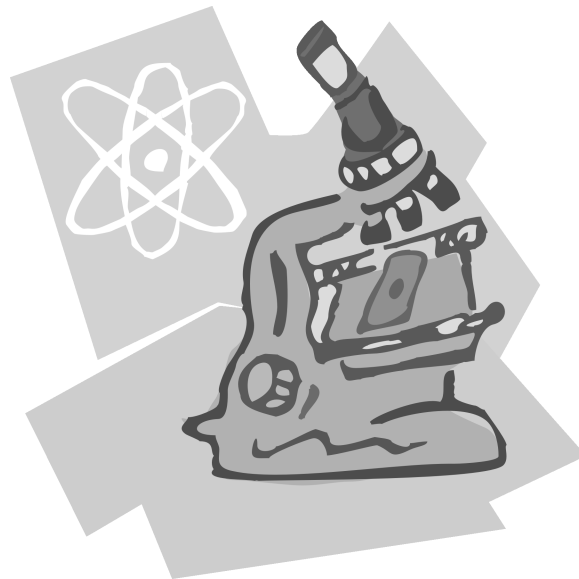


**Graduate Student Handbook**  
**Ph.D. Program in Experimental Pathology**  
**Department of Pathology and Laboratory Medicine**



**Academic Year**  
**July 1, 2016 to June 30, 2017**

# Contents

**Foreword**

**General Information – Pathology & Laboratory Medicine**

**General Information – School of Medicine PhD Program**

**Stipends, Insurance, Travel Support, Loans**

**Graduate Resource Center**

**Fellowship and Training Grant Information**

**Registration and Enrollment**

**Graduate Courses**

**Teaching Assistantships**

**Pathology Seminar Series (Path 204)**

**Advancement to Candidacy Committee and Exam**

**Doctoral Committee**

**Dissertation (Thesis) Preparation and Defense**

**Outline of Requirements**

**Current Graduate Students**

## Foreword

This brief handbook is designed for graduate students who are performing their Ph.D. thesis research in Experimental Pathology. Typically, these students enter via the Cellular and Molecular Biosciences (CMB) gateway program. This includes students performing research in the laboratories of Experimental Pathology faculty who hold primary appointments in other departments (so-called joint appointees). The home department for this Ph.D. program is the Department of Pathology & Laboratory Medicine. This handbook is intended to provide you with practical information to guide your research and academic endeavors. Our goal is to make the graduate program one that will enhance your UCI research experience in a way that will have a long-term, positive impact on your scientific careers. For those of you just joining the Department, welcome and a wish for a rewarding scientific experience with us!

Edwin S. Monuki, M.D., Ph.D., Warren L. Bostick Chair and Assoc. Prof. of Pathology & Laboratory Medicine, Graduate Advisor of the Experimental Pathology Ph.D. Program

1705 Gross Hall, Room 2018 (office)  
949-824-9604  
[emonuki@uci.edu](mailto:emonuki@uci.edu)

## General Information – Pathology & Lab Medicine

The business office for the Department of Pathology & Laboratory Medicine is located in the Med Sci I bldg., D-stack, 4<sup>th</sup> floor, room D440, in the School of Medicine on the UC Irvine campus in Irvine. Our administrative staff and their corresponding duties are:

Tara Kasmarek, Chief Admin Office	tkasmare@uci.edu	(949) 824-2350
Ken Yamane, Finance Manager	yamanek@uci.edu	(949) 824-8386
Dannielle Lampkin, Assistant to Dr. Monuki & Ms. Kasmarek	dlampkin@uci.edu	(949) 824-5534
Diana Speake, Personnel/Payroll	dlspeake@uci.edu	(714) 456-6411
Stefani Ching, Grad. Student Coord.	stefani.ching@uci.edu	(949) 824-5367
Rick Koser, Finance/Reimbursements	rkoser@uci.edu	(949) 824-2661
Lorena Yalung, Finance/Purchase Orders	lyalung@uci.edu	(949) 824-5827

If your PI has a primary appointment in Pathology, please stop by the office and introduce yourself. You will need to sign-out keys for the outside building door, the business office, and the laboratory in which you are working. D440 contains the fax machine and PI mailboxes for posted mail delivery. A copier and typewriter are conveniently located down the hall from the business office in room D450. You will need a PI code to operate the copier, which can also scan to email in addition to creating copies.

