M.D./Ph.D. Program

Handbook

Keck School of Medicine
University of Southern California
California Institute of Technology
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“The Best Physician is Also a Philosopher”

—Galen
Program Overview

There is an increasing awareness that translation of research from basic discovery to improvement in human health is a critical need. While expanding our biological understanding of the world around us is important in itself as a foundation for the medical sciences, it is equally important to translate scientific discoveries into improvements in clinical care and the health of our population.

Physician scientists are uniquely suited to fulfill this need, as they are trained to:

- understand the relevant health problems in patients they care for in their clinical practices,
- use scientific methods necessary to derive hypotheses, test mechanisms, make discoveries, and develop solutions to these problems in the laboratory, and
- translate their findings back to the bedside and community.

The mission of the KSOM MD/PhD Program is to train a qualified and diverse group of physician scientists to become the next generation’s leader in translational science.

The combined M.D./Ph.D. degree is awarded for demonstrated competence in two related areas: clinical performance and innovative research.

Clinical training occurs under the auspices of the Keck School of Medicine at the University of Southern California. Unlike some programs, we believe that an M.D./Ph.D. student should receive complete and undiluted medical training. The privilege of caring for patients comes with the important responsibility to be as knowledgeable and competent in medical practice as other physicians who complete the medical school program. Competency in clinical medicine is judged by EXCELLENCE in completion of all Year I and II coursework, as well as the Introduction to Clinical Medicine program offered during both years. Additional requirements include completion of all clinical rotations in Years III and IV, and passing of the National Boards Parts I and II.

The performance of innovative research occurs within the guidelines of a specific doctoral degree granting program in the Graduate School at the University of Southern California or at the California Institute of Technology. Students are encouraged to explore research opportunities from the beginning of their enrollment in the program. Competency in research is evaluated based upon grades in coursework and successful completion of an individual department’s requirements for the award of his/her Ph.D. degree. This may involve completion of laboratory rotations, participation in departmental seminars, acquisition of research skills, performance on screening and qualifying examinations, success in teaching assignments, publication and presentation at national meetings, and satisfactory progress on the dissertation research.
Program Leadership

LEADERSHIP

Carmen Puliafito, M.D., M.B.A. - Dean of the Keck Medical School
Henri R. Ford, M.D., M.H.A. - Vice Dean for Medical Education
Steven D. Mittelman, M.D., Ph.D. - M.D./Ph.D. Program Director
Mitchell E. Gross, M.D., Ph.D. - Associate Director
Sarkis K. Mazmanian, Ph.D. - Director of the CalTech M.D./Ph.D. Program

ADMINISTRATORS

Christine Crispen - Administrative Director
Roland V. Rapanot - Assistant Director for Administration
Elizabeth M. Ayala - CalTech Biology Graduate Option Administrator
Raina M. Beaven - CalTech Staff Support Associate

EXECUTIVE COUNCIL

An Executive Council, consisting of top scientists and physicians within KSOM, USC, and CalTech, help to inform the Program Leadership on strategic vision and ensure success of the Program and students. Members of the Council are assigned to incoming students as Advisors, and help them navigate the Program through all phases of their training.

Faculty advisors assist the student in the following areas: (a) helping to arrange student rotations in research laboratories in their areas of interest, (b) monitoring the academic progress of the student in the first year, and identifying areas of potential difficulty, and (c) helping to identify potential departments and thesis advisors. It is understood that the appointed faculty advisor should have some expertise in a research area that is as closely related as possible to the interests of the students, so as to be in the best position to offer advice. As students progress in their training, it is expected that advising and mentoring activities will be transitioned to their research Principal Investigator and other identified mentors.
The Medical School

The medical degree is offered through the Keck School of Medicine of the University of Southern California. The School of Medicine is responsible for the central administration and general policy of the medical training and education of medical students at USC and is administered by the Dean of the Medical School. The medical school meets or exceeds all state curricular and training requirements, and is routinely accredited by the Liaison Committee of Medical Education (LCME). The School of Medicine Office of Student Affairs is in Keith Administration Building and telephone numbers and email addresses of various deans and administrative departments may be obtained through the Campus Directory on the University web server (https://my.usc.edu/wp/faculty/SearchForm.do).

