



Sackler School of
Graduate Biomedical Sciences

Graduate Program in Immunology

Program Guide
2018 - 2019

Table of Contents

Welcome and Key Program Contacts	3
Curriculum Overview	5
Required Courses.....	5
Elective Courses	5
First Year Journal Club and Journal Club	5
Graduate Seminar.....	5
Research Presentations	5
Evaluation of Student Progress	6
Requirements for the Master of Science Degree.....	6
Laboratory Rotations.....	6
Purpose	6
Rotation Matching Process	6
Qualifying Examination	7
Purpose	7
Timing of Qualifying Exam	7
Selection of Qualifying Exam Committee.....	7
Overview of the Qualifying Exam Process.....	8
Format of the Written Qualifying Exam	8
Evaluation of the Qualifying Exam.....	8
Research, Career Planning, and Thesis.....	9
Selection of a Thesis Advisor	9
Selection of the Thesis Advisory Committee	10
Merge Inflammation Continuing Clinical Program	10
Career Planning	11
Thesis Advisory Committee Meetings and Assessment of Research Progress.....	12
Thesis Format and Defense	14
Publication	15
List of Immunology Program Students	16
List of Immunology Program Faculty	17

The requirements described in these guidelines may be amended or altered by the Graduate Program. Note that Sackler-wide policies supersede program specific policies.

Welcome and Key Program Contacts

Welcome to the Graduate Program in Immunology. This Program Guide provides key information and guidelines on the requirements of the program. It supplements information contained in the Sackler School Catalog (<https://sackler.tufts.edu/studentLife/sacklerCatalogs>), which has the official degree requirements and course listings, and the Sackler School Handbook (<https://sackler.tufts.edu/studentLife/sacklerStudentHandbook>), which contains important information about topics such as the Sackler academic and registration policies, professional conduct guidelines, financial matters, and information about student benefits, services, and resources.

This Guide includes a listing of graduate students in the program and contact information for faculty, staff, and students. You can find information about the research interests and publications of the faculty, as well as up-to-date schedules of seminars, journal clubs and research reports on our website (<https://sackler.tufts.edu/Academics/Immunology-Welcome>). We would greatly appreciate any feedback from you to help us make this Guide more useful.

There are several people who can serve as valuable resources during your PhD training and are always willing to discuss any issues or concerns about the program, or direct you to the appropriate office. They are listed below, along with information on how to contact them.

Name & Positions	Location	Phone	Email
Henry H. Wortis Program Director	Jaharis 807	3989	henry.wortis@tufts.edu
Honorine Ward, Student Advisor	Tupper 5	7022	hward@tuftsmedicalcenter.org
Andrew Plaut Clinical Training Director	Tupper 8	5882	aplaut@tuftsmedicalcenter.org
Peter Brodeur, Qualifying Exam Advisor	M & V 5	6730	Peter.brodeur@tufts.edu
Diana Pierce, Program Coordinator	Stearns 514	6836	diana.pierce@tufts.edu
John Iacomini Admissions Director	Jaharis 806	4014	john.iacomini@tufts.edu
Giang Nguyen Student Representative	South Cove 8	7613	giang.nguyen@tufts.edu
Keith Eidell Student Representative	Jaharis 524	2779	Keith.eidell@tufts.edu
Linus Williams Graduate Student Council Representative	Jaharis 801	4012	linus.williams@tufts.edu
Kate Sulka Graduate Student Council Representative	Jaharis 813	6612	Katherine.sulka@tufts.edu

The Program Director is elected by the graduate program faculty to administer the educational mission of the graduate program. The Program Director represents the interests of the program on the Sackler School's Executive Council where policy matters concerning the School's programs are discussed and enacted.

The Student Advisor serves as a mentor to the first-year students, including providing specific advice on selecting appropriate sites for laboratory rotations, choosing elective courses, and identifying laboratories for thesis work.

The Student Advisor also serves as an advisor to upper level students by assisting them with the membership of thesis advisory committees, elective course selection, individual development plans, and issues arising with mentors, faculty members, staff and other students. In general, the Advisor acts as a student advocate within the faculty.