If your PI has a primary appointment in a different department, i.e., is a joint-appointee, please refer to that department's policies on lab/office keys, mail delivery, copier, and typewriter usage. However, as a member of Pathology, you are welcome to use the department resources if your PI's department resources are not available.

The business office hours are 8:00 a.m. to 5:00 p.m., Monday through Friday, excluding holidays. If you use any of the department resources after hours, you are responsible for making sure the copier is reset to its home screen, the lights are off, and the office doors are closed and locked before leaving. The staff computers, desks, and equipment in the individual cubicles are not to be disturbed. Your UCInetID will allow you access to the California Digital Library, and with it, you will have online access to the majority of scientific journals you will need.

Please feel free to ask any of the office staff to show you how to use the equipment. The basic rules are to respect the equipment and belongings of each laboratory and the office, not to use other laboratories' computers without asking permission from the faculty members, not to borrow anything without asking, and to clean and lock up after oneself. If there is a facilities problem such as a flood/water leak, it should be reported to the Facilities help line (ext. 4-5444 from a campus phone). The police emergency number (911) can also be dialed for assistance.

Parking and Transportation Services provides an escort service from 6:00 a.m. to 1:00 a.m. from one place to another on campus. After 1:00 a.m., the phone transfers to the police station and the police will then provide the escort service. The number is ext. 4-7233. While crime on campus is low, the escort service should be used if you are leaving your laboratory late at night.

## General Information – SOM PhD Program

The Experimental Pathology PhD Program is part of the School of Medicine Biomedical Sciences PhD Program in the Office of Graduate Studies (<http://som.uci.edu/graduate-studies/index.asp>). The Associate Dean in charge of this program is Klemens Hertel, and the program director is Leora Fellus ([lfellus@uci.edu](mailto:lfellus@uci.edu), Med. Ed. bldg., rm. 3111, phone: x4-1028). Leora is your point person for any issues related to the SOM PhD program.

## Stipends, Insurance, Travel Support, Loans

As a full-time doctoral student, you will receive a monthly stipend, and your fees will be paid. The stipend is set by the CMB program and is the same for all graduate students in departments participating in the CMB gateway. You should already be aware of your health benefits, but if you have any questions, please contact Diana Speaker at (714) 456-6411; her office is located at the UCI Medical Center.

Support for travel to conferences is available. Currently, \$250/year per student is available to attend a conference. Students must have submitted an abstract and be scheduled for a poster or oral presentation to be eligible for the award. If you meet these criteria, submit a request to the SOM Graduate Studies Director (Leora Fellus) or Associate Dean Hertel.

Emergency loans are available through Financial Aid. The phone number for Financial Aid is (949) 824-6261. The maximum amount for a short period of time without interest is \$100.00.

Additional student support information can be found on the following website: <http://som.uci.edu/graduate-studies/Student-Support/student-support.asp>

## Graduate Resource Center

The Graduate Resource Center (GRC) exists to enrich the experiences of the UCI graduate and postdoc community by providing coordinated services, events, programs, information and support. This includes workshops and tutorials on a wide variety of topics related to personal and professional development (e.g., scientific writing). The GRC also serves as a meeting place for students to relax, interact, plan events, share ideas, and network. The GRC is located on the third floor of the Gateway Study Center – in between the Langson Library and the Cross-Cultural Center, directly across from Aldrich Hall on the main UCI campus. For more information on the center's events, resources, and location, go to their website at: <http://www.grad.uci.edu/cascade/services/grc/index.html>.

