

MD/PhD PROGRAM HANDBOOK

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SECTION I: ADMISSION

Students apply to the MD/PhD program through the American Medical College Application Service (AMCAS). After the AMCAS application is received, students interested in the MD/PhD program will be invited to complete a secondary application that will include questions related to their background and interest in becoming a physician-scientist. Highly qualified applicants invited to interview for admission to the MD program will also be invited to interview for consideration for the MD/PhD program. Only those students offered admission to the MD program will be considered for admission to the MD/PhD program.

Medical students at The Warren Alpert Medical School of Brown University may also apply for admission to the MD/PhD program after they have begun their medical studies. Interested students should contact the MD/PhD Program Director to explore the possibility of transitioning to the MD/PhD Program. However, admission to the program through this route is not guaranteed and depends upon review of the student's credentials and the availability of a position in the program.

Students in the Program in Liberal Medical Education (PLME) at Brown University are also eligible to apply. Interested students should contact the MD/PhD Program Director early during their undergraduate training to inquire about the application process. Admission to the MD/PhD program through this route is not guaranteed and depends upon review of the student's credentials and the availability of a position in the program.

SECTION II: PROGRAM OF STUDY

The MD/PhD Program enables students to attain both MD and PhD degrees over approximately eight years. Students who are unable to complete the degree requirements for the MD/PhD program within eight years will need to request a waiver of the eight-year graduation rule from the Medical Committee on Academic Standing and Professionalism. Students in the MD/PhD program will first complete the pre-clerkship curriculum (which ends in December of Year 2) and must pass the Step 1 licensing examination before undertaking graduate studies. Additionally, students are expected to be in good academic standing prior to entering the PhD program. Upon completion of all PhD requirements, students will return to complete the clinical phase of their medical education beginning with the mandatory Clinical Skills Clerkship course (in February) and their Clinical Clerkships (which begin in March).

All students admitted to the MD/PhD program are expected to complete the full training program. This includes satisfying all requirements for both the MD and PhD degrees. If this will not be possible for any reason, students must contact the MD/PhD Program Director immediately. Students who decide not to complete the PhD degree will no longer receive any financial support from the MD/PhD Program for either degree.

Students in the MD/PhD program are subject to the rules & regulations of The Warren Alpert Medical School and the Brown Graduate School. Students must familiarize themselves with the handbooks for the Medical School, the Graduate School, and the handbook specific to their PhD program. It is the student's responsibility to comply with all of the regulations specified within these handbooks. This includes maintenance of good academic standing and adherence to professionalism standards. Please consult the appropriate handbook for more information on how to maintain good academic standing and expectations around professionalism. All MD/PhD students are also required to adhere to the Academic and Student Codes set forth by Brown University. Students are also expected to refrain from behaviors that constitute sexual harassment as specified by Brown University's Policy Statement on sexual or gender-based harassment, sexual violence, relationship and interpersonal violence and stalking. Failure to adhere to the expectations detailed above could lead to dismissal from a single or both components of the dual degree program.

GRADUATE STUDIES

In their AMCAS application to the MD/PhD program, applicants should indicate which graduate program best fits their research background and interests. Early in Year 1 of medical school, students should consult with the MD/PhD Program Director and the Director of Graduate studies for their specific graduate program to discuss selection of a research mentor. The most important decision that a student makes during their graduate studies is selection of a research mentor. For information about specific programs, students should visit the websites of programs of interest and view handbooks available from the <u>Graduate School web site</u>.

Students may obtain their PhD as a member of one of the following graduate programs within the Division of Biology and Medicine:

Biomedical Engineering
Computational Biology
Ecology, Evolution, and Organismal Biology
Molecular Biology, Cell Biology and Biochemistry
Neuroscience
Pathobiology
Therapeutic Sciences

The requirements for the PhD degree for MD/PhD students can be optimized in accord with the student's past coursework and other factors. Once the student has completed their lab rotations and chosen a research mentor, the specific requirements for their PhD degree should be discussed with the mentor and the Director(s) of Graduate Studies for the student's PhD graduate program.

The following sections address key issues related to MD/PhD graduate studies.

