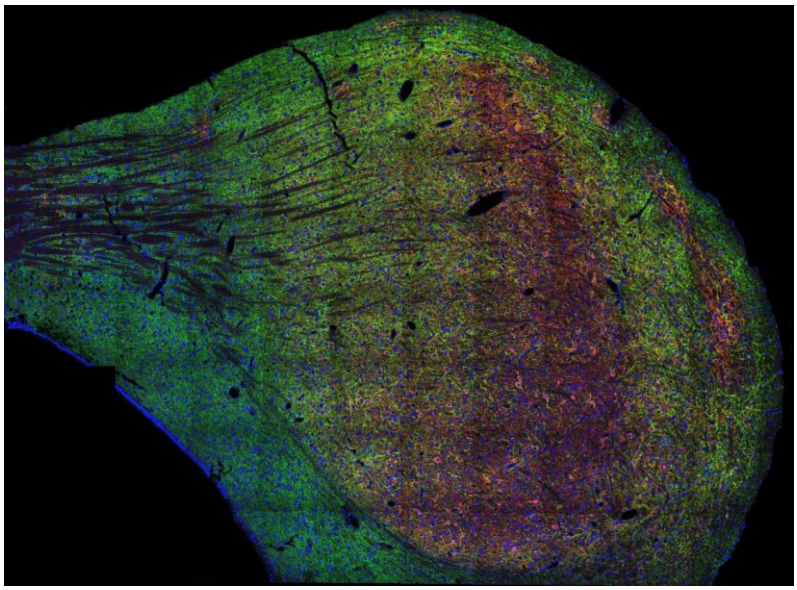
UCONN HEALTH

Ph.D. Biomedical Sciences

Neuroscience Graduate Training Program 2019-2020



https://health.uconn.edu/neuroscience/program-overview/

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INTRODUCTION

For those who have recently joined the Neuroscience Graduate Program at UConn Health, welcome! We look forward to many interactions as we explore the fascinating field of Neuroscience together over the next few years. This booklet describes the Neuroscience Graduate Program requirements and expectations and details the series of milestones that you will need to accomplish as you progress toward the final goal, a **Doctor of Philosophy degree** from the University of Connecticut.

Vibrant New England foliage paints the hills surrounding UConn Health in the fall.

For those who are in the process of deciding where to attend graduate school, or determining which program at UConn Health best fits your interests, this document should provide answers to some questions you may have pertaining to educational philosophy, research opportunities, and financial support. Additional information can be found at the following Graduate School websites:

UConn Graduate Catalog: http://gradcatalog.uconn.edu/
Graduate School Forms: http://grad.uconn.edu/current-students/forms/
Biomedical Science PhD program milestones: http://health.uconn.edu/graduate-school/current/biomedical-science-ph-d-program-milestones-made-easy/

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Educational Philosophy

Providing the fundamental training and intellectual foundation for the next generation of neuroscientists, so that they can build upon and branch out from the current knowledge-base in the field of neuroscience, is a primary educational goal of Neuroscience Graduate Program at UConn Health. Neuroscience Graduate Program faculty members, with their diverse interests, recognize the need to include a broad spectrum of topics in our curriculum. Although the vision, language, and approaches of molecular, cellular, and physiological neuroscientists may seem far removed from those of anatomical, systems, or behavioral neuroscientists, an understanding of each is necessary if students are to appreciate nervous system function and dysfunction fully, and ultimately, meet the challenges and demands of a future career in academia or industry.

Faculty Research

The Neuroscience Graduate Program is an interdisciplinary and interdepartmental Ph.D. program, with 30 faculty members. The goal of research in this program is to understand the development, organization, function, and dysfunction of the nervous system at the molecular, cellular, systems, and whole animal levels. Molecular, electrophysiological, behavioral, genetic, confocal imaging, and stem or virtual cell approaches are employed, as well as cellular, animal, transgenic, and mathematical models.

The breadth of this program is depicted in a survey of the numerous topics covered by faculty research, which include: stem and precursor cell biology as it pertains to gliogenesis and neurogenesis in the developing nervous system; biochemistry and regulation of gene expression, signal transduction, and intracellular trafficking in neurons and glia; structure and function of voltage-sensitive ion channels; synthesis, storage and secretion of neuropeptides; neurotransmission and plasticity; synaptic organization and stimulus coding; sensory perception, behavioral neuroscience and human psychophysics; neuro-inflammation, autoimmunity, and neurodegeneration; the biology of substance abuse.

Research pertaining to specific diseases or disorders include: Alzheimer's disease, autism, substance abuse; stroke; epilepsy; multiple sclerosis; and deafness. Faculty and program facilities provide students with the environment to perform the gamut of studies in this list.

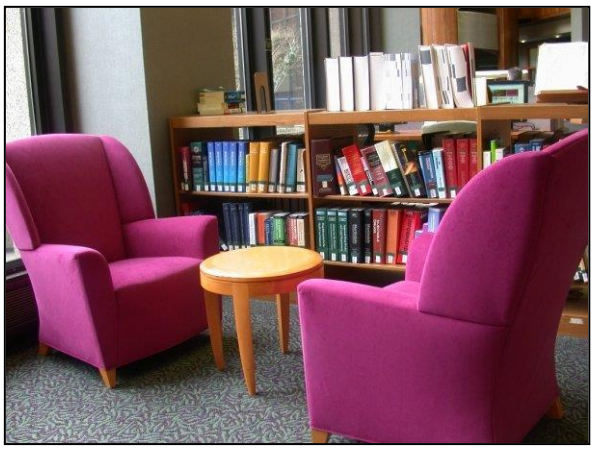
Faculty information can be found in the Appendix (p. 25) or at http://health.uconn.edu/graduate-school/academics/programs/ph-d-biomedical-science/neuroscience/faculty/

Research Facilities

The Neuroscience Graduate Program is part of the Graduate School at UConn Health, which also houses Medical and Dental schools and the John Dempsey Hospital with its associated medical clinics. Many of the faculty of the Neuroscience Graduate Program have laboratories on or near the fourth floor of the connected L and E buildings, where they have full access to an array of shared equipment and conference rooms; others are in the Center for Cell and Genome Sciences, a short shuttle bus ride away. Trainees will be based in these laboratories while performing Laboratory Rotations in the first year and during the subsequent years of thesis research.

In addition to the Program facilities, state of the art information and research services are available to the general UConn Health research community including:

- Lyman Maynard Stowe Library (*http://library.uchc.edu/*), Janice Swiatek, Director
- Gene Targeting and Transgenics Facility (*http://gttf.uchc.edu/*), Siu-Pok Yee, Director;
- Molecular Core Facility (*http://mc.uchc.edu/mc/default.htm*), David Rowe, Director;
- The Center for Cell Analysis and Modeling (*http://www.cbit.uchc.edu/*) and National Resource for Cell Analysis and Modeling (http://vcell.org/), Leslie Loew, Director;
- NMR Structural Biology Facility & Biophysical Core Facility (*http://structuralbiology.uchc.edu/*), Jeffrey Hoch, Facility Director;
- Jax Single Cell Genomics Center, Paul Robson, Director;
- Stem Cell Core (*http://stemcellcore.uchc.edu/index.html*), Marc Lalande, Director;
- Flow Cytometry (*http://flowcytometry.uchc.edu/*), Evan Jellison, Director;
- Research Histology Core (*http://researchhistology.uchc.edu/)* Kevin Claffey, Director;
- Electron Microscopy Facility (*http://hcrac.uchc.edu/facilities/electron_microscopy.html)* Stephen King, Director.



FINANCIAL SUPPORT

Students in the Neuroscience Graduate Program may receive financial support from a variety of sources. Most students are initially supported by Research Assistantships from the Graduate Programs Committee (GPC), which currently provides student stipends for the first and second years. In subsequent years, stipends are provided by funds from Program faculty research grants.