The Student Advisor is your primary go to person as advocate, but the Program Director is also available, especially when the Student Advisor is away. If either Student Advisor or Program Director are away they will let you know how to contact them -by email or phone, Skype or Google hangouts or WhatsApp. Or just drop in to their offices at any time they are there. Please do not hesitate to contact them. They will get back to you as soon as possible and within 24 hours.

Please let them know as soon as possible if you have any concerns or issues-the sooner the better so they can address them right away. All students should contact the student advisor and the student advisor should contact the Program Director. They will work with you and if necessary your advisor, committee or Sackler administrators to try to resolve these issues. No concern is too small, and there is no such thing as a stupid question!

Faculty members will respect your wish for confidentiality as far as possible, but there are situations where the law and/or university regulations require disclosure of issues.

The Qualifying Exam Advisor guides the student through the Qualifying Exam process providing advice on topic selection and approaches to constructing the written proposal and oral presentation.

The Admissions Director is responsible for recruiting high quality program candidates, identifying candidates for interview from the applicant pool, arranging for interviews of these candidates with program faculty, and selecting the best candidates (with input from the faculty and students) to be given placement offers.

The Program Coordinator assists the Program Director in the functioning of the program as needed, as well as helps students schedule rooms, complete forms, plan events, and manage program requirements.

Graduate Student Council Representatives. Two representatives are elected by the students to serve as the program's representatives to the Sackler Graduate Student Council (GSC). The GSC organizes activities, including the Annual Sackler Relays, and the GSC Officers are ad hoc members of the Sackler School Executive Council.

Student Program Representatives. Elections of Student Representatives should be taken seriously and not left passively to volunteers. Students have considerable responsibility for Journal Clubs, Research Workshops, Seminars and the Annual Retreat. Representatives present the students' collective views at faculty meetings and thereby help to shape the curriculum and the entire training experience.

Immunology Retreat

Faculty, students, fellows and staff participate in an Annual Immunology Retreat. Planned by the students, this one-day event typically features a student-invited speaker, post-doc talks or a round-table discussion. All students, except those with permission to

defend, are required to attend. All attending junior students in their second and third research years are required to present a poster and all senior students give short talks. Travel awards are given to exceptionally strong posters and talks. This year's retreat is scheduled for October 19, 2018 at the Boston Museum of Science.

Leskowicz Lecture

Once a year, the Program sponsors a seminar by a major figure in Immunology. The occasion is a memorial that honors the founder and first director of the Program, Dr. Sidney Leskowicz. There is also a Minisymposium in which students present their research for discussion by the Lecturer and members of the Program.

Curriculum Overview

Required Courses

Students complete a series of required didactic courses designed to provide a strong knowledge base for their research. The Sackler School Catalog for the year in which students were admitted lists these required courses (<https://sackler.tufts.edu/studentLife/sacklerCatalogs>). In addition, the Catalog contains course descriptions and progression plans for the first and second years.

Elective Courses

Students admitted before Fall 2016 are required to complete one elective course in addition to the required courses. Elective courses must be approved by the thesis advisor and the Program Director and should be used to explore students' interests and further their understanding of their thesis research fields. Students choose these courses from the list of electives in the Sackler School Catalog. Courses may be chosen from any Sackler program or from other schools that allow cross-registration.

First Year Journal Club and Journal Club

The overall goals of the First Year Journal Club and Journal Club are to advance the student's skills in critically evaluating the scientific literature and to improve the student's presentation skills. Students should read the detailed course description of these courses to understand how papers are to be selected and discussed.

Attendance in journal club is required and students who do not attend regularly will receive a warning; continued absence will result in a failing grade. PhD students must register for First Year Journal Club in Fall of year one and for Journal Club an additional three years. MD/PhD students register for First Year Journal Club in Fall of year one and for Journal Club for Fall of year two and an additional two years. Attendance and participation will be monitored by the student coordinator via a sign-up sheet which will be circulated.

Graduate Seminar

The goal of attending the Graduate Seminars is to improve the student's appreciation for how research progress is obtained and to raise awareness of recent advances in the field. All students must register each semester for graduate seminar except for those students who have registered for PhD Degree Only.

Research Presentations

Students must present an annual report of their research, except those students who have received permission to defend their theses. The Student Research

Presentation schedule is provided to students at the beginning of each academic year and will also be posted on the Sackler calendar. Research Presentations are attended by students, faculty, and other interested members of the Program. All students are required to attend these meetings.