For the Core Year I-IV Curriculum, please visit: http://keck.usc.edu/Education/Degrees_and_Programs/Professional_Degrees/MD/MD_Program/Medical_Curriculum.aspx

The Graduate School

Graduate programs in each of the USC Basic Science and Preventive Medicine Departments or Interdepartmental Programs are under the administration of the Graduate School. The Graduate School is responsible for central administration and general policy of all graduate programs at USC and is administered by the Dean of the Graduate School. Departmental graduate programs conform to or exceed the practices and standards set by the Graduate School. The administrative offices of the Graduate School and other associated offices are located at University Park Campus. The telephone numbers and addresses can be obtained from the University web server (https://my.usc.edu/wp/faculty/SearchForm.do). If additional information is required, the Program Administrators can help answer questions. Many administrative matters including registration and fee payments are handled on the Health Sciences Campus for full time students by the Office of Student Affairs at the Keck School of Medicine (323-442-2553) for the medical years. Students should contact the Office of Graduate Student Affairs in the School of Medicine (323442-1607) for any additional information regarding specific graduate student policies and programs.

The graduate course grades are used to determine each student’s grade point average in graduate courses. At USC, a student must maintain a 3.0 (B) GPA to be in good academic standing in graduate school. Dropping below a 3.0 places the student on academic probation; the student has one year to bring the GPA up to 3.0. Financial aid may be adversely affected in the event that the grade point average drops below 3.0.
Transition from M.D. to Ph.D. Program

RECEIVING GRADUATE CREDIT FOR MEDICAL SCHOOL COURSES

During the first two years of medical school, students are enrolled as medical students in the medical curriculum (which is graded Pass/Fail). **Students must perform at an acceptable level in their coursework in order to receive graduate credit for these medical school courses.** Appropriate graduate credits will be transferred to each M.D./Ph.D. student's transcript at the end of the MSII year, based on continued adherence to performance standards (See Performance Guidelines, Medical School Curriculum). Please note that graduate credit is not transferred to the California Institute of Technology.

During the fall semester of the MSII year, the M.D./Ph.D. student must decide which Ph.D. granting graduate departmental program to enter. For description of these graduate programs and selecting participating Ph.D. programs, visit [www.usc.edu/pibbs](http://www.usc.edu/pibbs). For other University programs, you may also visit [http://viterbi.usc.edu/](http://viterbi.usc.edu/) or [http://dornsife.usc.edu/](http://dornsife.usc.edu/).

The requirement for the graduate program selected is that it must be a Ph.D. granting program within the University of Southern California or the California Institute of Technology. Although the M.D./Ph.D. student was accepted into a combined degree program, there are certain application procedures that students must follow. Graduate programs have early application deadlines so it is best to begin planning for that transition early in the second year. Students should directly contact the staff advisor listed below for specific departmental instructions.

IDENTIFYING A RESEARCH ADVISOR AND PH.D. PROGRAM

During the first two years of the program, each student should actively seek out potential faculty to serve as a research advisor. During orientation, they will be exposed to the various degree-granting programs on the Health Sciences Campus in a variety of formats. Most of these formats provide some print information concerning the current research interests of individual research faculty in doctoral degree granting programs. In addition, students are directed to individual websites of faculty, which can be viewed through the University of Southern California Programs in Biomedical and Biological Sciences (PIBBS) web site ([www.pibbs.usc.edu](http://www.pibbs.usc.edu)). Also, the M.D./Ph.D. Program Office can provide lists of faculty and research interests. During the MSI year, students should consult with their assigned M.D./Ph.D. advisor, the Director or an Associate Director of the program, to identify potential faculty advisors. Students should contact advisors in whose work they are interested and make arrangements with that potential advisor to discuss research projects. If possible, it would help if the student could meet with potential advisors a number of times before the first summer to more clearly delineate areas in which they might perform a small preliminary project.
Only faculty who have appointments (either secondary or primary) in departments with Ph.D. degree-granting programs are eligible to serve as faculty advisors for the graduate degree. Some clinical faculty may thus not be strictly eligible. Students who are interested in studying with someone who is not currently a faculty member in a Ph.D.-granting department may still work with that individual if they can identify a member of a degree granting department who will serve as a co-advisor. Alternatively, they should urge the potential faculty mentor to seek a secondary appointment in an appropriate department.