Regardless of the source, however, the level of stipend support is identical for all students. The annual stipend for 2019-2020, which is issued in bi-monthly payments, is $32,000 for all students within the Graduate School, irrespective of their year or Program of study. The financial support

package also includes full payment of tuition and associated fees as well as health and dental insurance. Moreover, there is no teaching assistantship obligation associated with this stipend.

OVERVIEW OF REQUIREMENTS AND MILESTONES

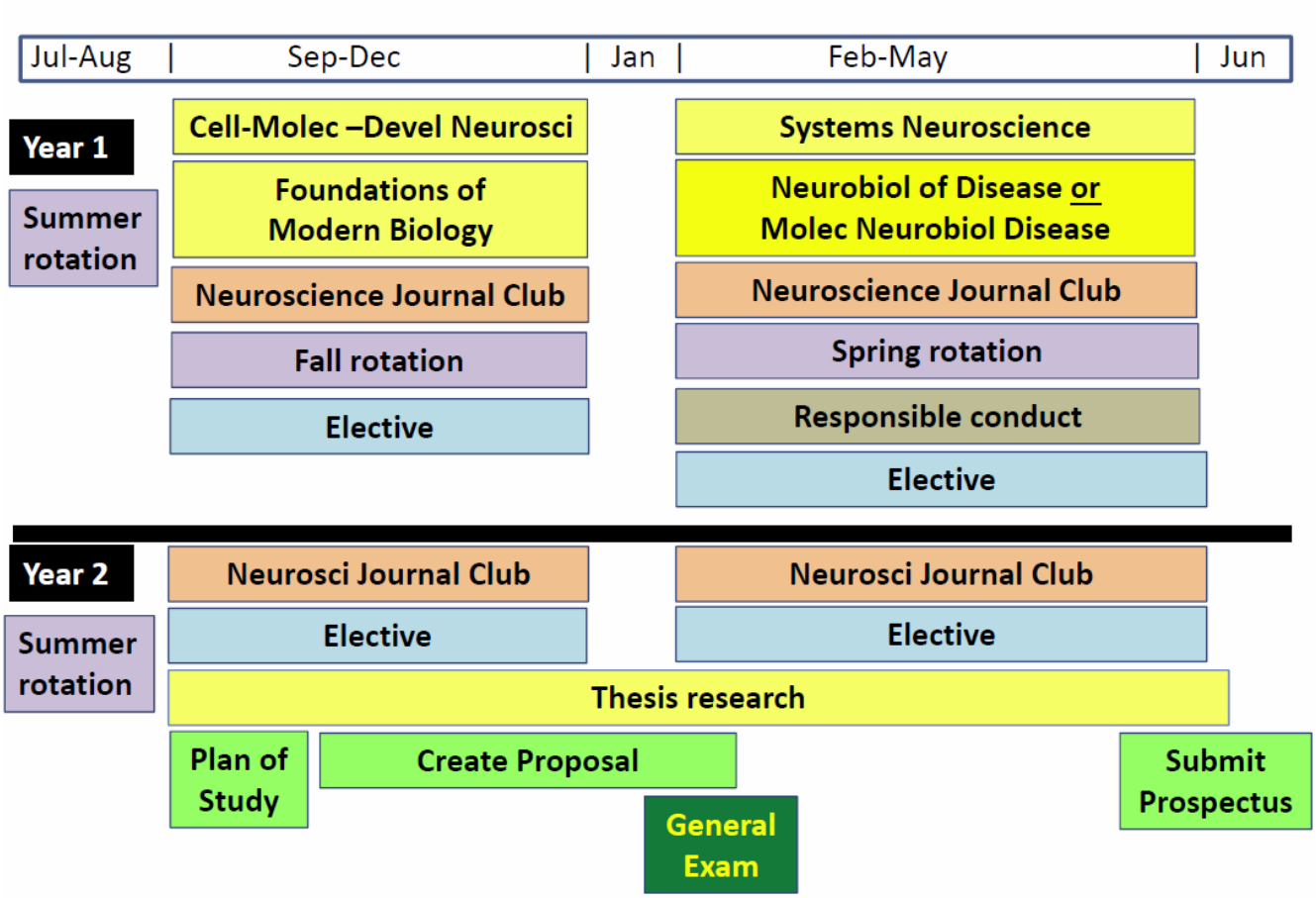
In general, a number of requirements and milestones must be met by all students in the Biomedical Science Doctorate Degree Program at UConn Health (see http://health.uconn.edu/graduate-school/current/biomedical-science-ph-d-program-milestones-made-easy/). First, students must register for a minimum of six credits per semester, other than lab rotations, independent study and graduate seminar, typically accruing a total of 45 credits by graduation. Of these, 30 credits will come from courses that are taken before the end of the second year and with 15 dissertation research credits (GRAD 6950) to complete the balance needed. Students also perform laboratory rotations in the fall, spring, and summer semesters of the first year, submit a Plan of Study listing their course work in the fall of the second year, and pass a General Examination, the format of which is determined by individual Programs. Finally, all students must submit a Dissertation Proposal (i.e., Thesis Prospectus) by the end of the third year. Students are strongly encouraged to become familiar with the Graduate School Catalog for all details pertaining to expectations and milestones set by the Graduate School. *http://gradcatalog.uconn.edu/*

Within these guidelines of the Graduate School, the Neuroscience Graduate Program has specific requirements and expectations, which are detailed in the following sections. However, recognizing that students of very different backgrounds will enter the Neuroscience Graduate Program in a variety of ways, the Neuroscience Program has tried to incorporate a certain degree of flexibility, while ensuring that all students are exposed to the diverse fields that comprise modern Neuroscience research.

NEUROSCIENCE PROGRAM CURRICULUM

Courses are chosen to provide a broad background in Neuroscience as well as to acquire the background necessary for the student's specific research interests. In the first year, course selections are made in consultation with first year faculty advisors. For students on Graduate Program Committee Assistantships, first year faculty advisors are appointed by the Associate Dean of the Graduate School or by the Neuroscience Program. At the beginning of the second year, when students have chosen a laboratory for their thesis research, courses are selected in consultation with a student's Major (Thesis) Advisor.

A suggested timeline summary for the first two years is shown below. The prospectus occurs in the third year. The third year and beyond are primarily devoted to laboratory research.



Neuroscience Program Course Requirements

***Students who want to pursue their thesis work in the Neuroscience Graduate Program (also referred to as Neuroscience Area of Concentration) must complete a minimum of 7 credits of course work in Neuroscience-related topics*.**

Courses that apply toward the 7 credit Neuroscience Graduate Program requirement are (See Appendix, p. 22, for course descriptions):

	Course	Credits	Title	Fall	Spring
*	Meds 5372	3	*Cellular, Molecular, and Developmental Neuroscience (1st year course)*	X	
*	Meds 5371	3	*Systems Neuroscience (1st year course)*		X
	Meds 5341	3	*Molecular Neurobiology of Excitable Membranes*	X	
	Meds 5377	3	*Neurobiology of Hearing*		X
#	Meds 5383	3	*Neurobiology of Disease*		X[1]
*	Meds 5384	2	*Brain Microcircuits*	X	
#	Meds 5385	3	*Molecular Mechanisms of Neurobiological Disorders*		X[2]
	Meds 6372	2	*Neurobiology of Glia*		X

[1] Alternate even years / [2] Alternate odd years

* *Suggested core courses.*

\# *Required course for NIH NRSA pre-doctoral candidates/awardees (one or both).*

Grades

In order to remain in good standing, students must maintain an overall GPA of 3.0 per the guidelines of the University of Connecticut Graduate School.

Credit for Previous Course Work

Students may obtain credit for elective courses if they have already taken equivalent graduate-level courses at UConn Health or elsewhere (e.g., Master Degree programs). Requests for credit should be submitted in writing to the Director. The person best able to assess the previous course work is the director of the course from which credit is sought. Thus, the course director's approval must be obtained and indicated on the letter to the Program Director; final approval rests with the Graduate School.