The Thesis Advisory Committee chair or at least one committee member (or a selected faculty member if committee members are not available) must attend the presentation and is responsible for providing oral feedback about the seminar. At the following committee meeting, the oral presentation will be further discussed and graded.

Evaluation of Student Progress

In the middle of the first year, after the grades for the fall classes are received and after the first two rotations are complete, the faculty evaluates the performance of each first-year student. The evaluation is based on performance in didactic courses, journal club, and laboratory rotations. A written synopsis of the evaluation is given to each student with an emphasis on feedback that will highlight strengths and identify areas where improvement may be needed.

Requirements for the Master of Science Degree

A student in good standing in the doctoral program who is unable to complete the requirements for the PhD degree may be allowed to write and defend a Master's thesis. Permission to submit a Master's thesis must be obtained in advance from the Program faculty and will only be granted if compelling reasons for leaving the PhD program are provided, if specific guidelines are followed and specific criteria are met. Master's Degree Requirements can be found in the Sackler School Handbook (<https://sackler.tufts.edu/studentLife/sacklerStudentHandbook>).

A Master's candidate may only begin writing a thesis after obtaining explicit permission to do so from the thesis advisory committee. The student's thesis must describe original research carried out by the candidate under the supervision of a faculty member and must form a coherent body of work of publishable quality, even though the scope of the work may not permit publication. The Master's thesis must be presented in the same format as a PhD thesis, as required by the Sackler School. The suitability of the Master's thesis will be determined by the thesis advisory committee after an oral defense of the thesis by the candidate and is subject to ratification by the program faculty.

Laboratory Rotations

Purpose

Laboratory rotations are designed to acquaint students with some of the research projects of current interest in the program, to allow students to assess the suitability of several labs for their thesis research, and to allow faculty members to assess the suitability of individual students for work in their labs. A minimum of four lab rotations must be completed during the first academic year.

Rotation Matching Process

Students choose rotations based on their interests and the willingness of the rotation mentor to accept a student. Students are strongly encouraged to choose rotations that expose them to areas of research with which they are not already familiar. In the Fall semester students must rotate with members of the Immunology Faculty.

The Sackler School Laboratory Rotation Policy is published in the Handbook (<https://sackler.tufts.edu/studentLife/sacklerStudentHandbook>) and the dates for laboratory rotations are posted on the Sackler website in the Academic Calendar (<http://sackler.tufts.edu/Student-Life>).

Several weeks before rotations begin the Sackler School Dean's Office emails students a list of available faculty laboratories. This email contains a link to a survey in which students are to enter their first, second, and third choices for rotations. The Program Student Advisors meet with students to discuss their possible matches. Information regarding the research areas of program faculty members can be found at the Sackler School website (<https://sackler.tufts.edu/facultyResearch/faculty>). In addition, students should meet with potential mentors during the last three weeks of the immediately prior rotation, but no commitment can be made about whether or not the student may rotate in a lab before all rotation matches are announced. Students should share their interests and mentors discuss the possible projects available in the lab. All students will be notified of their matches simultaneously by their Student Advisors.

Each rotation is evaluated by the rotation mentor. The Student Advisor assigns a rotation grade for the semester based on the average grade for each rotation.

Qualifying Examination

Purpose

A Qualifying Examination is given to all doctoral candidates. The purpose of the examination is to determine whether a student: 1) has adequate general knowledge in research, 2) can formulate experiments and test biological hypotheses, 3) can critically analyze experimental results, 4) has the ability to communicate both orally and in writing; and 5) has creativity.

Timing of Qualifying Exam

The Qualifying Examination must be completed by the end of June of the first year for PhD students. MD/PhD students may take the exam earlier. The qualifying examination is coordinated by the Qualifying Exam Advisor who meets with students early in the second semester of the first year to orient them to the process. Students must submit a one-page summary of the proposal to the Qualifying Exam Advisor by May 1. If acceptable, the summary will form the basis of the full-length written Qualifying Exam proposal and an exam date will be set. The final proposal must be submitted exactly one week prior to the oral defense.