Students are urged to carefully evaluate the nature of the laboratories in which they are interested to determine if that particular laboratory would operate in a manner that would most facilitate their own method of learning. Factors in any decision would include first and foremost whether the research area is one that the student finds stimulating and intriguing. Other factors would be the number of people in the laboratory, who actually does the training in the laboratory (the laboratory director, or technicians and postdoctoral fellows), the funding level of the laboratory (the laboratory is required to provide graduate support for the student by some mechanism), and the past training history of the laboratory. Students should consult with their more senior student colleagues, but should keep in mind that each student has his or her individual requirements and needs, and the criteria used by certain students for their ultimate choice may not be appropriate for others.

SUMMER RESEARCH ROTATIONS
In general, each M.D./Ph.D. student will perform a summer research rotation between Years I and II in the laboratory of the individual they are most likely to choose as an advisor. If the student has an opportunity to work in someone's laboratory in the summer before they start Year I, this is an advantage as well and highly encouraged. Students may also do a research rotation between Year II and Ph.D. Year I.

REQUIRED SCHOLARLY PROJECT
The required scholarly project (RSP) is a part of the medical school curriculum, designed to expose students to research. The medical school curriculum includes several afternoons without lectures in order to allow students to work on their RSP. M.D./Ph.D. students should use these afternoons to identify a graduate advisor, lay the groundwork for their project(s), learn laboratory techniques, and participate in laboratory activities. Since M.D./Ph.D. students will perform a substantial amount of research during their graduate school years, they might not complete a discrete project on the same timeline as other medical students. The table below delineates the responsibilities of the M.D./Ph.D. students in participating in the RSP program.
**RSP Requirement** | **M.D./Ph.D. Requirement**
--- | ---
Attend all RSP meetings | Same
Complete online clinical-translational research modules during MSI year | Same
Complete summer research project between MSI and MSII years | Rotate in laboratory during summer between MSI and MSII years
Research proposal due August of MSII year | Summer progress report and research proposal due August of MSII year. If student has not identified research advisor, proposal should include plan to do so during MSII year
Progress report due January of MSII year | Same
Present poster in April of MSII year | Same (or during PhD I year if needed)

**APPLYING TO GRADUATE SCHOOL**

**USC**
1. Contact the administrator in the academic department/program of interest so they are aware you plan to apply and find out if there is anything such as a pre-application that needs to be done. Identify that you are an M.D./Ph.D student and who you will be working with.
2. Complete the Graduate School admissions on-line application. The website is [http://www.usc.edu/admission/graduate](http://www.usc.edu/admission/graduate)
3. Complete a waiver with the M.D./Ph.D. Program Office so that your M.D./Ph.D. file can be sent to the department you are applying to.
4. Upon formal admission into a Ph.D. Program, notify M.D./Ph.D. Administrators

*The above instructions are the students’ responsibilities.* Students may contact the M.D./Ph.D. Program Office if assistance is needed with the application process.