MD/PhD and DMD/PhD Students

The Neuroscience Graduate Program recognizes the extensive course work taken in phase 1 of the MD/PhD and DMD/PhD Programs. Thus, students in these Programs will take into consideration this previous course work when planning their curriculum in Neuroscience during the PhD phase of the dual degree programs. Additional course work for such students in this phase will be determined in consultation with the student's Major Advisor and Thesis Advisory Committee.

Laboratory Rotations

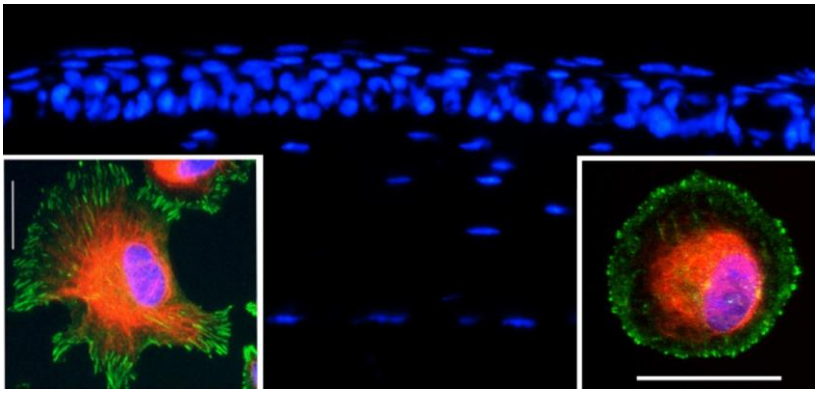
In addition to course work, all doctoral degree students are expected to perform 2-3 separate laboratory rotations during the first year (MEDS 6496). Students who want to explore research in Neuroscience are encouraged to perform these rotations in laboratories of Neuroscience Graduate Program faculty. Students should confer with their first year Faculty Advisors in choosing a laboratory for rotation research. Students on assistantships from the Graduate Program Committee must obtain permission from their first year advisors to register for laboratory rotation. Registration requires a lab rotation form http://health.uconn.edu/student-services/wp-content/uploads/sites/58/2016/06/form_labrotation.pdf.

It should be recognized that research rotations are a combination of two components: 1) The work obligation for the graduate research assistantship that provides the student's stipend and tuition waiver; 2) A graded course (MEDS 6496) for which students earn 1 credit in each semester of the first year. The laboratory of the rotation research project will become the student's home base during this time of exciting exploration. Thus, ***when students are not in class, they will be in the laboratory working on the rotation research project***. Balancing the demands of course work and the rotation research is essential to a successful laboratory rotation.

At the end of the semester, students present a short talk (15 min) to fellow students and faculty describing the background, goals, and findings of the rotation research project. All students performing rotation research projects in Neuroscience Program laboratories are also required to prepare a Rotation Report, which is a written abstract summary of the laboratory rotation project (two-thirds of a page). This report, which is submitted during the week preceding the rotation talk, is signed by the rotation faculty advisor and forwarded to the Associate Director for review by the Student Progress Committee. Grades are contingent on receipt of the Rotation Report.

Laboratory Rotations serve two important purposes. First, they enhance the breadth of the graduate *educational experience* in the first year by exposing students to new techniques and paradigms and providing training in proper experimental design and analysis. Successful performance in classes depends on a good grasp of the scientific method and an ability to understand and interpret

experiments. Second, rotations afford students an intensive opportunity to learn about the research of laboratories that could become their thesis laboratory. Thus, the benefit of a laboratory rotation is not only intellectual. It could have tremendous *practical impact* on the student's ability to move quickly into the thesis research project. Moreover, effort invested and expertise gained from carefully chosen laboratory rotations could result in great dividends for the rest of the student's graduate career. Finally, the rotation project will let the student become sufficiently engaged in the performance of a research project to determine whether he or she has the passion for research that is necessary for successful scientific careers in academics or industry.



Injury to the cornea can elicit a pathological process known as fibrosis that leads to irreversible blindness due to scarring. The Mohan lab has discovered that the natural product withaferin A that targets vimentin does not interfere with vimentin's function in normal tissue repair but blocks fibrotic functions of myofibroblasts. This mechanism is illustrated in a cell culture model showing the repair fibroblast treated with withaferin A retains its ability to establish focal adhesions (red-stained vimentin makes contacts with green-stained paxillin, left panel), whereas the myofibroblast cell treated with the drug reveals a phenotype showing arrested cell spreading due to strong interference of focal adhesions (highly restricted red-stained vimentin resulting in poorly formed green-stained paxillin). (Mohan Lab)

Neuroscience Journal Club

Students are required* to participate in Neuroscience Journal Club (MEDS 6497) for the duration of their graduate career. Neuroscience Journal Club, which meets each Wednesday from noon – 1pm during the school year, is a major focal point of the Neuroscience Graduate Program. Participants include students, post-doctoral fellows, and faculty. Presenters select a current research article that they find noteworthy, make the reference available to the UConn Health Neuroscience community, and then present appropriate background, the article itself, and their critique of the work. The diversity of topics selected by presenters, together with input from attendees, makes this an important learning opportunity for all participants. A goal for each speaker is to allow researchers with diverse interests and backgrounds to appreciate the subject matter of the paper selected. Students are encouraged to consult with their faculty advisors as well as other students and faculty for help in selecting an article. Grades are based on attendance and participation, as well as on the student's presentation.

**Exceptions may be made to those students who have received written approval from their thesis committee to write their thesis.*

GENERAL EXAMINATION

The general examination marks the transition from courses to independent research and should be completed by **February** of the second year for a student to remain in good standing. The purpose of the examination is to determine whether the student is qualified to do independent Ph.D. thesis research. The general examination will focus on a research proposal that is prepared and defended by the student. While it is not meant to be a comprehensive exam covering all previous course work, students are expected to draw upon this information in drafting their proposal. Learning how to

express ideas in the proposal format is critical. Thus, the preparation of this proposal provides an opportunity for students to generate a testable hypothesis and formulate specific aims for their research.

General Examination Timetable

When the thesis advisory committee has been selected, the student should schedule a meeting to review the Plan of Study before **October 31** of the second year. The Plan of Study must be approved before the Graduate School will issue a permit for the student to take the general examination. At this same meeting, the student will present a **one page abstract** describing the proposed research project, which is prepared in consultation with the major advisor. The members of the Advisory Committee will review the abstract to determine if it is suitable for development into a full research proposal that will form the basis of the general examination, or if the direction and scope require modification. A detailed outline of the **specific aims (up to 3 pages)** should be submitted for approval to the members of the student's General Examination Committee before **December 15**. A copy of the full written research proposal must be submitted to each member of the student's General Examination Committee at least 7 days prior to the oral examination and no later than 5 weeks from the date the aims received approval. Both parts of the general examination should be completed by the end of February of the second year.

Format Overview

The general examination in neuroscience has two parts:

- Part One: a written research proposal related to the student's thesis topic.
- Part Two: an oral examination based on this proposal.

Part One - The Written Research Proposal

The written research proposal should be prepared in the format of an NIH R01 grant application. While related to the student's thesis topic, the proposed research program should be go beyond the scope of a thesis proposal. The written proposal must not exceed 10 single-spaced pages with no appendices. Figures and tables, but not references, are included in this page limit. The primary objective of your proposal shall be to outline specific aims to test a unique scientific question.