Selection of Qualifying Exam Committee

The Qualifying Exam Committee will consist of the Qualifying Exam Advisor, who acts as a non-voting Chair, a group of faculty members chosen from the student's rotation supervisors, and two to three other faculty with interests and expertise in the area of the student's proposal.

Students may have their qualifying exam proposal pre-read by their committees. To do this, however, the proposal must be submitted by June 1. Keep in mind that the committees will only be able to make general statements about the credibility of the proposal. Also, students may have any willing member of the faculty review their proposals but be warned that they can only give a personal opinion that may not coincide with the views of the exam committee.

Overview of the Qualifying Exam Process

For the Qualifying Examination, students are required to write and defend orally an original research proposal. The subject of the research proposal should be an area of the student's choice that is not related to future thesis work or to previous work experience.

Students are encouraged to discuss the scientific merits of their proposals with the faculty or anyone else in the scientific community. They should also feel free to ask for help in finding specific information but should not ask faculty to suggest a proposal or to play any kind of active role in the development of the proposal. All too often, students who fail to talk sufficiently with faculty members have a difficult time with the exam.

Handing in the one-page summary and final reports on time is part of the requirement for an acceptable proposal. Not meeting the deadline is grounds for receiving a failing grade.

Format of the Written Qualifying Exam

The format of the written proposal is based on an NIH grant application and should be as follows (typed, double spaced, half inch margins, and 11-point Arial, Helvetica, or Times New Roman font). Failure to adhere to the page limits will result in the proposal being returned unread. Be sure to number every page.

1. Title page
2. Summary - 1 page
3. Specific Aims - 1 page
4. Background and Significance - no more than 3 pages
5. Experimental Design - no more than 6-10 pages

This should not involve an overly detailed description of technical details, but should emphasize the order of experimentation with potential pitfalls and alternative approaches. Methods should only be described in sufficient detail to provide convincing evidence that you appreciate the demands and difficulties of the proposed techniques. 10 pages is the absolute limit. Do not try to extend it by including appendices, supplements, additional figures, or other devices. If the total number of pages excluding sections 1-4 and 6 exceeds 10 the proposal will be returned without being read.

6. Bibliography - Keep it brief!

Evaluation of the Qualifying Exam

Students are asked to leave the room for 5 to 10 minutes at the beginning of the oral defense so that the attending faculty can discuss the order of questioning. Students are then asked to give no longer than a 10-minute summary of the highlights of their proposals. There is no limit to the range of the topics to be included in the discussion. However, students are not expected to know everything; rather be willing to give an opinion. "I don't know" is a valid answer. The format will be that of an informal scientific discussion. Faculty members are expressly requested not to attempt to "grill" or aggressively question students.

At the end of the exam the student will be requested to leave and wait outside during the discussion of the proposal. The student will be informed of the grade immediately upon the conclusion of this discussion.

The written and oral parts of the exam are graded separately. Grade options are Pass, Incomplete, and Fail.

- Pass: No additional work is required.
- Incomplete: Some aspect of the work is not satisfactory and needs to be redone or completed before passing.
- Fail: A failing grade carries with it a recommendation to the full faculty that the student not continue in the program.

If a student is deemed to have failed the qualifying exam by the Qualifying Exam Committee, the issue is referred to the full faculty. The faculty reviews the student's complete first year record. The faculty may decide to give the student another chance and create an appropriate course of action consistent with the program's requirement that a student pass the qualifying exam before beginning full-time thesis research. The final decision about passing on to the second year will be made at that faculty meeting.

The faculty may also decide, after careful review, that the grade for the Qualifying Exam be reported as a failure. This can either occur after the first attempt or after a retake of the examination. Failure to pass the Qualifying Exam will result in dismissal from the School.

Research, Career Planning, and Thesis

Selection of a Thesis Advisor

Students are matched with thesis mentors in May of their first year after completing their laboratory rotations. The centralized matching system is designed to maximize the chances that students are matched with one of their top choices. Starting in mid-April students should begin to discuss with potential thesis advisors the range of research projects that may be open to a student. No such discussions should occur at any earlier time. At no time should a student expect, or faculty members provide, any guidance or commitment as to the likelihood that the student would be accepted into the lab. At this stage, all students are afforded an equal opportunity to discuss potential projects with all faculty members who have indicated a willingness to accept one or more students.