CHOOSING A THESIS LAB

Students are required to do lab rotations during the summer after Year 1 of medical school and after they complete their pre-clerkship curriculum and pass Step 1 at the conclusion of Year 2 of medical school. Rotation request forms must be submitted to the graduate school prior to the start of each rotation—students should contact the Director of Graduate Studies for their PhD graduate program for information on how to submit. Students are not expected to engage in lab work during the pre-clerkship phase of their medical education and are encouraged to maintain full focus on their medical school coursework to ensure they maintain good academic standing and remain on track to transition to the PhD component of their studies at the end of Year 2 of medical school. If students are interested in doing a lab rotation during the summer before Year 1 of medical school, they should contact the MD/PhD Program Director as early as possible. Specifics of rotations

should be agreed upon with the prospective faculty mentor. Summer rotations should last 8-9 weeks and the time commitment should be consistent with what would be generally considered "full time." Information about PhD Graduate Programs and Faculty Directors can be found here: Graduate Programs in Biology

Graduate programs may require that students do a specific number of rotations. For MD/PhD students, this number can be optimized in accord with past research experiences and other factors. This should be discussed with the student's faculty mentor and the Director of Graduate Studies for the student's PhD graduate program.

Before a student commits to a lab for their thesis work, mentors must submit a lab placement application to the PhD graduate program for consideration. Mentors should contact the Directors of Graduate Study or Program Coordinator in the PhD program for information on how to submit the application.

REGISTRATION FOR GRADUATE SCHOOL

For students transitioning from medical school to graduate school, students may register at the beginning of September. Before registering for classes, students must set up an appointment with their mentor and/or the Director of Graduate Studies for their specific graduate program. Prior to registering for courses at the graduate school, students must submit the relevant time away paperwork in order to request a leave of absence from medical school for the anticipated duration of their PhD studies.

All continuing graduate students must pre-register. Students should register via Banner, the student information system. Pre-registration is in the preceding April for the Fall semester and in the preceding November for the Spring semester. Students are notified of the specific dates for registration but please consult the <u>Registrar's web site</u> for complete and updated information.

If students have completed all required coursework and plan to only do lab work, they must register for *Independent Study*. If a student fails to pre-register, the Registrar's Office will charge a late fee. Additionally, there is the risk of the student's status becoming inactive. If this happens, students will lose aid and privileges until they register and their student status is reactivated.

STUDENT EVALUATION

Students are regularly evaluated by their mentor and program. When a student enters the graduate research years, the Director of Graduate Studies will meet regularly with the student to offer advice on courses and to assess progress. As the student prepares for the qualifying exam, the student will

assemble an advisory committee that will evaluate their performance on the qualifying exam and serve as their thesis committee for the remainder of their PhD studies. Note that student advising practices may differ between graduate programs. Students should check with specific graduate programs for details. The MD/PhD Program Director and Associate Dean for Student Affairs at The Warren Alpert Medical School will meet once annually to ensure adequate progression of students.

TEACHING ASSISTANTSHIP REQUIREMENT

MD/PhD students are not required to perform teaching assistantships. However, students can serve as teaching assistants if they feel that this experience will be valuable to their training. The goal of the teaching assistantship is to not only provide an important service to the institution, but also to gain valuable teaching experience that will contribute to academic career development. Course assignments, whenever possible, will be based on a student's research interests and career goals and will be made by the Associate Dean of Biology Graduate Education in the Office of Graduate Studies in consultation with the MD/PhD program. Students interested in serving as a teaching assistant should notify their Director(s) of Graduate Study during their first year in graduate school.

DISSERTATION/ADVISORY COMMITTEE

Most students will have selected a mentor by the beginning of their graduate years. The student and the thesis mentor then select a thesis committee, which provides insight into the specific field of research and evaluates and helps to guide the student's progress during the PhD years. For step-by-step instructions and dissertation requirements, please consult the Graduate School's <u>Rules and Regulations</u>.

CLINICAL ROTATIONS DURING GRADUATE SCHOOL

A clinical elective during the later graduate research years is required for all students so that they can maintain clinical competency and prepare for the transition back to medical school. MD/PhD students can see patients in a hospital clinic affiliated with the medical school one day every other week during the last two years of their PhD studies. This clinical rotation will be registered as a medical school elective and will be graded on a pass/fail basis; however, this clinical rotation will not count towards the 40 weeks of elective credits that are required for graduation from the MD program.