The proposal shall include the following sections:

- **Title page:** Proposal title, student's name, and major advisor (not included in the page limit).
- **Specific aims:** List the research objectives and state the hypotheses to be tested (1 page).
- **Background and significance:** This section should contain a critical evaluation of existing knowledge and identify the gaps that the project is intended to fill, along with its impact on human health, society, etc. It should be noted that while preliminary data from the student's own experiments are not a prerequisite for the examination, such data can be useful in establishing the rationale and demonstrating feasibility.
- **Research design and methods:** This section should describe the conceptual and experimental approaches to be taken, the procedures for collecting, analyzing and interpreting data, expected and alternative results, and potential problems and alternative approaches. New methods should be described. Standard methods need not be described in detail, but should have literature citations, and the student should be prepared to discuss the underlying fundamentals and details during the oral general examination. *Although the proposal is related to the student's thesis research project, any appropriate methodology can be*

proposed to address the hypotheses. Thus, students are encouraged to include exploratory projects and incorporate experimental approaches that are not currently employed in the thesis laboratory.

- **Literature cited:** Complete citations, including titles, should be given. (This section is not included in page limit).

In preparing the research proposal, the student may consult any faculty member, or any other source, for information on experimental methods and approaches. Once the 3 page specific aims has been approved by the General Examination Committee, the major advisor may not be consulted for specific feedback on the proposal. This proposal may be based on existing projects in their lab, but the general examination proposal must be distinguished from any existing grant application(s) by original contribution(s) by the student. The student's contributions may be a specific aim, or additions to experiments outlined throughout the proposal. The scope of the student's contributions are to be unrestricted in feasibility, meaning that the student must pose an original question and then propose an original set of experiments that employs any existing technology or methodology that is not specifically described in any grant from which the proposal has been based. These original contributions are expected to demonstrate the creativity and thinking of the student and are expected to complement the scientific goal(s) of their overall proposal. **However, the student is solely responsible for the development of the final written proposal submitted to the General Examination Committee.** The student is not to receive any specific feedback on the written proposal prior to the oral examination. Other than the General Examination Committee, the written proposal must not be shared with anyone prior to the oral examination. **The thesis advisor does not receive a copy of the written proposal until the day before the oral examination is held.**

Part Two - The Oral Examination

At the beginning of the oral examination, the student will be asked to give a very brief (10 minute maximum) overview of the research proposal. This is meant to convey the overall subject area, hypotheses to be tested, and general experimental approach. The student is free to practice this brief presentation with fellow students and/or their thesis advisor prior to the examination. The ensuing discussion during the oral examination will focus on the theory behind the proposal, the methods used to address the problem, the interpretation of potential results, alternative approaches to the experimental problem, and related literature. Each member of the examination committee will have an opportunity to discuss the proposal with the student. **The major advisor should be present during the oral examination, but only in the capacity of an observer.**

General Examination Committee

The General Examination Committee is composed of at least five members and typically includes the Neuroscience Program Director and Associate Director, all members of the student's Advisory Committee, and other faculty members as necessary. The Program Director serves as chairman of the examination committee to ensure that the questioning is fair and that the student's rights are protected. In the case of combined M.D./Ph.D. or D.M.D./Ph.D. candidates, the director of the dual degree program will be invited to attend.

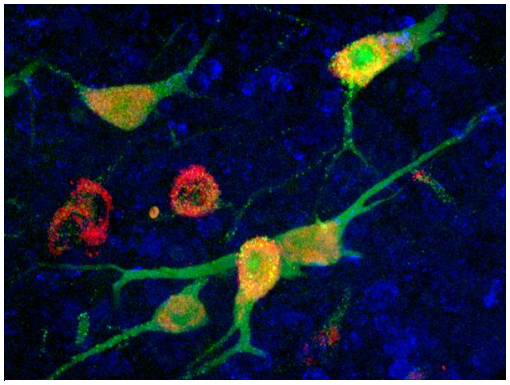
Evaluation

The general examination is administered by the student's General Examination Committee, which determines the outcome of the examination. After the oral examination, the student is asked to leave the room and the Examination Committee evaluates the written and oral parts of the examination, as well as the student's overall performance in the neuroscience program (course work, rotations, work

ethic, etc.). The student's major advisor will be present during these deliberations and asked to comment on the intellectual and technical development of the student during the time in the laboratory prior to the examination. Again, while preliminary data from the student's own experiments are not a prerequisite for the examination, data can be useful as a demonstration of the student's abilities and work ethic. The general examination committee will vote on the outcome and can recommend unconditional pass (no more than one dissenting vote), incomplete pending specific remediation, or failure. In the case of failure, the student may be invited, at the discretion of the general examination committee, to retake the examination. The chair of the general examination committee will communicate the outcome to the candidate immediately following the deliberations. The final results, bearing the signature of each examination committee member, will then be reported to the graduate records office.

THESIS RESEARCH

Thesis research must be a significant contribution to knowledge and worthy of publication in its present form. As such, it must be worthy of acceptance in partial fulfillment of the requirements of the degree of Doctor of Philosophy.



Neurons with different patterns of gene expression and network connections are shown in the dorsal cochlear nucleus of the auditory system. Green neurons send their axons to the midbrain and express the gene for VGLUT2 (red). Blue neurons are granule cells in a different network that express the gene for VGLUT1. (Oliver lab)

Selection of Major (Thesis) Advisor

Students must select a Major Advisor for their thesis research by September 1st of the 2nd year. The Program Director is to be notified when a student has made this decision, since the choice of Major Advisor must be approved by the Program Director. Major Advisors must be able to provide research resources and financial support as well as intellectual guidance for the term of the thesis research. Moreover, the student must submit the completed "Change of Major Advisor" forms to the Graduate School Office of Records and Registration (see http://grad.uchc.edu/current/index.html)

Thesis Advisory Committee Formation

The Thesis Advisory Committee is formed prior to October 31st of the 2nd year. The composition of the Advisory Committee should reflect the student's research interests. It must include three faculty members (Associate Advisors) chosen jointly by the student and the Major Advisor. Associate Advisors should be selected for their expertise and willingness to advise the student and Major Advisor throughout the duration of the thesis research. At least one Associate Advisor will serve as Student Progress Committee representative and will chair the Thesis Advisory Committee. Although adjustments to the membership of this committee can be made with approval of the Major Advisor and Program Director, changes after the Plan of Study is approved will require that the Major Advisor present written notification to the Graduate School Office of Records and Registration.

Plan of Study

The Plan of Study form contains a list of completed courses as well as credits to be compiled through graduation and requires approval and signatures from all members of the Advisory Committee. The form ("Plan of Study the degree of Doctor of Philosophy") can be obtained on line here. This is a Graduate School milestone that should be approved and submitted before October 31st of the 2nd year; it must be done before a student can take the General Examination.

Student Progress Seminars

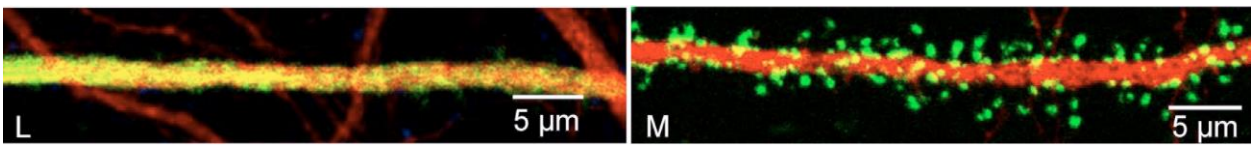
All students are required to present a formal seminar on their thesis research project starting in their third year, and each year after until a reasonable number of months from their scheduled thesis defense. These typically occur in the spring semester. This seminar, which typically coincides with the preparation of the Thesis Prospectus, provides students with valuable experience with the preparation and delivery of a 1 hr long formal seminar in the environment of familiar colleagues. In addition, these presentations acquaint program members with on-going student research projects and foster exchange of information and expertise. Student Progress Seminars are included as part of the yearly Neuroscience Journal Club series.