During a predetermined period in May, each student will submit a list of his/her first, second and third choices of thesis labs. The student advisor will make known to relevant faculty members the names of students who have listed the faculty member as a first choice. Each faculty member will then have the option to accept the student(s) or to decline. When more than one student asks to be accepted into the same lab and only one space is available, the faculty member has the option of choosing which student to accept. If a student is not accepted into his/her first lab choice, every effort will be made to assure that that student's second choice is successful. In summary, faculty members do not recruit students into their labs and students should not make commitments to faculty members or ask for commitments from faculty members except through the process described above.

MD/PhD students usually select a thesis advisor after completing two summer rotations during medical school and upon entering the program.

A student who chooses a faculty thesis mentor in a research lab that is not part of the Immunology Program must decide whether to switch graduate programs or stay within the Program. In the latter case, the student would be required to meet all the requirements of the Program, the thesis advisor would have to be approved by the Immunology Program Faculty, and the student's thesis project would have to be judged appropriate for a degree in Immunology.

Selection of the Thesis Advisory Committee

PhD students select their Thesis Advisory Committee early in the fall semester of their second graduate year, and MD/PhD students do so during fall of their first graduate year. Students are responsible for holding their first TAC meeting before the end of this semester.

The thesis committee should consist of the thesis advisor and at least three additional Immunology faculty members. The membership of the Committee must be approved by the Student Advisor. Additional non-Immunology faculty may be invited to join in order to provide particular expertise.

Merge Inflammation Continuing Clinical Program

The continuing clinical program starts with and is required for incoming PhD (not MD/PhD) students beginning in 2018. All other students who participated in the Summer Merge-INF Program (current 2nd and 3rd Years) are highly encouraged to participate.

After a student enters a thesis lab and decides on a thesis project early in the second year, s/he will choose a clinical advisor. The clinical advisor should specialize in infectious or inflammatory disease/s, preferably, but not necessarily related to the student's thesis topic. He/she may be from Tufts Medical Center or another Boston area hospital. The thesis mentor should be consulted about existing or planned clinical collaborations in which case the student may select the clinician as a clinical advisor. If there is no existing or planned clinical/translational collaboration, the student advisor, in consultation with the Clinical Training Director, can assist with identifying potential clinical advisors. Clinical advisors should be selected, and students should meet with them before their first committee meeting in the Fall of the second year. Clinical activities are not expected to occur while first year students are engaged in rotations. Clinical advisors are welcome to attend student's thesis committee meetings but are not required to do so. Students should meet with their clinical advisors at the beginning of each semester (and more if the student desires to and the advisor is willing to). Student should discuss with their clinical advisors what clinical activity they would like to participate in. Clinical advisors will advise them about the availability and suitability of relevant clinical activities

Activities can include, but are not limited to, the following should occur at least once a month or 4 times a semester:

- Shadowing the advisor on rounds or in clinics
- Attending grand rounds (usually on Fridays at noon for the Department of Medicine). Speakers and subjects will be provided to students
- Attending and participating in a clinical journal club related to infectious or inflammatory diseases- Speakers and subjects will be provided to students
- Attending and participating in MD, PhD journal club
- Attending Clinical Microbiology or similar Rounds

- Reviewing Pathology slides on infectious/inflammatory diseases
- Speaking with pharmacists about inflammatory disease-related drugs or biologics-e.g. anti-TNF α mAbs
- Attending global health/epidemiology/CTSI seminars related to infectious/inflammatory diseases
- Attending ID or other case conferences
- Attending MD/PHD Journal Club.

Students should include a bullet point list of clinical activities they have engaged in their TAC reports based on an honor system. Committees should monitor and approve clinical activities in terms of frequency. The clinical activities should continue through year four (third research year) or until the student has permission to defend.

To help implement this program, the student advisor will provide first year students and their thesis mentors at the time of entering the thesis lab a list of potential clinical advisors at Tufts Medical Center and a list of funded grants relevant to inflammation at Tufts Medical Center. Beginning in the second year, the student advisor will provide all students (and their thesis mentors) information about Department of Medicine Grand Rounds on Fridays, Clinical Journal Clubs, ID Case Conference on Tuesdays and any other relevant information.