**CALTECH**

For students who want to do graduate studies at CalTech, please contact Elizabeth Ayala at ayalae@caltech.edu (626) 395-4497. The steps for applying to specific departments or divisions will be communicated at the time of contact. Additional information may be obtained by visiting [www.caltech.edu](http://www.caltech.edu). M.D./Ph.D. students typically join the Division of Biology/Biological Engineering or Chemistry/Chemical Engineering
<table>
<thead>
<tr>
<th>Program</th>
<th>Deadline</th>
<th>Faculty Advisor</th>
<th>Administrator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventive Medicine (IPR/Health Behavior)</td>
<td>Feb 1</td>
<td>Louise Rohrbach</td>
<td>Marny Barovich (626) 457-6648 <a href="mailto:barovich@usc.edu">barovich@usc.edu</a></td>
</tr>
<tr>
<td>Preventive Medicine (Biostatistics, Epidemiology, Molecular Epidemiology, Statistical Genetics &amp; Genetic Epidemiology)</td>
<td>Dec 1</td>
<td>W. James Gauderman</td>
<td>Mary Trujillo (323) 442-1810 <a href="mailto:mtrujill@usc.edu">mtrujill@usc.edu</a></td>
</tr>
<tr>
<td>Cancer Biology and Genomics</td>
<td>Dec 1</td>
<td>Gerry Coetzee</td>
<td>Joyce Perez (323) 442-1475 <a href="mailto:jpperez@usc.edu">jpperez@usc.edu</a></td>
</tr>
<tr>
<td>Development, Stem Cells, and Regenerative Medicine</td>
<td>Dec 1</td>
<td>Gage Crump</td>
<td>Joyce Perez (323) 442-1475 <a href="mailto:jpperez@usc.edu">jpperez@usc.edu</a></td>
</tr>
<tr>
<td>Medical Biology</td>
<td>Dec 1</td>
<td>Martin Kast</td>
<td>Joyce Perez (323) 442-1475 <a href="mailto:jpperez@usc.edu">jpperez@usc.edu</a></td>
</tr>
<tr>
<td>Molecular Structure &amp; Signaling</td>
<td>Dec 1</td>
<td>Wei Li</td>
<td>Joyce Perez (323) 442-1475 <a href="mailto:jpperez@usc.edu">jpperez@usc.edu</a></td>
</tr>
<tr>
<td>Biological Sciences/Neurosciences, Molecular and Computational Biology (UPC)</td>
<td>Dec 1</td>
<td>Program Specific</td>
<td>Dawn Burke (213) 740-5774 <a href="mailto:dawnburk@usc.edu">dawnburk@usc.edu</a></td>
</tr>
<tr>
<td>Engineering (UPC)</td>
<td>Dec 1</td>
<td>Program Specific</td>
<td>Jenninfer Gerson (213) 740-6241 <a href="mailto:jgerson@usc.edu">jgerson@usc.edu</a></td>
</tr>
<tr>
<td>CalTech (partial list)</td>
<td></td>
<td>Program Specific</td>
<td>Elizabeth Ayala (626) 395-4497 <a href="mailto:ayalae@caltech.edu">ayalae@caltech.edu</a></td>
</tr>
</tbody>
</table>
Transition from Ph.D. to M.D.
Clerkships

COMPLETION OF PH.D.
Each student must complete the requirements for the Ph.D. degree (including the thesis defense) before re-entering the clinical MSIII year. Students who expect to complete the Ph.D. and enter MSIII in July of the respective year of completion must contact the Office of Student Affairs at the Keck School of Medicine (323-442-2553 or medstuaf@usc.edu) in the early spring (January) to notify this office of their intent to return and to develop a rotation schedule. In addition, the students should notify the M.D./Ph.D. Program Office.

Students must complete the dissertation deadlines imposed by either USC or CalTech. USC deadlines may be obtained on the USC website by going to www.usc.edu/GraduateSchool and clicking on Current Students, then Thesis and Dissertations. Elizabeth Ayala (ayalae@caltech.edu) will be able to inform CalTech students of the specific deadlines for that institution. Students may also visit http://libguides.caltech.edu/theses

In order to approve student’s entry into MSIII, the M.D./Ph.D. Program Office and the Office of Student Affairs require the following paperwork by April 30th:

**USC Graduate Students**
- Approval to Submit Defended & Final Copy of Doctoral Work
- Verification of Completion of the Requirements for the Doctoral Degree
- Documentation Review Form
- Front Page of Dissertation signed by your Committee

**CalTech Graduate Students**
- A signed letter from the Dean of Graduate Studies indicating completion of all requirements at CalTech and that the degree will be formally awarded on a specific date.