Doctoral Dissertation Proposal

The Dissertation Proposal is an important milestone **required by the Graduate School**. This document serves not only as a detailed description of the student's thesis research project, but also as a guide for discussion of the student's progress during annual/biannual meetings with their Thesis Advisory Committee. A meeting with the student's Thesis Advisory Committee should be convened to discuss a general outline for the Dissertation Proposal prior to completing the document. This outline must be distributed to members of the Thesis Advisory Committee at least one week prior to the meeting. At this meeting, the committee will decide to approve the outline or may require revisions prior to approval. While this meeting typically is scheduled soon after the presentation of the Student's third-year research seminar, it can occur earlier once the student has passed the General Examination. However, the completed Dissertation Proposal document must be submitted to the Thesis Advisory Committee for approval **no later than June 1st of the third year**. Once approved by the Thesis Advisory Committee, the Dissertation Proposal document is submitted to Registrar's Office of UConn Health (MC1827, LM-035) for approval by the Area Review Committee of the Graduate School. The Doctoral Dissertation Proposal Coversheet and Instructions can be found on the milestones page of the Graduate School Website.

Application for Individual Pre-Doctoral Fellowships

Students are encouraged to submit a fellowship application to NIH or to other pre-doctoral funding agencies. A student's support in the Program is not dependent upon obtaining funding of this type, but the experience of submitting an application and the advantage of obtaining individual recognition of this type makes it an extremely worthwhile experience.



Over-expression of Kalirin 7 forces aspiny interneurons to produce spine-like structures in cultures of dissociated hippocampal interneurons. (Xinming Ma Lab)

STUDENT ADVISORY SYSTEM OVERVIEW

First Year Faculty Advisors

For students on Graduate Program Committee Assistantships, two First Year Faculty Advisors are appointed by the Associate Dean of the Graduate School or by the Neuroscience Program. Advisors

assist students in choosing courses and Laboratory Rotations and, as such, first year students are required to consult with their Faculty Advisors prior to registration for fall and spring semesters.

Thesis Advisory Committee

Overview. Thesis Advisory Committees will be formed soon after choosing a Major Advisor (i.e., by October 31st of the second year) and will include three Associate Advisors in addition to the Major Advisor. The representative of the Student Progress Committee will serve as chair of the Advisory Committee. Associate Advisors should serve as a resource for students to draw upon as they conduct their dissertation research. Students must schedule Thesis Advisory Committee meetings at least once per year, but biannual meetings are recommended. Thesis Advisory Committee meetings must be completed by June 1st of each year to assist the Student Progress Committee in review of student progress during its academic year-end meeting in June. Once the Thesis Prospectus is approved and submitted, the purpose of the Thesis Advisory Committee during the annual/biannual meetings is to discuss progress on the aims, provide constructive criticism, and set research goals for the next period. Any major problems with approaches and techniques of the approved Thesis Prospectus that may necessitate modifications should prompt a meeting with the Thesis Advisory Committee for discussion. These meetings also provide an opportunity for committee members to advise the student on career development as they approach their thesis defense.

Within a week before each Thesis Advisory Committee meeting, the student must provide each member with a written statement, typically ~ 1 page, of his or her progress during the preceding year and plans for the following year. At the beginning of the meeting, the committee may wish to ask the student to step out of the room so it can consider the most appropriate way to proceed in its discussions with the student. The Advisory Committee may also meet with the student in the absence of the Thesis Supervisor. Dual degree students returning to the clinic must schedule an annual Advisory Committee meeting one year prior to graduating.

Soon after each meeting of the Advisory Committee, the Chair of the Thesis Advisory Committee, together with the Major Advisor, will submit a report to the Program Director and Chair of the Student Progress Committee. The letter should summarize the student's progress and the results of the Committee meeting (e.g., accomplishments, future goals, problems-remedies, etc.). Copies of this letter are distributed to all Associate Advisors and to the student. This report is reviewed by the Student Progress Committee and placed in the student's file. The Student Progress Committee continues to monitor each student's progress through the annual Advisory Committee reports.

Specific meetings. *Plan of Study approval and General Examination*. Students must meet with their Thesis Advisory Committee in the fall of the second year to ensure timely completion of two important milestones, the Plan of Study and General Examination, which are due by the end of February of the second year (see p. 10, 13). All Associate Advisors will serve on the student's Examination Committee. *Dissertation Proposal*. Students will specifically meet with the Thesis Advisory Committee soon after the Third Year Seminar to initiate completion of another important milestone, the Dissertation Proposal, which is due by the end of the third year (see p. 13).

DISSERTATION REQUIREMENTS AND GRADUATION

There are a series of requirements for graduation that must be performed in a particular sequence as described below. The University confers degrees three times per year (August, December, May), with one Commencement ceremony held in May. In order to graduate in May of a given year, there are certain deadlines and intervals for these steps. It should be understood that if the graduation deadline is not met for a given calendar year, this does not obligate the student to remain in the

program. Once the requirements for graduation have been met, the Registrar's office can issue a letter attesting to this fact and allowing students to begin postdoctoral fellowships, employment, residencies, etc.

When the student has completed a substantial amount of his or her dissertation research and can clearly delineate what will constitute the dissertation, a meeting of the Thesis Advisory Committee is called. At this time the members of the Thesis Advisory Committee decide whether additional experiments, reanalysis of data or examination of the literature must be conducted before the Dissertation can be written.

The Dissertation

The student, in consultation with the Major Advisor, writes the Dissertation. It should begin with a broad Introduction, which summarizes the history of the general area and the major outstanding questions. A General Methods section should be used to describe those methods that are common to the various experiments. Following the chapters which present and discuss the various experimental results, there should be a final chapter in which the student highlights the implications and limitations of the findings, sets the results within the context of related work in the literature and explores future directions of study. The Dissertation with all chapters, figures, etc. is submitted to the Thesis Advisory Committee. It should represent what the student considers to be a complete and final document. Since the thesis research is a significant contribution to the candidate's field and worthy of publication in its present form, it is expected that the candidate will have one or preferably more than one first-author manuscript describing the research under consideration for publication by a peer-reviewed journal prior to scheduling the Private Defense.

The Research Private Defense

Once the dissertation has been distributed to the members of the Thesis Advisory Committee, the Research Defense is scheduled with the committee. Students may invite a knowledgeable scientist from outside UConn Health to participate as an external examiner in the Research Defense. At this meeting, the members of the Thesis Advisory Committee examine the student's knowledge of the literature and broader issues related to the thesis topic. In addition to discussing their data, students should be prepared to discuss the background and history of the problem addressed in their thesis work, details of the techniques used, implications and limitations of their findings and future research directions. The Thesis Advisory Committee then votes to tentatively approve pending outcome of the public defense, conditionally approve pending modifications, or reject the thesis; the final decision requires unanimous approval of members of the Advisory Committee.

Submission of the Dissertation

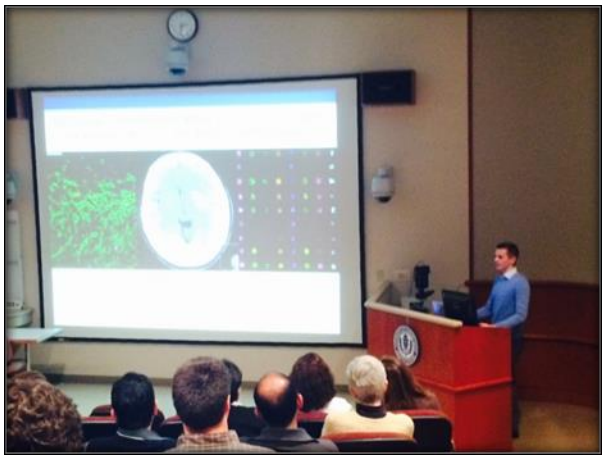
For details in preparing and submitting the dissertation, see "Doctoral Dissertation Guidelines" at *http://health.uconn.edu/graduate-school* and the UConn Health Graduate School Catalog, which is available online at *http://gradcatalog.uconn.edu/.*

The Dissertation Oral Defense (Public Thesis Seminar)

Upon acceptance of the dissertation, the student can schedule the Public Defense. However, this cannot be scheduled sooner than 2 weeks following a successful Private Defense (see "For All Finishing Ph.D. Students" *http://grad.uconn.edu/current-students/doctoral-degree-program/*). The Public Defense provides a formal opportunity for the student to present and defend his or her thesis research to the members of the Neuroscience Training Program and academic community at large,

all of whom are strongly encouraged to attend (a minimum of five participating faculty members, including members of the advisory committee, is required by the graduate school).

