	x 60082	4327 CNSI	Fund Manager
Jessica Wang-Cheng	x 55596	23-145 CHS	Fund Manager

Computer/Internet Services

Website: <http://itc.medsch.ucla.edu/pages/contactus>

Pre-Award Services

Ilya Kisel	x 72038	23-385 CHS	Pre-Awards
Sandy Ma	x 53130	23-126 CHS	Pre-Awards

Useful resources

Department of Molecular & Medical Pharmacology

23-120 CHS
Box 951735
Los Angeles, CA 90095-1735
Telephone: (310) 825-0390
Fax: (310) 825-6267
Email: efitch@mednet.ucla.edu
www.pharmacology.ucla.edu
<http://www.ctrl.ucla.edu/pharm-homearea/pages/>

Graduate Programs in Bioscience (GPB)

<https://www.ctrl.ucla.edu/bsp/pages/>

Campus Maps:

<http://www.ucla.edu/map>

Career Center:

<http://www.career.ucla.edu/>

Housing:

(310) 206-7011
[UCLA - Graduate & Family Students](#)

UCLA Graduate Division

1237 Murphy Hall
Box 951419
Los Angeles, CA 90095-1419
Admissions/Student Academic Services
(310) 825-3819
www.gdnet.ucla.edu

Campus Directory:

www.directory.ucla.edu

Security/Escort Services:

(310) 794-WALK
<http://map.ais.ucla.edu/go/1000806>

Student Health:

(310) 825-4073
<http://www.studenthealth.ucla.edu/default.aspx>

Counseling and Psychological Services:

(310) 825-0768
<http://www.counseling.ucla.edu/>

Students needing academic accommodations based on a disability should contact the Center for Accessible Education (CAE) at (310)825-1501, or the Behavioral Wellness Center (BWC) at (310)825-9605, or in person at Murphy Hall A255. When possible, students should contact the CAE or BWC within the first two weeks of the term as reasonable notice is needed to coordinate accommodations. For more information visit www.cae.ucla.edu and medschool.ucla.edu/bwc.