GROUP MEETINGS WITH THE MD/PhD PROGRAM DIRECTORS

All students in the MD/PhD program are required to attend group meetings with the MD/PhD Program Director that are held every other month on the first Wednesday of the month from 5-6 PM. Individual schedules, particularly during the Clerkship years, may prohibit attendance at some meetings; however, students are encouraged to make every effort to attend whenever possible. Students can utilize the excused absence request form on the class Canvas page to request an absence from any required Clerkship activities with the exception of OSCEs (Objective Structured Clinical Exam). These meetings serve a variety of purposes. First, students can raise any issues pertinent to their training for discussion by the group. Second, physician-scientists from Brown University or other institutions will be invited to present their career trajectories and research at some of these meetings. Third, the Program Director may discuss issues of relevance to the students, such as transitioning between medical and graduate studies and applying for NIH F30 grants. Fourth, students in the PhD phase will be expected to do a works-in-progress talk. Fifth, the Program Director may discuss significant changes being considered or implemented in the MD/PhD program.

MEDICAL STUDIES

REQUIREMENTS FOR THE MD DEGREE

The requirements for the MD degree are identical to those for MD students, which can be found in Section II of the Medical Student Handbook.

Further requirements for the awarding of the MD degree are as follows:

- Every candidate for the degree of Doctor of Medicine must satisfactorily complete all of the medical school curriculum as a full-time matriculated student at Brown University.
- A candidate for the degree of Doctor of Medicine must complete all the requirements for that
 degree within eight years of admission to the Medical School for MD/PhD candidates.
 Exceptions to this rule may be made only with the consent of the Medical Committee on
 Academic Standing and Professionalism.
- The Medical Committee on Academic Standing and Professionalism will recommend granting of the medical degree to candidates who have fulfilled the academic requirements.
- Students will be allowed to receive their diploma only if all tuition and fees have been fully paid and other obligations fulfilled, such as return of pagers and repayment of emergency short-term loans.

SECTION III: TRANSITION PROCESSES

MEDICAL SCHOOL TO GRADUATE SCHOOL

In order to ensure a smooth transition from the medical school to the graduate school, the following steps should be followed.

Step 1: At the beginning of the second year of the medical program, students should confirm with the MD/PhD Program Director their intention to pursue graduate studies. Academic years during the medical school program do not strictly align with the graduate school program. At the conclusion of the pre-clerkship curriculum phase in their MD program, students are required to submit the MD/PhD Leave of Absence Request Form.

Step 2: Arrangements to change a student's status to graduate student will be made by the MD/PhD Program Directors working in concert with the Division's Office of Graduate Studies. The contact person in the Office of Graduate Studies is the Graduate Program Manager (ogs@brown.edu). This process is essential in order for students to receive a graduate stipend, tuition remission, and health insurance.

Step 3: If students are doing graduate work *on campus*, their box number will remain the same. If students are doing graduate work *off campus*, they should leave a forwarding address with the Bio-Med Mailroom and they will be reassigned a new box number upon their return to the medical school.

Step 4: Once students transition to being a Graduate Student, they must fill out an I-9 form by September 1. Students complete an I-9 Form (if they are receiving a stipend), which can be initiated in Workday and completed at the <u>Brown Business Center</u>, Page-Robinson Hall, room 213. If needed, instructions for completing section 1 of the I-9 can be found on the <u>I-9 Central site</u>. Students should consult a list of <u>acceptable documents</u>.

During the transitional phase, a student's status may, for a short period, become inaccessible by computer. As a result, the student may encounter difficulties when trying to use various services on campus (library, etc.). If this happens, students should instruct the person in charge to call the Registrar's Office to verify enrollment. Be aware that this can only be done during business hours.

RE-ENTERING MEDICAL SCHOOL AFTER COMPLETING REQUIREMENTS FOR THE PhD DEGREE

Step 1: As students begin planning for their thesis defense, they should contact the MD/PhD Program Director as well as the Associate Dean for Student Affairs at The Warren Alpert Medical School to discuss their timeline for their transition back to medical school. Students will transition back to medical school to begin their clerkship rotations, starting with). the Clinical Skills Clerkship (held in February). The thesis defense must be completed before the student is cleared to return to medical school. Students will NOT receive a tuition fellowship during their Clinical Clerkships unless this requirement is met.

Step 2: MD/PhD students should contact the Office of Records and Registration (AMS-Records@brown.edu) at the medical school in December of the year before they return to medical school. This is to ensure their student status is on track to be changed from graduate student to medical student, and that students can attend the Clinical Skills Clerkship in the Spring. Students will need to bring their immunizations, N95 respirator fitting, and ACLS/BLS certification into compliance in order to be cleared to start their Clerkships.