The "Report on the Final Examination for the Doctoral Degree" *(http://grad.uconn.edu/current-students/doctoral-degree-program/dissertation-information/)* must be completed, including record of Faculty members participating and signatures of each member of the Thesis Advisory Committee.



Matthew Hammond, public defense, December 10, 2014
2015 Winner of the Edward G. Henderson Prize

TIMETABLE OVERVIEW

Courses – at least 7 credits in Neuroscience; typically 20-24 credits of coursework; total of 44 to 48 course + research credits;
Laboratory Rotations – 3 typical, fall, spring, summer of first year; seminar and written Rotation Reports required;
Journal Club – participation required in all years; presentation required in years 1-4; presentation of proposed thesis research occurs in the third year;
Neuroscience Seminars – regular attendance required in all years;
Thesis Supervisor – selected by September 1st of 2nd year;
Advisory Committee members – selected according to each student's thesis research by October 31st of 2nd year;
Plan of Study – approved by Advisory Committee and filed by October 31st of 2nd year;
Abstract of Research Proposal – submitted and approved by October 31st of 2nd year;
3 Page Specific Aims of Research Proposal – submitted to Examination Committee for approval by December 15th;
Part one of General Examination (*Written Research Proposal*) – distributed to Examination Committee members 5 weeks after approval of Specific Aims and at least 7 days before the Oral Examination;
Part two of General Examination (*Oral Examination*) – completed by end of February.
Dissertation Proposal – Must be approved by the Thesis Advisory Committee and submitted to the Graduate School by June 1st of 3rd year;
Thesis Research – annual/biannual meetings with the Thesis Advisory Committee;
Seminar on thesis research – part of Journal Club during 3rd year and all subsequent years;
Approval to write dissertation – obtained from Thesis Advisory Committee;
Private Research Defense – submit completed dissertation to Thesis Advisory Committee 2 weeks prior; submit manuscripts to journals;
Thesis Seminar – no sooner than 2 weeks following successful Private Research Defense; students typically graduate within approximately 5 years;

See http://health.uconn.edu/graduate-school/current/biomedical-science-ph-d-program-milestones-made-easy/ for more details on the UConn Health Doctoral Program milestones/timeline.

ADDITIONAL NEUROSCIENCE PROGRAM FUNCTIONS

Neuroscience Retreat

The Neuroscience Retreat is held annually, typically in the Spring. It is a formal one day student/post-doctoral fellow-oriented research symposium held at an external regional venue. All Program members are invited to attend and students are expected to participate. This retreat provides a format by which students/post-doctoral fellows can gain experience in meeting-style scientific presentation**.** Morning continental breakfast, lunch, and afternoon snack with libations are typical accoutrements.

Neuroscience Seminar Series

Neuroscience students are expected to attend the weekly seminars sponsored by the Department of Neuroscience. Seminars are scheduled weekly from September through the end of May and feature the work of neuroscientists at UConn Health, as well as guests from the regional and national neuroscience community. Speakers are asked to provide a key reference as background for the topic and Neuroscience Program students and postdoctoral fellows typically meet with outside speakers over lunch on the day of the seminar.

Other Seminars and Journal Clubs

In addition to the weekly meeting of the Neuroscience Journal Club, there are also basic and clinical seminars that meet on a regular weekly, biweekly or monthly basis, along with a plethora of special seminars, most of which are announced by broadcast emails.

Teaching in Neuroscience

Teaching is not required as part of the Neuroscience Training Program, but is encouraged. For students interested in gaining teaching experience, arrangements can be made to assist in the teaching of selected Neuroscience and Medical/Dental school courses, in Neuroscience undergraduate programs at area colleges and universities or in summer programs at UConn Health.

PROGRAM ADMINISTRATION

Director and Associate Director

The Director of the Neuroscience Program performs a number of important programmatic functions, including: 1) acting as the sole voting Program representative and voice on the Graduate Programs Committee (GPC), which sets the policies of the Graduate School; 2) chairing all annual General Examination Committees, maintain protocol and providing consistency between examination; 3) oversees Program activities during recruitment weekends. The functions of the Associate Director include chairing the Student Progress Committee and substituting for the Director at monthly meetings of the GPC. While the Associate Director is invited to attend monthly GPC meetings, they carry no vote or voice at the meetings when the Director is present. However, the Associate Director acts in the full capacity of the Director in the Director's absence.

APPENDIX

Course Descriptions

The descriptions for several courses are included. Additional course descriptions can be found in the Graduate Course Catalog (http://gradcatalog.uconn.edu/).

MEDS 5341 - *Molecular Neurobiology of Excitable Membranes*. Emphasizes the relationship between structure and function of biological interfaces that comprise electrically excitable and chemically excitable (synaptic) membranes. *Course Director: Dr. Zhao-Wen Wang, zwwang@uchc.edu*

MEDS 5371 - *Systems Neuroscience*. This course is a part of the core series in the Neuroscience graduate program. In the earlier part, the course addresses the functional organization of the neural systems underlying sensation and movement. Sensory systems include the somatosensory, auditory, visual, vestibular, and chemosensory systems. Motor systems include the spinal cord, brain stem, cerebellum, vestibular system, oculomotor system, basal ganglia and cerebral cortex. In the latter part, the course addresses complex brain systems, i.e., the autonomic systems, neuromodulator systems, and systems underlying emotion, addiction, reward, learning/memory, and speech. *Course Director: Dr. Srdjan Antic.*

MEDS 5372 - *Cellular, Molecular and Developmental Neuroscience.* This course is a part of the core series in the Neuroscience graduate program and is organized in the form of interactive lectures and paper discussions. The first part provides an introduction to basic concepts in the study of neurophysiology and molecular neurobiology, such as neurotransmitter synthesis and release, electrical and calcium signaling, cellular basis of memory formation and neurological disease. The second part investigates the principles and mechanisms that guide the formation of the nervous system from stem cells to the complex multicellular arrays needed for function, including the understanding of genetic and molecular regulation of neuron/glia lineage decisions, axonal growth, synapse formation and developmental diseases. *Course Director: Dr. Eric Levine.*

MEDS 5383 - *Neurobiology of Disease.* The purpose of the course is to introduce the topic of the "neurobiology of disease" to graduate students receiving basic neuroscience training, or any basic science student who is using models of brain disorders. We will cover a number of neurological and psychiatric diseases including stroke, depression, post-traumatic stress disorder, Alzheimer's disease, hearing loss, substance abuse, aging, autism spectrum disorders, multiple sclerosis, epilepsy, schizophrenia, Parkinson's disease, and ALS. The first half of each session will be precepted by a clinician who specializes in the disorder of the week, and the second half of the session will be led by a basic scientist. *Course Director: Dr. Riqiang Yan.*

MEDS 5384 - *Brain Microcircuits.* Is an upper level course for students who wish to undertake a detailed analysis of the neuronal and synaptic organization of the central nervous system. The focus of the course is the brain microcircuitry as seen in animals and man, the cell biology of the brain, gene expression, and mechanisms that govern the activity of networks of neurons. Students will learn about the relationship of structure to function and discuss the neurons and organizations that create specific brain regions. The emphasis will be on the nervous system in experimental animals used for neuroscience research. Students will have to opportunity to examine human and rodent brains, but the course assumes some prior exposure to neuroanatomy. The course is conducted in informal, small-group sessions and is designed for graduate students and upper level undergraduates who are

engaged in research. Each week students are assigned a chapter in the text and lead the discussion of that chapter. Grades are based on classroom discussion and a final project or written report. *Course Director: Dr. Doug Oliver.*