Hours of operation: 9 a.m. to 7 p.m., Monday through Thursday, and 9 a.m. to 5 p.m., Fridays  
Phone: 949-824-3849  
E-mail: [grc@uci.edu](mailto:grc@uci.edu)

## Fellowship and Training Grant Information

Although applying for graduate fellowships is not formally required, you are highly encouraged to do so. Fellowship/grant writing is particularly valuable for focusing your ideas and research, and if successful, for providing financial support and building your resume/curriculum vita (CV). Information on several federal and private fellowships available to graduate students can be found on the Graduate Division website at: <http://www.grad.uci.edu/funding/fellowships-awards/index.html>. Your mentor may also know of private foundations that offer graduate fellowships in your research area.

Your PI may also have access to training grants, which can provide stipend and tuition/fee support. Because access to such training grants is very PI-specific, you should inquire with your PI about these. Be aware that most fellowships and training grants (but not all) require US citizenship or permanent residency (i.e., a green card).

## Registration and Enrollment

Each quarter you will need to register for classes. Registration is through WebReg. You are responsible for enrolling in the required courses/units prior to the deadline each quarter. You must sign up for Path 200, 203, 204, every quarter and 227 in fall quarters (see below for further description of these courses). If you do not register on time you:

- will be responsible for paying any late fees,
- will not meet the IRS FICA exemption and thus will be subject to federal deductions from your paycheck,
- must use the online Add/Drop/Change procedure for late registration, including justification for registering late.

**IMPORTANT:** You must enroll in classes and pay fees by the end of the 3<sup>rd</sup> week of the quarter; otherwise, you will lose your student status and will need to reapply to the program!

By the beginning of the second year, US citizens and permanent residents who are non-residents of California during the first year should become legal California residents. California residency will eliminate “nonresident tuition” of about \$5,000 per quarter. A change of residency must be recorded in the Registrar’s Office BEFORE the fee deadline. Normally the deadline is four weeks before the start of Fall quarter. For details about the documentation required to establish California residency, see the Office of the Registrar’s Residency website: <http://www.reg.uci.edu/navigation/residency.html>.

For foreign students, non-resident tuition is waived for a period of nine academic quarters (3 years) and reduced to the California resident rate AFTER advancement to candidacy. This reduction in student expenses is substantial. Therefore, advancement to candidacy is recommended by the end of the third year, if not earlier, and completion of the dissertation within nine academic quarters. Fees increase back to non-resident levels after the nine academic quarters (so-called “doc2A” status).

When your mailing address or phone number changes, please notify both the Registrar's Office and Stefani Ching in the Pathology Business Office.

## Graduate Courses

Every student is required to enroll every quarter in:

- Path 200 A, B, C** – credit for laboratory research (Graded, based on performance).
- Path 203 A, B, C** – credit for organized group study based on readings, discussions, presentations given within each lab group (Graded, based on performance).
- Path 204 A, B, C** – the Thursday Noon Time Seminars given by graduate students, postdoctoral fellows, and faculty (S/U, based on attendance).

Every student is required to enroll every fall quarter in:

- Path 227** – Experimental Pathology Journal Club that is taking concurrently with the Thursday Noon Time Seminars, Path 204 (S/U, based on participation).

Every student is also required to enroll one time in:

- Path/MMG 225** – Molecular Mechanisms of Human Disease (Graded, based on performance). This class is offered in the Spring Quarter of odd numbered years so students should plan accordingly.

You must have a minimum of 12 units per quarter.

At the end of the first year you will have completed all of the course requirements of the CMB program. From your second through fourth year, you are required to take at least one didactic course per year. A partial list of approved elective courses is on the next page. If you and/or your advisor identify a course that is not on this list, please get approval from the graduate advisor (Ed Monuki).