Career Planning

All PhD research trainees must have an Individual Development Plan (IDP) to help them develop their career paths. Tufts has created two forms to assist students in identifying their career goals and the current activities they participate in to achieve them. These forms are available at <https://sackler.tufts.edu/studentLife/currentStudents/forms>

- The IDP form is intended help students consider their career aspirations as well as the types of skills and attributes that may affect these aspirations and students' ability to attain their goals. It is not intended to predict or identify careers that match their skills. The document is for students' personal use only. Students are not required to share this document with anyone or provide anyone at Tufts with a copy of the completed document. Students may, however, choose to share the document with mentors who may suggest ways to improve skills that are appropriate to the career path(s) being considered. This document should be a living document and one that is updated as students advance in their training.
- The Training and Career Goals Progress Report form is designed to help students think about what they are learning and how to develop professionally. Students are asked to complete this form with a reflective assessment of their current progress and the plans for reaching both short- and long-term career goals. Note that some questions on the form may not apply depending on a student's stage of training. This annual progress report is designed to provide ongoing documentation of progress made towards career goals. Once a year, students complete this form and submit it to their thesis committee along with their research reports for discussion at a TAC meeting. It is the responsibility of thesis committee to provide advice on the resources that will help students achieve their goals at Tufts and beyond.

IDPs have proven so valuable that NIH has mandated that every trainee that it supports have one. Students can learn about IDPs at this very valuable site, <http://myidp.sciencecareers.org/>. They may also talk with their mentors, Student

Advisors, the Program Directors, or the Associate Dean about career planning, in addition to their Thesis Advisory Committee.

Thesis Advisory Committee Meetings and Assessment of Research Progress

Immunology students are responsible for holding their first Thesis Advisory Committee (TAC) meeting before the end of the fall semester of their second graduate year. MD/PhD students must hold their first TAC meeting in the fall semester of their first graduate year.

Subsequently, two meetings a year, one in the fall semester and one in the spring semester, will be necessary for satisfactory performance in the graduate research course. Failure to hold meetings in a timely fashion will result in an Incomplete grade for research for the semester which will become a failing grade if not completed by the end of the subsequent term.

Students should summarize their research progress and plans on the most up to date TAC Evaluation form on the Sackler website (<https://sackler.tufts.edu/studentLife/currentStudents/forms>). After the Committee meeting, the TAC Chair enters the Committee's assessment on the Thesis Advisory Committee Evaluation form and assigns a grade for Graduate Research. The form is signed by all members and an electronic copy is sent to the Sackler Registrar who records the grade on the student's transcript.

Students must submit a written thesis project proposal and present preliminary data to their Thesis Advisory Committee at their first thesis committee meeting. The project and the student's progress must be acceptable to the thesis committee. Thesis committee meetings must be held within the four week period after the student's workshop talk and again in the following semester. Students presenting in the spring semester need to have a meeting in the fall semester within the four week period beginning six months earlier than their scheduled talk. Details concerning all aspects of the thesis committee procedure are distributed to each PhD student at the beginning of the second year and to MD/PhD students soon after they enter the program.

Beginning with the third meeting of a thesis committee, a portion of the progress report, discussion, and the committee report should be devoted to the status of work leading to a manuscript for submission. Depending on the status of experimental work, this might focus on such matters as the possible main point of a paper, an outline of a manuscript, additional experimental work needed for a manuscript, discussion of the journals under consideration, or drafts of a manuscript.

A student's progress report should be considered as an opportunity to practice and develop writing skills. Thesis advisors are encouraged to take the time to mentor writing as opposed to correcting it. The student gains from such experiences. Further, it does not help the student to have a thesis committee evaluate a progress report that is largely written by the mentor. Thesis committees must include comments on writing skills in each report.

End of Third Laboratory Year Committee Meeting

At the end of the third laboratory year, the committee will communicate its confidence or lack thereof in the student's project. All committee members must attend this meeting.

The student progress report for the end of third laboratory year committee meeting should contain a clear and concise summary of the work completed so far and of the remaining goals of the project. The experiments that are projected to fulfill these goals should be outlined briefly. The report, as all other student progress reports, should be given to the committee at least three working days before the meeting.