A letter from the student’s advisor from either USC or CalTech with a date for completion is not sufficient to confirm a place in the MSIII year.

*Students will need to keep in mind the April 30 deadline if they plan to enter Year III in July of the same year.*

LONGITUDINAL CLINIC EXPERIENCE
The Longitudinal Clinic Experience is a requirement for the joint M.D./Ph.D. Program, which is completed during the Ph.D. portion of training. The general components of this program are:
• Students will participate as an active medical trainee (MSII or equivalent) in a clinical venue 12 times per academic year
• The clinical experience should be appropriate to the research and/or eventual career interest of the student
• Decisions regarding clinical placement will be made by the M.D./Ph.D. program leadership (Drs. Mittelman and Gross) along with the student and/or graduate advisor as may be appropriate
• While the dates and times for the interactions will be flexible as determined by the requirements for the graduate program and the availability of the clinical mentor, attendance will be verified by an administrative contact at each site.

Overall, the goal of this experience is to maintain clinical skills and gain exposure to clinical problems to enrich students’ potential to become physician scientists.

OTHER CLINIC REQUIREMENTS

OSCE Exam: Students must (re)take and pass the OSCE exam prior to entering their MSIII year. This exam will be coordinated through the ICM Office. M.D./Ph.D. students are encouraged to attend the MSII pre-OSCE sessions, which are generally held in the spring semester (mid-to-late April). These are MSP sessions coordinated by the MSPE tutors and the ICM office (mlogan@usc.edu). Information about the pre-OSCE tutor sessions is sent by email. Students should get on the class list serve by contacting Teresa Cook in the Office of Student Affairs at tcook@usc.edu.

Ambulatory Medicine Experience: M.D./Ph.D. students are required to take this 4-week ambulatory medicine elective prior to entering other MSIII clerkships. This elective should be taken no earlier than June to ensure that junior/senior continuum elective credit can be received. Please contact Sandra Gonzales in the Department of Medicine at Sandra.gonzales@usc.edu or (323) 226-2111 and Estella Peneyra-Turla at peneyral@usc.edu or (323) 442-2418 to make these arrangements.

SCHEDULING CLERKSHIPS

The Office of Student Affairs will be sending out clerkship information in spring of each year. Students may begin the paperwork process with Student Affairs and, in fact, should do so if they are planning to return in July. However it is important that students understand returning to the clerkships is not guaranteed until the appropriate documentation is received. For a preview of the Clerkship Tracks, please visit www.medweb.usc.edu and click on Year III.

Students will need to meet with Dr. Donna Elliott, Associate Dean for Student Affairs, to inform her of their intention to return to Year III. Students may make an appointment with her through Hazel Martinez at hazel.martinez@med.usc.edu or at (323) 442-2553.

To summarize, in order to return to the clinic, students must do the following:

• Inform M.D./Ph.D. program and the Office of Student Affairs of your intent to enter MSIII by early spring (January) of the semester prior.
• Provide paperwork by April 30 that you have completed the Ph.D. or will be completing the Ph.D. by July or August, whichever track/rotation you are assigned.
• Attend the optional MSP sessions in spring semester (dates to be confirmed).
• Arrange to get a new County ID badge, an updated TB test, and LiveScan for reestablishing LAC/USC Compliance. (Contact Student Affairs at 323-442-2553)
• Take the OSCE with Year II students in May (date to be confirmed).
• Schedule and participate in the mandatory 4-week Ambulatory Medicine experience.