Step 3: Students should also discuss their return to medical school with the <u>Office of Financial Aid</u> (md_finaid@brown.edu) for the medical school.

SECTION IV: FUNDING, FINANCIAL AID AND PAYMENT

SOURCES OF FINANCIAL SUPPORT

AS A MEDICAL STUDENT:

During Years 1-4 of medical school, MD/PhD students are provided with a full tuition scholarship. To qualify for full tuition remission during their Clinical Clerkships, students must satisfy all requirements for the PhD degree before beginning their Clerkships in medical school.

Financial support is available through a NIH T35 training grant to support students as they conduct rotations during the summer between Years 1 and 2 of medical school. Students in Year 1 of medical school are required to apply for this in the fall. For more information on this, students should contact the MD/PhD Program Director. Students will be provided a stipend by the medical school during their second rotation and then by the graduate school during their third rotation before their transition to graduate school. Students do not need to apply for these stipends.

AS A GRADUATE STUDENT:

MD/PhD students receive full support during the graduate years, which includes tuition, health fees, and a stipend for twelve months per year for up to **five years**. However, the typical length of PhD studies for MD/PhD students is four years and all students are expected to work towards the goal of completing their PhD studies within four years. The stipend levels can be found <u>here</u>.

All students are required to apply for an NIH F30 grant during their PhD years. Students may also apply for fellowships from other sources as well. Grant applications must be supervised and filed through proper university channels. Students should allow time for university review and acceptance which must be done prior to the agency deadline. Students should discuss their plans for grant applications with the MD/PhD Program Director and their PhD advisor. Eligibility for an F30 grant is described online here.

If a student's external fellowship award is less than the published Brown Division of Biology and Medicine stipend, the award will be supplemented so that the stipend level is the same as other Division PhD students (as long as the terms of the award do not prohibit supplementation). Students who are awarded an NIH F30 grant as a graduate student will receive a supplemental reward of \$250.00 per month during their fellowship.

STIPEND PAYMENT INFORMATION

AS A MEDICAL STUDENT:

Medical students will receive a stipend during the summer between Years 1 and 2 of medical school if they successfully apply for NIH T35 training grant support during Year 1. Medical students will also receive a stipend during their rotations after they complete the pre-clerkship curriculum and pass Step 1 in Year 2. Medical students will only receive a stipend during their Clinical Clerkships if they have obtained an NIH F30 grant. Stipend payments are processed by the Program Director's office and issued through the Payroll Office.

Medical students that are receiving any payment must have an I-9 form on file with the University in order to receive payment from the Payroll Office.

AS A GRADUATE STUDENT:

If students do not complete the I-9, they will not receive their paycheck.

Graduate students will receive an appointment through the Graduate School for the academic year and for the Summer. The terms for these appointments are as follows:

• Fall: Sept 1 – Jan 15

• Spring: Jan 16 – May 31

• Summer: June 1 – Aug 31

Appointment type will be determined by the funding used to support graduate student training. There are various appointment types: research assistant; fellow; trainee; teaching assistant. Payroll taxes and withholding of income taxes are dependent upon appointment type and non-US students are subject to the applicable treaties. Government regulations are quite complex and tax withholdings may vary and, thus, net pay will vary depending upon appointment. Stipends that are paid in the summer are subject to ADDITIONAL payroll taxes (FICA, etc); therefore, net pay in the summer may be lower than the academic year. Any money received from Brown may be considered taxable income and it is the student's responsibility to file appropriate tax returns. The impact of the appointment types dictates only whether taxes will be withheld, not whether the student owes taxes. This can be a complicated process and students are encouraged to consult the IRS and/or a tax specialist for specific information. Please review the financial information available from the Medical School.

The Graduate Labor Organization is the Union of Graduate Student Employees at Brown University. For more information about this organization, please visit <u>here</u>.

SECTION IV: GRIEVANCE PROCEDURES

Information on grievance procedures is available for graduate and medical students.

QUICK REFERENCE GUIDE

The following links contain lists of key administrative staff should students need assistance.

MD/PhD Program

Office of Graduate Studies (Division of Biology and Medicine)

Warren Alpert Medical School Office of Student Affairs

Warren Alpert Medical School Office of Medical Education

The Brown Graduate School