The committee will rigorously evaluate the overall progress in achieving the goals of the thesis project and the likelihood that remaining goals can be achieved. As part of the end of the third research year evaluation, the thesis committee must determine if the student has made at least one novel observation that would provide the basis for a thesis and a publishable paper.

In the case of a positive evaluation, the committee will be acknowledging that, barring unforeseen developments, it is confident that the project will lead to successful completion of the dissertation research. It is important to note that a positive committee evaluation at the end of the third laboratory year does not guarantee a degree.

In the case of a negative evaluation, the chair of the committee will draft a report detailing the committee's objections to the project. The student and advisor will have one month to respond in writing to the evaluation. The following responses are possible: 1) the student and advisor disagree with the committee and have decided to proceed with the project and have formed a new or altered committee to guide the work, 2) the student and the advisor have decided to pursue a different project and interact with the same or a different thesis committee as appropriate, or 3) the student has decided to pursue a different project in a different lab. The faculty will be apprised of the outcome of the evaluation at the final faculty meeting of the academic year.

In addition, it is extremely important to understand that a negative evaluation at this point does not rule out the possibility that the student can successfully complete the dissertation with the project in which the committee does not have confidence. The goal of a negative evaluation is to send a clear danger warning about the project to the student and the advisor.

The thesis committee monitors student progress and also determines when a student has completed sufficient work to prepare their thesis.

To obtain permission to defend the thesis, a student, after consultation with the advisor, must present the thesis committee with the following information.

- Outline of the thesis Results Section. The outline should be organized in chapters, delineate the major findings, highlight their significance, and be accompanied by a list of figures and tables.
- An abstract. The abstract of the thesis work should be approximately 250 words.
- A list of remaining experiments. If any experiments remain to be completed, these should be described and a timeline for their anticipated conclusion should be given. It is anticipated that very little bench work will remain once the committee gives permission and that no experiments critical to an acceptable thesis will remain to be completed.
- Choice of outside examiner. The student also needs to inform the committee as to the choice of outside examiner.

The student and advisor should make every effort to reach an agreement concerning the material to be in the thesis prior to the committee meeting. In the event that the student

and the advisor are not in full agreement concerning the thesis content, the work remaining, or a schedule for experimentation or writing, these issues should be laid out clearly for the committee to evaluate.

Upon evaluation of the outline and the timetable, the committee will decide whether to grant permission. In granting permission, the committee is not guaranteeing the degree but merely stating that they feel the body of work presented to them is sufficient for the thesis.

All committee members, including the thesis advisor, must be present at meetings where permission to defend is considered. It is important to note that permission is a formality in that many students elect to write large sections of their thesis before their final committee meeting. Often this is to the student's benefit because it expedites the process of preparing the thesis. The defense date must be set within three months of receiving permission.

Selecting an Outside Reviewer

A student, after consultation with the advisor, should propose an individual as an outside examiner at the final committee meeting. If the student is uncertain about the willingness or availability of the first choice, several names may be proposed. The committee can approve all or some of the choices and offer additional suggestions.

Either the student or the advisor may make the initial contact with the outside examiner. Once a person has agreed to serve as the outside examiner, he or she will be contacted by the chair of the committee concerning the mechanics of the defense procedures. If a person from outside the Boston area is identified as an outside examiner and you wish to seek support for travel/lodging for this individual, prior approval by the Program Director is required. Any costs for an out of town outside examiner are the responsibility of the thesis advisor, not the Immunology Program, unless the examiner has been invited by the Program to give a seminar.

Thesis Format and Defense

When a student receives permission to defend, he/she should make an appointment to meet with the Associate Dean. Students will receive instructions on all aspects of the process used to complete the degree, thesis formatting guidelines and information about Commencement Ceremonies at Tufts University.

In order to receive a PhD in IMM a student must have completed a substantial body of work, demonstrate a thorough mastery of his/her subject and have achieved the ability to work independently. When the thesis committee determines that the aims of the project have been met, the thesis is prepared and defended in an oral examination. Students distribute their thesis to their Thesis Defense Committee members approximately two weeks before their scheduled defense. The chair of the thesis committee will contact all committee members, including the outside examiner, 48-72 hours prior to the defense to determine if the thesis is generally acceptable to the committee.