MEDS 6372 - *Neurobiology of Glia.* This course will provide a detailed introduction and advanced, in-depth on specific topics related to the cellular biology and pathobiology of glia. This course will have two components. The first part of the course will be didactic lectures covering each of the types of glia in the central and peripheral nervous systems. The remainder of the course will provide focused paper discussions on the specific roles of glia in particular diseases of the nervous system that are current with recent publications and innovations in the field. *Course Director: Dr. Stephen Crocker.*

MEDS 6448 – *Foundations of Biomedical Science I.* Due to the diverse background of our entering first year students and the recognized importance that each student should enter their thesis research years with a solid foundation of biomedical knowledge, this course has been designed to encompass topics considered fundamental to any student pursuing a Ph.D. in any Area of Concentration in the Biomedical Science Graduate Program. The course will combine an introduction to fundamental concepts along with a more in depth analysis of the research that underlies some of these ideas. A variety of topics will be examined in approximately one week modules that will include a basic, introductory one hour lecture on Mondays, a more in - depth discussion of one to two critical historical papers on an aspect of the topic on Wednesdays and then a small group discussion on a more modern paper related to the area on Fridays. The course is designed to be taken in conjunction with its partner course Foundations of Biomedical Science II in the spring. *Course Director(s): Dr. Stormy Chamberlain, chamberlain@uchc.edu, Dr. Ann Cowan, acowan@uchc.edu, & Dr. Chris Heinen, cheinen@uchc.edu*

MEDS 6596 - *Laboratory Rotation*. Laboratory Rotations are scheduled for fall, spring, and summer semesters of the first year in a laboratory of the student's choice. See description above. Registration for this credit requires a form (see http://health.uconn.edu/student-services/wp-content/uploads/sites/58/2016/06/form_labrotation.pdf)

MEDS 6497 - *Neuroscience Journal Club*. Registration is required each semester for the duration of the dissertation research. See description above. *Course Director(s): Dr. David Martinelli davidmartinelli@uchc.edu and Dr. Rosa Guzzo, guzzo@uchc.edu*

Program Faculty Contact and Research Information

A list of the Neuroscience Program faculty, with their contact information and a brief description of their research interests, is provided below. More details of faculty research and current Laboratory Rotation opportunities/projects can be found at: http://health.uconn.edu/graduate-school/academics/programs/ph-d-biomedical-science/lab-rotation-availability/**.**

NAME	Contact	Location	Research
Srdjan D. Antic, M.D.	antic@uchc.edu 860-679-8468	E3052	Dendritic integration of synaptic inputs; dopaminergic modulation of dendritic excitability.
Byoung-Il Bae, Ph.D	bbae@uchc.edu 860-679-8955	L4075	We aim to understand the molecular and cellular mechanisms underlying human cerebral cortical development.
Rashmi Bansal, Ph.D.	bansal@uchc.edu 860-679-1133	E4014	Developmental, cellular and molecular biology of oligodendrocytes; growth factor regulation of function and its relationship to neurodegenerative disease.

NAME	Contact	Location	Research
Leslie R. Bernstein, Ph.D.	les@uchc.edu 860-679-4622	L3047	Behavioral neuroscience; psychoacoustics, binaural hearing.
Stormy J. Chamberlain, Ph.D.	chamberlain@uchc.edu 860-679-8351	400 Farmington 1236	Uses induced pluripotent stem cells (iPSCs) to study the human neurogenetic disorders, Angelman syndrome and 15q duplication syndrome.
Bojun Chen, PhD	bochun@uchc.edu	L4021	Molecular mechanism of neurotransmitter release regulation, and molecular mechanisms of gap junction function, assembly and regulation using *C. elegans* as a model system.
Jonathan M. Covault, M.D., Ph.D.	covault@uchc.edu 860-679-7560	L4091	Genetic correlates of alcohol use disorders.
Stephen J. Crocker, Ph.D.	crocker@uchc.edu 860-679-8750	E4054	Brain injury/repair; neurodegenerative diseases, neuroinflammation; myelin injury; glia; matrix metalloproteinases.
Rosaria Guzzo, PhD	guzzo@uchc.edu 860-679-3026	E4032	Epigenetic mechanisms underlying pluripotent stem cell differentiation, musculoskeletal development, and tissue homeostasis.
Jaime Imitola Herrera, M.D.	imitola@uchc.edu 860-679-3186		Multiple Sclerosis and Translational Neuroimmunology
George A. Kuchel, MD	kuchel@uchc.edu 860-679-3956	EM018	Aging; Neural regulation of bladder function; Resilience and neural plasticity.
Eric S. Levine, Ph.D.	eslevine@uchc.edu 860-679-2145	E3053	Synaptic plasticity; role of endogenous cannabinoids and nerve growth factors in the hippocampus and cerebral cortex.
Yuanhao "James" Li, Ph.D.	jali@uchc.edu 860-679-3836	E3014	Development of the central nervous system; cellular and molecular mechanisms underlying formation of the mammalian cerebellum
Leslie M. Loew, Ph.D.	les@uchc.edu 860-679-3568	400 Farmington 1608	Morphological determinants of cell physiology; image-based computational models; spatial variations of cell membrane electrophysiology; new optical methods for probing living cells.
Xin-Ming Ma, Ph.D.	ma@uchc.edu 860-679-4280	E4030	Uses Induced pluripotent stem cell (iPSC)-derived neurons to study the mechanisms of the human psychiatric disorders, schizophrenia and cocaine addiction.
David Martinelli, PhD	martinelli@uchc.edu 860-679-2271	L4003	Genetics, cell biology, biochemistry, and behavioral neuroscience of synaptic adhesion proteins and their role in neuropsychiatric disease.
Royce Mohan, Ph.D.	mohan@uchc.edu 860-679-2020	L4023	Developing treatments for conditions and diseases of the eye that involve angiogenesis, fibrosis and gliosis. Developed first pharmacological probe of type III intermediate filaments (IFs).
Douglas L. Oliver, Ph.D.	doliver@uchc.edu 860-679-2241	L3042	Circuitry and parallel information processing in the auditory system; neurobiology of hearing, deafness, and tinnitus;
Phillip P. Smith, MD.	ppsmith@uchc.edu 860-679-3438		Research regarding lower urinary tract physiology and dysfunction, especially in the context of aging.
Feliks (Ephraim) Trakhtenberg, PhD	Trakhtenberg@uchc.edu 860-679-7819	L4005	Neuroregeneration: Integrating molecular, genetic, bioinformatic, and translational approaches in studying neuronal development, towards engineering gene therapy and nanotechnology-based therapeutics for regenerating injured nerve/brain tissues
Rajkumar Verma, PhD	raverma@uchc.edu 860-679-3521	E5052	Identification and validation of novel therapeutic targets for ischemic stroke.
Zhao-Wen Wang, Ph.D.	zwwang@uchc.edu 860-679-7659	L4005	Molecular mechanism of neurotransmitter release regulation, and molecular mechanisms of gap junction function, assembly and regulation using *C. elegans* as a model system.
Ming Xu, PhD	mixu@uchc.edu 860-679-4338		Discover novel interventions to slow down the aging process, and thereby alleviate a number of diseases simultaneously.
Riqiang Yan, Ph.D.	riyan@uchc.edu 860-679-3527	E4032	Focuses on the study of how Alzheimer's disease patients develop the pathologies in their brains and explores therapeutic treatment for this most common neurodegenerative disease.
Ji Yu, Ph.D.	jyu@uchc.edu 860-679-7680	400 Farmington 1605	Optical imaging technology; regulatory mechanisms in dendritic RNA translation; cytoskeletal dynamics.
Lixia Yue, Ph.D.	lyue@uchc.edu 860-679-3069	EG024	Calcium signaling mechanism and its physiological/pathological functions in various systems.