M.D./Ph.D. Courses

MEDICINE AT THE BENCHTOP AND BEDSIDE COURSE (FALL SEMESTER)
This course is required of first and second year M.D./Ph.D. students, and includes ~6 classes during the fall semester. The goal of the course is to teach the students what a physician scientist is and how to be successful in translational research. Classes are two hours on selected days at a location in the Health Science Campus of USC.

The first hour is a combined case presentation and journal club. Two students will be assigned to present at each session (one first year and one second year). For each session, the students will choose a topic and a paper from the scientific literature, in consultation with the faculty instructor for that class. The MSII will present a clinical case, followed by the MSI presenting a paper which provides scientific insights into that topic. All of the students in the class will be expected to read the papers and have done some research into the medical topic.

The second hour of the class will involve an informal discussion led by the faculty instructor, who will be a scientist or physician scientist. These discussions will cover important topics relevant to career building, translational research, grant and paper writing, tenure, etc. M.D./Ph.D. students in all years of training are encouraged to attend these discussions.

TOPICS IN MOLECULAR MEDICINE JOURNAL CLUB (SPRING SEMESTER)
Topics in Molecular Medicine is held at CalTech during the spring semester, and is required for MD/PhD students in Year I and II Medicine. This journal club is organized around a defined subject in a basic or applied research focused in an area relevant to the specific preceptor at CalTech. Typically, the preceptor facilitates the discussion with the MSI and MSII students leading the discussion. Each participant can voice their view relating to several questions such as the appropriateness of the research design, the statistics employed, the appropriateness of the controls that were used, etc. There might be an attempt to synthesize together the results of several papers, even if some of these results might first appear to contradict each other.
The intent is to familiarize students with the advanced literature in the field of molecular medicine. The journal club can help improve the students' skills of understanding and debating current topics of active interest in the field. This is a non-credit course that meets six times over the course of the semester for one hour per session.
Performance Guidelines

M.D./Ph.D. students are an elite group of trainees. They are recognized for their long-term commitment to becoming a physician scientist by receiving monetary compensation not normally afforded to other medical students, including tuition remission and a stipend during their medical school training. As such, they are expected to perform with EXCELLENCE in all aspects of their medical and research training.

MEDICAL SCHOOL CURRICULUM

The Student Performance Committee (Year I-II) or the Committee on Performance, Professionalism, and Promotion (Year III-IV) may place a student on probation at any time during the student’s enrollment. Justifications for placing a student on academic probation include, but are not limited, to the following:

- Failure to pass a required course, a required clerkship, selective/elective, or other mandatory competencies (OSCE, CPX, HEAL, etc.)
- Failure to pass the appropriate USMLE exam by the specified time
- Failure to satisfactorily remediate a pattern of marginal performance as specified by the performance committees
- Failure to make Satisfactory Academic Progress toward the completion of the M.D. degree
- Repeating the year for academic reasons

A student may be placed on academic probation by the Associate Dean for Student Affairs for academic matters without convening the performance committee. The student may meet with the Associate Dean for Student Affairs to discuss whether probation is warranted, and may appeal being placed on probation to the appropriate Performance Committee.

At the time a student is placed on probation, s/he will be informed of the reason for probation, the terms of probation, the duration of probation, and any other matters deemed pertinent by the Performance Committee or Associate Dean for Student Affairs. An M.D./Ph.D. student on probation MAY have their stipend withheld, at the discretion of the Program Director, until they complete any required remedial work and demonstrate improved performance in subsequent Systems or Clerkships. Any M.D./Ph.D. student who is on probation for >12 weeks MAY be dismissed from the M.D./Ph.D. program. These students will continue in the medical school program at the discretion of the Student Performance Committee.

Prior to transition to Ph.D. training, M.D./Ph.D. students are required to take the USMLE Step I Examination. This should be completed by mid-July of their MS II year, in order to facilitate timely entry into a graduate program.
RESEARCH TRAINING

M.D./Ph.D. students are expected to complete a laboratory rotation during the summer between medical school years I and II. Additional rotations can be completed during the summer before entering the year I medical school class, or immediately after completion of year II.