<b>Path 221/MMG 221:</b>	Immunopathogenic Mechanisms of Disease
<b>BC 215/DC 207:</b>	Mouse Developmental Genetics
<b>DB 203B:</b>	Systems Developmental Biology
<b>DB 210:</b>	Developmental Genetics (if not taken year 1)
<b>DB 231B:</b>	Cell Biology
<b>DB 231D:</b>	Mol., Cell. & Developmental Neurobiology (if not taken year 1)
<b>DB 245:</b>	Stem Cell Biology
<b>MBB 205:</b>	Eukaryotic Gene Expression: Viral
<b>MBB 206:</b>	Regulation of Gene Expression
<b>MBB 207:</b>	Molecular Genetics (if not taken year 1)
<b>MBB 217A:</b>	Cancer Biology I
<b>MBB 217B:</b>	Cancer Biology II
<b>MBB 218:</b>	Clinical Cancer for Basic Scientists
<b>MBB 399/DC 399:</b>	University Teaching
<b>MMG 215:</b>	Molecular Immunology
<b>MMG 222:</b>	Molecular Pathogenesis of Viral Infections

## Teaching Assistantships

Students in the Experimental Pathology Ph.D. Program are no longer required to be teaching assistants (TAs). However, you have the option of being a TA, if you and your advisor so choose. This can be a valuable component of your doctoral training, as many of you will go on to careers that involve teaching. Be aware that if you are interested in a TA position, you must take TA training beforehand, which is currently offered in the Fall only. The SOM Graduate Studies office will inquire every summer about students interested in a TA position. Please plan ahead accordingly; sign-ups for training and inquiries for TA positions are submitted to the School of Biological Sciences in July from SOM Graduate Studies. The School of Biological Sciences will not accept inquiries from students directly.

If English is not your first language, you must demonstrate proficiency in spoken English before you can be appointed a TA. For this purpose, you must take and pass the Test of Spoken English (TSE) or the Test of Oral English Proficiency (TOEP). For additional information, go to: <http://www.grad.uci.edu/funding/employment/teaching-assistantships/english-proficiency.html> . Exceptions to this requirement will not be granted. A minimum score of 50 is required for a TA appointment. The TSE is given six times per year at TOEFL test centers. *Once you have been appointed as a TA, you should enroll in either Mol Bio 399 or Dev Bio 399 - "University Teaching".*

More intensive training experiences in teaching are also available. If interested and acceptable to your PI, please contact the SOM Graduate Studies Director (Francine Jeffrey) for additional information about these programs.

## Scientific & Clinical Advances Seminar Series

The Department of Pathology & Laboratory Medicine sponsors a Seminar Series, Scientific & Clinical Advances, which provides continuing updates on the various disciplines of pathology with emphasis placed on the clinical applications of current research, experimental pathology, and the role of the laboratory in specific areas of patient care. This seminar series, which is accredited by the Accreditation Council for Continuing Medical Education for CME credit, is given principally by faculty (both UCI and non-UCI), graduate students, and postdoctoral fellows. For this coming academic year, these seminars will be on Thursday afternoons in the Thorp Conference Center, Gross Hall, 4<sup>th</sup> Floor. Student attendance at this seminar series is mandatory. (Note: grading for this course is based on attendance). Students should document their attendance on sign-in sheets.

The Graduate Student Representative (typically a 3rd or 4th year student) is responsible for assigning duties associated with these seminars; this does not apply to any Pathology-sponsored seminars that are not part of the Path 204 course. The Graduate Student Representative is appointed by the Graduate Advisor on a yearly basis. Duties include being the "coffee runner" (i.e., making sure there is coffee), introducing seminar speakers, bringing and collecting sign-in sheets for the grad students and faculty requesting CME credit, and coordinating lunches with outside speakers. Depending on the venue, responsibilities may also include setting up the computer and projector, and arranging the room for seminar seating. For lunches with outside speakers, the Grad Student Rep will also organize the group of students and/or postdoctoral fellows (3 total) to have lunch with the speaker. Larger numbers require prior approval. Funds for hosting the lunch reception are available from the department; receipts must be returned to Rick Koser in the Pathology Business office (D440 Med Sci I).

Graduate students in the program will also present in the seminar series, usually during the Spring quarter; these oral presentations are an important part of the graduate training. Second year students typically give a 30-minute “research in progress” (RIP) talk. In the third year and beyond, students will present their research as formal one-hour seminars. Following advancement to candidacy (see below), students are encouraged to coordinate their required yearly meetings with their doctoral committee in conjunction with their yearly Path 204 seminar.