Current and Past Trainees

Current PhD Trainees	Where they came from
Judy Bloom	Eastern Connecticut State University, CT
Brittany Knight	Lock Haven University, Lock Haven, PA
Jessica Yasko	Georgetown University, Washington, DC
Matthew Sticco	Muhlenberg College, Allentown, PA
Cara Hardy	Otterbein University in Westerville, OH
Rob Pijewski	Fitchburg State University, Fitchburg, MA
John Zhou	Cleveland Clinic, Cleveland, IL
Marwa Elamin	University of Gazira/University of Hartford
Bruce Rheaume	University of New Hampshire, Durham, NH
Michal Ragan	University of Illinois, Chicago, IL
Megan Rouillard	Worcester State University, Worcester, MA
Ramalakshmi Ramasamy	PSG College of Technology
Jian Xing	University of Connecticut, Storrs, CT
Emily Fabrizio-Stover	Wesleyan University, Middletown, CT
Marc Benoit	Clark University, Worcester, MA
Past Graduates of Neuroscience Program	**Current Position**
James Fink, PhD, 2018	Senior Scientist, Q-State Biosciences, Cambridge, MA
Carissa Sirois, PhD, 2018	Postdoctoral Research Assoc., Univ. of Wisconsin, WI
Cory Willis, PhD, 2018	Postdoc, University of Cambridge, UK
Alexandra Nicaise, PhD, 2018	Postdoc, University of Cambridge, UK
Rajamani Selvam, PhD, 2018	Research Fellow at the FDA, Rockville MD
Mandakini Singh, PhD, 2017	Postdoctoral Fellow, UConn Health, Farmington, CT
Maegan Gross, PhD, 2016	Postdoctoral Fellow, Yale University, CT
John Wizeman, PhD, 2016	Patent Law, Boston, MA
Inseyah Bagasrawala, PhD 2016	Scientist, Biogen, Cambridge, MA
Richard Lieberman, PhD, 2015	Scientist, Fulcrum Therapeutics, Cambridge, MA
Kasey Johnson, PhD, 2015	Medical Science Liaison, Hologic Inc.
Xi Bie, PhD, 2015	Investment Analyst Intern, Spencer Trask Ventures
Kyle Denton, PhD, 2015	Postdoctoral Fellow, National Institutes of Health, MD
Megan Miller, PhD, 2015	Research Program Officer, USAID, Washington, DC
Katerina Oikonomou, PhD, 2014	Postdoctoral Fellow, UCLA, Los Angeles, CA
Matthew Hammond, PhD, 2014	Principal, RA Capital, Boston, MA

Anthony Giampetruzzi, PhD, 2013	Postdoctoral fellow, Univ. of Mass Medical School
Kumiko Ijichi-Claycomb, PhD, 2013	Biomedical Scientist, San Diego, CA
Shaina Short, PhD, 2013	Postdoctoral Fellow, University of Utah School of Medicine
Bharti Manwani, MD (PhD 2013)	Assistant Professor, University of Texas Health Science Center
Verica Milivojevic, PhD, 2012	Assistant Professor of Psychiatry, Yale University, CT
Haiying Zhan, PhD, 2012	Postdoctoral Fellow, Yale University, CT
Wen-Liang Zhou, PhD, 2012	Postdoctoral Fellow, Yale University, CT
Lawrence Hsieh, PhD, 2011	Postdoctoral Fellow, Yale University, CT
Chad Siegel, PhD, 2011	Senior Medical Director, The Scienomics Group
Nicole Jackman (PhD 2011/MD 2013)	Physician Anesthesiologist, San Francisco, CA
Drew Kiraly (PhD 2011/MD 2013)	Assistant Professor, Icahn School of Medicine at Mount Sinai
Eric Gaier (PhD 2011/MD 2013)	Ophthalmology Resident, Massachusetts Eye and Ear Infirmary
Jane Sutherland, PhD, 2010	Post-doc, Mannheimer Foundation, Inc
Ricka Messer, MD/PhD, 2010	Assistant Professor, Pediatrics-Neurology, University of Colorado
Anna Moore, PhD, 2010	Assistant Professor of Biology, Temple University
Robert Claycomb (MD/PhD), 2009	Stroke Fellow, Vascular Neurology, UCSD, San Diego, CA
Danielle Moore, PhD, 2009	Clinical Team Lead, Syneos Health
Zhou Han, PhD, 2008	Post-Doc, Yale University, CT
Joseph Madara, PhD, 2008	Staff Scientist, Harvard Medical School, Boston, MA
Dori Schafer, PhD, 2008	Assistant Professor, Univ. of Massachusetts, Worcester, MA
Vedakumar Tatavarty, PhD, 2008	Postdoctoral Fellow, Brandeis University, Waltham, MA
Marius Ifrim, PhD, 2008	Assistant Professor of Cell & Developmental Biology, Upstate Medical University, Syracuse, NY
Mark Niciu, MD/PhD, 2008	Assistant Professor of Psychiatry, Iowa Neuroscience Institute
Yuanzheng Gao, PhD, 2007	Research Associate, University of Florida
Jacqueline Sobota, DMD/PhD, 2007	Assistant Professor, Hofstra University School of Medicine
Birgit Fogal, PhD, 2007	Principal Scientist, Boehringer Ingelheim Pharmaceuticals
Kristian Hedstrom, PhD, 2007	Chief Science Officer, Adelson Medical Research Foundation
Mary Hamby, PhD, 2007	Head of Neuroinflammation Drug Discovery, MD Anderson Cancer Center, Houston, TX
Yang Yang, PhD, 2006	Ophthalmic Consultants of Boston, MA
Jason Cromer, PhD, 2006	Senior Director, Cogstate, New Haven, CT
Dale Fortin, PhD, 2006	Assistant Professor, Washington State University
Lei Jin, PhD, 2005	Science Multimedia Producer, Harvard Medical School
Chana Rabiner, PhD, 2005	Director, Global Health Programs, Washington D.C

Jay Pathmanathan, MD/PhD, 2004	Assistant Professor of Neurology, Univ. of Pennsylvania, Philadelphia, PA
Chang Xu, PhD, 2003	Clinical Fellow in Nephrology, Univ. of Chicago Medical Center
Joseph Trettel, MD/PhD, 2003	Medical Director, Neuropsychiatry, Hartford Hospital, CT
Christopher Taylor, PhD, 2003	EMD Serono Research Institute, Billerica MA

Additional UConn Health Contacts

UConn Health Graduate School Website- http://health.uconn.edu/graduate-school/current/gso/guide/

UConn Graduate School Forms - http://grad.uconn.edu/current-students/forms/

Graduate Student Organization (GSO) - http://health.uconn.edu/graduate-school/current/gso/guide/

Neuroscience Department Website - http://neuroscience.uchc.edu/

UConn Health Registrar
Barbara Ricketts, bricketts@uchc.edu
860-679-2990 (Phone)
860-679-6176 (Fax)

UConn Health Assistant Registrar
Swapna Das, das@uchc.edu
860-679-3125 (phone)
860-679-6176 (fax)

UConn Health Graduate School Admissions
Stephanie Rauch, *BiomedSciAdmissions@uchc.edu*
860-679-4509 (Phone)
860-679-1637 (Fax)

Neuroscience Department Office Business Service Manager
Diana Mikulak, *mikulak@uchc.edu*, 860-679-2320

UConn Health Student Services Center
http://health.uconn.edu/student-services/
860-679-8765 (Phone) / 860-679-6176 (Fax)

Office of Health Career Opportunity Programs
AG013/ 860-679-3483

Confidential Counseling
Debra Johnson, *johnson@psych.uchc.edu*, 860-679-6700

Public Safety/Escort Service - *http://publicsafety.uchc.edu/*
Phone: 860-679-2511
Fax: 860-679-1345

UConn Health Parking & Transportation - *http://health.uconn.edu/park/*