Students are expected to join their Ph.D. laboratory no later than August 1st after their M.D. II year. Any delay beyond that time should be approved in advance by the M.D./Ph.D. Program, and may result in a lapse in stipend support.

The primary responsibility for research training and performance rests with the Principal Investigator. However, the M.D./Ph.D. Program will monitor progress via required annual progress reports. These reports will be due by June 30th of each year in the program. In addition, M.D./Ph.D. students will be assigned an M.D./Ph.D. Advisor from the Executive Council, who will help to guide and monitor progress throughout the entire training period. Students are expected to meet with their mentors regularly.

MD/PHD SPECIFIC COURSEWORK

M.D./Ph.D. students are expected to attend and actively participate in the Medicine at the Bench and Bedside and Topics in Molecular Medicine Journal Club. Both courses are required for M.D./Ph.D. students during the M.D. I and M.D. II years. Any absences from these classes should be cleared with the M.D./Ph.D. office beforehand.

PROFESSIONALISM

M.D./Ph.D. students are expected to exhibit the highest degree of professionalism on and off campus. Any unprofessional or unethical behavior will be addressed by the Associate Dean for Student Affairs and/or the M.D./Ph.D. Program Director, and potentially referred to the appropriate performance committee, and MAY result in probation. The link to the Keck School of Medicine Handbook is provided.


TIME LIMITATIONS

If a student takes longer than 6 years to finish the Ph.D. degree, they must petition for an extension. The USC Graduate School limit is 8 years to finish the Ph.D. degree.
Other Issues

UPDATES
Students are requested to update the information in their files on an annual basis. Information to be provided includes: changes in advisor, coursework taken in Ph.D. years with grades, publications, awarded grants or scholarships, speaking engagements, or other events in which the student participated. This will facilitate the writing of future letters in support of the students.

ANNUAL M.D./Ph.D. PARTIES
Every year the M.D./Ph.D. Program hosts three parties. A Welcome Party at the beginning of the year to welcome the entering class and give an opportunity for the current students to catch up with one another. There is a Holiday Party in December to celebrate the season, and at the end of the Spring term there’s a Graduation Party. The parties are generally held off campus at one of the local Pasadena or Los Angeles area restaurants.

ANNUAL M.D./Ph.D. SYMPOSIUM
This event is generally held annually during the late spring or early summer and consists of oral and poster presentations by current M.D./Ph.D. students. A keynote speaker is also invited to speak at the Symposium. Students are expected to participate annually throughout the duration of their training.

STUDENT COUNCIL
A Student Council, comprised of one representative from each entering M.D./Ph.D. class, will be formed to advise the Program Directors and Administration on policy and student activities. The Council will be informed of relevant upcoming changes in the Program, and given the opportunity to provide input on these changes. They will be responsible for soliciting student feedback on the Program, especially as new changes are implemented. The Council will meet twice per year, and on an ad hoc basis.

Financial Issues

FUNDING
Financial support, tuition waivers, and scholarships are awarded to all students accepted into the program. Students accepted into the program receive full funding which include tuition remission and a stipend. This funding continues until the student is enrolled in a graduate program. Support during the Ph.D. portion of the program will be provided for each student by the specific department and/or research preceptor.
STIPEND
Fully funded M.D./Ph.D. students currently receive an annual stipend of $24,000 which is awarded in monthly installments of $2,000. This stipend is available for direct deposit as long as the student’s bank of choice supports it. The student must complete a “Direct Deposit/Electronic Funds Transfer” form to receive the direct deposit. Student’s will receive an annual letter from the Program Office documenting their stipend received for tax purposes.