## Advancement to Candidacy Committee and Exam

Qualifying Exams (aka the “prelims”) are normally completed at the end of your first year in the CMB Program. At this point, with approval from your Experimental Pathology PI, the student formally enters the Experimental Pathology program. Financial support for student stipend and tuition/fees then shifts from the CMB gateway to the student’s PI/mentor. In exceptional cases when a student is ineligible to sit for their qualifying exam by the end of the first year, the student may enter the Experimental Pathology program on a conditional basis. Details of these exceptions will be worked out by the student’s prospective mentor, the graduate advisor (Ed Monuki), and CMB director (David Fruman).

The next step in progression towards the doctoral degree is Advancement to Candidacy (aka the “advancement”). The purpose of this process is to ensure that the student has selected an appropriate topic for the dissertation and that completed and planned experimental work is scientifically rigorous and likely to be completed successfully within the “normative” period for graduate study (5 years).

The Advancement to Candidacy exam should be taken **by the end of the summer of the third year of graduate study** (i.e., by the end of the second year in the Experimental Pathology Ph.D. Program in most cases). Students are encouraged to advance even earlier, if ready. The advancement exam committee consists of five members – at least 3 from Experimental Pathology (primary or joint faculty) and at least one “outside” member (i.e., NOT in Experimental Pathology). Your advisor will serve as Chair of the committee. All members must be Academic Senate faculty (Professor, Professor-in-Residence, or Clinical X Professor series); Academic Senate faculty from other UC campuses may serve as outside members. Exceptions to include non-Academic Senate members (e.g., faculty in the Adjunct Professor, Visiting Professor, Clinical Professor, and Researcher series) may be granted by the Dean of Graduate Studies. Larger committees are acceptable, but it is important to emphasize that the *majority* of committee members must be Experimental Pathology faculty.

Prior to the exam, a written research proposal modeled after an NIH grant application must be submitted to the committee members at least one week before the oral presentation. It should include an introduction, specific aims, background and significance, progress to date (preliminary data), research plan, and literature cited. The general organization of such a proposal can be found on the NIH Website: <http://grants1.nih.gov/grants/funding/phs398/phs398.html>. The proposal should be no more than 15 pages, excluding references and figures. The student must also bring a form (Ph.D. Form I) to the committee meeting. This form is available from the Grad Division website at <http://www.grad.uci.edu/forms/index.html>, or click on “Current Students” → “Forms” → Ph.D. Form I - Advancement to Candidacy. If you have any questions filling out the form, Stefani Ching or the Grad Advisor will be happy to help you.



During the exam, the student should be aware that he/she will be asked to leave the room before the presentation, and that extensive questioning and interruptions will likely occur during the presentation. Following the presentation, the committee will discuss the proposal at length with the student. The committee will then excuse the student again from the room for discussion. Immediately after this discussion, the committee will inform the student of its decision.

## Doctoral Committee

After successfully advancing to candidacy, you will form a Doctoral (or Dissertation) Committee. This committee is composed of at least three members from the Advancement to Candidacy Committee. The chair and a majority of members must be Experimental Pathology faculty (either primary or joint appointees), but unlike your advancement committee, there is no requirement to include an outside faculty member. You can also retain more than three members for the Doctoral Committee, if you so choose. The committee shall meet with the student no less than once a year to evaluate the student's progress and plans for future work. To document that the student has convened a yearly committee meeting, a form obtained from Stefani Ching must be signed by all committee members. This form is included in the student's file. A convenient time to have your yearly committee meeting is at the time of your yearly seminar in the Pathology seminar series (Path 204). Additional meetings may be called, as necessary, by request of the student or the advisor.