The oral defense will consist of a public presentation of approximately 45-60 minutes, followed by a closed discussion period with the committee and outside examiner.

During the deliberations of the thesis examination committee, the committee should determine what revisions need to be made to the thesis document and the amount of

time needed to complete those particular revisions. The Sackler School Time-from-Thesis-Defense-to-Completion Policy, governing thesis revisions and continued receipt of a stipend, is in the Student Handbook (<https://sackler.tufts.edu/studentLife/sacklerStudentHandbook>).

Publication

Because writing and publishing results and conclusions is a critical part of the life work of scientists, the Program requires that all students have at least one first author publication or manuscript in press at the time a thesis is defended.

If the thesis committee believes that there are extenuating circumstances, the group can request that the full faculty consider making an exception to the requirement for publication before the defense.

List of Immunology Program Students

Year in School	Student	Phone	Advisor
1 st	David Jetton	TBD	TBD
	Zoie Magri	TBD	TBD
	Sasha Smolgosky	TBD	TBD
	Linda Xu	TBD	TBD
2 nd Year	James Cameron	3889	Xudong Li
	Talia Greenstein	0919	Bree Aldridge
	Machika Kaku	6526	John Coffin
	Kate Sulka	6612	Shruti Sharma/Phil Haydon
3 rd Year	Jacob Hopkins	6612	Shruti Sharma
	Hymlaire Lamisere	8437	Honorine Ward
	Urmila Powale	7613	Linden Hu
	Linus Williams, MD/PhD	4012	John Iacomini
4 th Year	Alyssa Fasciano	2743	Joan Meccas
	Njabulo Ngwenyama	9319	Pilar Alcaide
	Rebecca Silver	2743	Joan Meccas
5 th Year	Abdo Abou-Slaybi	7626	Pedram Hamrah
	Keith Eidell	2779	Steve Bunnell
	Basma Joma	On leave	John Leong
	Giang Nguyen	2743	Joan Meccas
	Frank Scangarello, MD/PhD	2779	Steve Bunnell
8 th Year	John Yoon	6526	John Coffin

List of Immunology Program Faculty

Some faculty are in the process of re-locating offices. Please email the faculty for current office locations.

* No longer accepting rotation or thesis students.

Faculty	Phone	Email
Alcaide, Pilar	2192	pilar.alcaide@tufts.edu
Aldridge, Bree	6703	bree.aldridge@tufts.edu
Brodeur, Peter*	6730	peter.brodeur@tufts.edu
Bunnell, Steve	2174	stephen.bunnell@tufts.edu
Gaglia, Marta	3586	Marta.gaglia@tufts.edu
Genco, Caroline	6739	caroline.genco@tufts.edu
Hamrah, Pedram	6726	phamrah@tuftsmedicalcenter.org
Hu, Linden	8498	lhu@tuftsmedicalcenter.org
Huber, Brigitte*	3989	brigitte.huber@tufts.edu
Iacomini, John	4014	john.iacomini@tufts.edu
Imanishi-Kari, Thereza*	6779	thereza.imanishi-kari@tufts.edu
Kumar-Singh, Rajendra	3767	rajendra.kumar-singh@tufts.edu
Leong, John	0488	john.leong@tufts.edu
Li, Xudong	3781	xudong.li@tufts.edu
Meccas, Joan	2742	joan.meccas@tufts.edu
Meydani, Simin	3129	simin.meydani@tufts.edu
Panjwani, Noorjahan	6776	noorjahan.panjwani@tufts.edu
Perrin, Mercio	2933	mercio.Perrin@tufts.edu
Plaut, Andrew*	5882	aplaut@tuftsmedicalcenter.org
Poltorak, Sasha	3596	alexander.poltorak@tufts.edu
Shruti, Sharma	TBD	Sharma.shruti@tufts.edu
Stadecker, Miguel	6732	miguel.stadecker@tufts.edu
Thorpe, Cheleste*	0245	cthorpe@tuftsmedicalcenter.org
Ward, Honorine	7022	hward@tuftsmedicalcenter.org
Weinstock, Joel*	4593	jweinstock2@tuftsmedicalcenter.org
Wortis, Henry*	6718	henry.wortis@tufts.edu
Zeng, Li	2107	li.zeng@tufts.edu