TRAVEL FUNDS
The M.D./Ph.D. Program will provide funds for M.D./Ph.D. students in their second year of medical school to attend either the national American Physician Scientist Association (APSA) conference in Chicago (April), or the M.D./Ph.D. Student Conference in Colorado (July). These meetings are great opportunities to meet other M.D./Ph.D. students, present research, and hear cutting edge science. The Program will also cover the cost of APSA membership for all M.D./Ph.D. students. Students desiring to attend a scientific meeting in their own subject area should rely upon funds from their advisors, departments, and/or professional associations.

Student Resources

M.D./Ph.D. WEBSITE (http://keck.usc.edu/mdphd)
The M.D./Ph.D. Website contains detailed information on the dual program and talks about the administrative, academic, and financial aspects of the program.

M.D./Ph.D. STUDENT HANDBOOK
This Handbook provides both incoming and current students with information about the USC-CalTech M.D./Ph.D. Program and offer guidelines. The guidebook also addresses common questions regarding academic, social, and financial issues.

M.D./Ph.D. PICTURE BOOKLET
This booklet contains the pictures of the Program Administrators and current M.D./Ph.D. students.

UNIVERSITY CATALOGUE
The University Catalogue describes the general policies and degree requirements for the Graduate School, the School of Medicine, and each degree granting department eligible to train M.D./Ph.D. students.
OTHER STUDENT HANDBOOKS

The Medical Student Handbook.
This handbook, published by the Medical School and provided to each student on enrollment in the medical school, describes the rules, regulations and requirements that specifically relate to participation in the Medical School curriculum.

The Graduate Student Handbook.
This handbook, published by the Graduate School, guides students through the rules, regulations, and administrative details of obtaining a degree at USC. The handbook is particularly valuable because it includes a step-by-step checklist that students can use to monitor their progress toward their graduate degree.

GRADUATE SCHOOL WEBSITE (http://www.usc.edu/dept/GRADSCHL/)
This site has detailed information regarding rules, regulations and administrative details of obtaining a graduate level degree at USC.

HOUSING INFORMATION
USC offers a range of services to meet the housing needs of graduate students. There are several housing facilities at the University Park Campus and one graduate student housing on the Health Sciences Campus. Housing assignments fill quickly and it is imperative to contact the USC Housing department early to inquire about availability and eligibility requirements.

USC Housing Services
620 USC McCarthy Way, Los Angeles, Calif. 90089-1332
Tel: (800) 872-4632, (213) 740-2546
Fax: (213) 740-8488
Email: housing@usc.edu

Non-USC Housing
Another option many students take advantage of is the diversity of housing opportunities within and around the Los Angeles area. Some popular communities around the university include: Pasadena, Glendale, Alhambra, Santa Monica, and Downtown Los Angeles. The sources below may be able to help you find a home in these areas.

University Resources
There are listings for non-university owned housing available through the Office of International Services, although this mainly lists accommodation near UPC. At HSC it is worthwhile checking the notice board on the first floor of the MUDD building as apartments and rooms for rent are often posted here. The department webpage contains useful information on apartment hunting for new students (www.usc.edu/student-affairs/OIS/NewStud/housing/housingupdate.htm).
TRANSPORTATION INFORMATION

Parking permits for all USC campuses must be purchased through the USC Transportation department, either in person or online. It is best to buy them early as they generally sell out. To purchase a permit online, please visit [http://transnet.usc.edu](http://transnet.usc.edu) and click on “Parking Permits”.

For more information, please contact the USC Transportation department directly at (213) 740-3575 or visit [http://transnet.usc.edu](http://transnet.usc.edu).

Tram service at USC

A free shuttle runs between HSC, UPC, CHLA, Alhambra, and Union Station (LA’s main train station) at half hour intervals making a handy alternative to go between campuses if you don’t want to brave the traffic! Please visit the transportation webpage to get more information on tram schedules.

Public Transportation

Most people in Los Angeles own a car, although public transport (buses and the metro) is available in some areas. To plan routes using public transportation, go to LA’s Metropolitan Transportation Authority at [www.metro.net](http://www.metro.net). Taxis and shuttles are also available.