## Dissertation (Thesis) Preparation and Defense

Written and oral presentations of a student's Dissertation are the criteria for receiving the Ph.D. Prior to scheduling the oral thesis defense, the student should meet with Doctoral Committee members and receive approval to schedule the defense. For additional guidance, also go to <http://www.grad.uci.edu/> → "Current Students" → "Academics" → "Degree Completion". Among useful links is the UCI Thesis and Dissertation Manual for Electronic Submission (ETD): <http://special.lib.uci.edu/dissertations/electronic/tdmanuale.html>. The Archives at the Main Library also has dissertation packets listing all the requirements for your thesis preparation.

The dissertation should be given to doctoral committee members at least two weeks before your defense. You will present your dissertation as a seminar, followed by a question-and-answer period, then a closed-door session with your doctoral committee. Make sure to bring "Ph.D. Form II" with you for signatures, which you can find at: <http://www.grad.uci.edu/forms/index.html> – "Ph.D. Form II - Signature Page/Report on Final Examination for the Ph.D. Degree". This form, together with the signature page from the dissertation, will be signed by the doctoral committee at the time of the oral defense (or soon thereafter, if further edits are requested) and will be submitted with the final draft of the Dissertation to the Library Archives.

Modifications to the written document may be extensive, including the possible necessity of performing additional experiments. Thus, the student should schedule ample time for revisions to the final Dissertation prior to its submission to the Library Archives. Once graduate requirements are completed, students can participate in the UCI graduation ceremony; exceptions to this policy (i.e., attending the ceremony before completing all graduation requirements) require prior approval. Caps and gowns may be rented in advance from the UCI Alumni Association.

The “normative time to degree” – i.e., the expected length of Ph.D. training – is five years. This period includes both the first year in the CMB program and the time spent in the Experimental Pathology Ph.D. Program. The “maximum time to degree” is seven years. Both the mentor and the student should be vigilant regarding the maximum time to degree. Any training beyond the seven-year maximum requires exceptions from Associate Dean Klemens Hertel and the Dean of Graduate Studies, and will not be routinely approved.

## Outline of Requirements

### Year 2

- Sign up for Path 227 in fall quarter; and Path 200, 203, & 204 every quarter offered
- Take at least one didactic course
- Attend seminars and journal club (Path 204 and 227)
- Present RIP talk in Path 204 spring quarter
- Consider applying for fellowships

### Year 3

- Sign up for Path 227 in fall quarter; and Path 200, 203, & 204 every quarter offered
- Take at least one didactic course
- Attend seminars and journal club (Path 204 and 227)
- Present research seminar in Path 204 spring quarter
- Consider applying for fellowships
- Consider attending and presenting at a scientific meeting
- Set up Advancement Committee
- Take Advancement Exam (by end of 3rd year)
  - Submit proposal in NIH format (approx. 10-15 pages) at least a week in advance
  - Meet with committee members
  - Get PhD Form I signed

### Year 4

- Sign up for Path 227 in fall quarter; and Path 200, 203, & 204 every quarter offered
- Take at least one didactic course
- Attend seminars and journal club (Path 204 and 227)
- Present research seminar in Path 204 spring quarter
- Consider attending and presenting at a scientific meeting
- Meet with Doctoral Committee (ideally in conjunction with your Path 204 seminar)
  - Get yearly meeting form signed
- Make postdoctoral plans

### Year 5 and beyond

- Sign up for Path 227 in fall quarter; and Path 200, 203, & 204 every quarter offered
- Attend seminars and journal club (Path 204 and 227)
- Present research seminar in Path 204 spring quarter
- Consider attending and presenting at a scientific meeting
- Meet yearly with Doctoral Committee
- Solidify postdoctoral plans
- Arrange for your thesis defense
  - Submit written dissertation at least two weeks prior to defense
  - Get PhD Form II signed
  - Celebrate
- Submit your dissertation
  - Attend graduation (maybe)
  - Celebrate

## **Current Graduate Students (as of July 2016)**

**Daniela Bota**  
Naomi Lomeli

**Stephen Chessler**  
Tom Caldwell

**Andrea Tenner**  
Michael Hernandez

**Ping Wang**  
Hsiao-chen Lee