Neuroscience Graduate Program (NGP)
University of Cincinnati

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Website: https://med.uc.edu/education/neurosciencesgrad/home
Who are we?

- Interdisciplinary Ph.D. program in basic and translational neuroscience research
- Interdepartmental
- 32-36 students
- >70 faculty across University of Cincinnati and Cincinnati Children’s Hospital Medical Center (CCHMC)
Research Strengths

Focus on identifying mechanisms underlying neurological disease and the design of novel therapeutic strategies:

• Neurodevelopmental Disorders (Autism, Fragile X, ADHD)
• Chronic Pain and Itch
• Epilepsy
• Stress, Reward and Addiction
• Psychiatric Disorders (Anxiety, Depression, PTSD, Panic Disorder)
• Neurodegenerative Disease (Parkinson’s, ALS)
• Neuronal Injury (Traumatic Brain Injury (TBI) and Stroke)
• Metabolic Disorders (Obesity)
Cutting-edge core facilities at UC/CCHMC

• CCHMC Confocal Imaging Core (Nikon Center of Excellence)

• Biostatistics
• Bioinformatics
• Flow Cytometry
• Genomics, Epigenomics and Sequencing
• NMR/MRI Animal Imaging
• Proteomics

• Viral Vectors
• Metabolic Phenotyping
• Animal Behavior
• Mass Spectrometry
• Transgenic Animal and Gene Editing
• Histopathology
Curriculum - Ph.D. Students
(Refer to NGP Handbook on our website for details)

Year 1:

Summer:
Introduction to Research (lab rotations) (NS 8050) 12 credits

Fall:
Fundamentals of Neuroscience I (NS 7078) 4 credits
Principles of Molecular and Cellular Biology (GNTD 7001) 4 credits
Survey of Research (NS 8040) 1 credit
Neuroscience Journal Club (NS 9010) 1 credit
Neuroscience Seminar (NS 9001) 1 credit
Introduction to Research (lab rotations) (NS 8050) 1 credit

Spring:
Fundamentals of Neuroscience II (NS 7079) 5 credits
Ethics in Research (GNTD 7030) 1 credit
Statistics and Experimental Design for the Biomedical Sciences* (MCP 8050C) 3 credits
Neuroscience Journal Club (NS 9010) 1 credit
Neuroscience Seminar (NS 9001) 1 credit
Introduction to Research (lab rotations) (NS 8050) 1 credit

*Student joins mentor’s lab for dissertation research at the end of Year 1
Curriculum - Ph.D. Students

Year 2:

Fall:
- Professional Development in Biomedical Research (MCP 8001) 2 credits
- Neurobiology of Disease (NS 7001) 2 credits
- Elective* (varies)
- Neuroscience Journal Club (NS 9010) 1 credit
- Neuroscience Seminar (NS 9001) 1 credit
- Introduction to Research (NS 8050) (varies)

* Candidacy Exam to be completed before end of fall semester

Spring:
- Academic Survival Skills (NS 7077) 3 credits
- Neuroscience Journal Club (NS 9010) 1 credit
- Neuroscience Seminar (NS 9001) 1 credit
- Dissertation Research (NS 9099) 7 credits

*Electives can be taken at any time. The minimum requirement for graduation is one graduate-level elective, but you can take additional courses if you wish (note: one cannot exceed 18 credit hours per semester)
Financial Support for NGP Students

- Competitive stipend level ($30,000/year -> $32,000/year upon candidacy)
- Student health insurance coverage
- Tuition covered by UC Graduate School
- Support for conference travel from NGP and Graduate Student Government (GSG)
- URM Student Professional Development Funds
- Daniel Kline Training Award
Student Professional Development

- Individual Development Plans (IDPs)
- NGP Director/Student/Mentor Meetings
- NGP Alumni Seminar Series
- Preparing Future Faculty Program
- TA opportunities
- > 400 student organizations on campus
  - Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)
  - Association for Women in Science (AWIS)
  - Science Policy Ambassadors
  - Mental Health Champions
- Ohio Miami Valley chapter of Society for Neuroscience (OMV-SfN) events
- Plenty of opportunities to present your research!
Building a sense of community in the NGP

- Annual NGP Retreat
- Faculty-Student-Alumni Dinner at annual SfN meeting
- Welcome reception for new students
- Summer Picnic and Winter Get-together
- Peer-to-peer mentoring program
- Director-Student Lunches
- Student lunches with visiting speakers
- Recruitment weekend social activities
NGP Commitment to Diversity, Equity and Inclusion (DEI)

• Appointment of NGP Diversity Ambassador (Dr. Matia Solomon, PhD) and Student Diversity Ambassadors

• Regular training in cultural competency and DEI for all NGP faculty and students

• Implementation of mentor-student agreements

• Creation of climate surveys

• Detailed tracking of student milestones and outcomes

• Student exit interviews

• Additional financial support for professional development opportunities for URM students
NGP Outreach Efforts

• Brain Awareness Week, Lakota Pi Day, OMV Brain Bee and more.....
Living in Cincinnati

Bureau of Economic Analysis report (2017): Cincinnati has the lowest cost of living of any metro area in the U.S. (10% lower than the national average)
Getting to the Finish Line... Then what?

- Mean Time to Defense = 5.2 years (n = 62)

A survey of 57 recent NGP alumni:

- Academia: 71%
- Industry: 18%
- Science Policy/Other: 11%
NGP Student Outcomes

Recent Postdocs:
Johns Hopkins
Stanford
Harvard
Yale
Wash U
Penn
Vanderbilt
Michigan
St J ude’s
OHSU
Florida
Ohio State
Karolinska Institute
UNC-Chapel Hill
Northwestern
Cork (Ireland)

Non-academic positions:
Johnson and Johnson
MedPace
Medtronic
Taconic Biosciences
Sense Diagnostics
Boston Consulting Group
Pfizer
Science
NIH
CAS
External Reviews of NGP

UC 2019: Strategy for Excellence in Doctoral Education (UC Provost)

- One of only 7 UC graduate programs (out of 52) to be awarded “ENHANCED” status which provides funds for program initiatives
- Provost’s final summary:
  - Student outcomes and graduate placements are strong
  - Well funded and productive faculty
  - Student recruitment is strong
  - Interdisciplinary composition is a positive model for the university

Ohio Department of Higher Education / Dean of the UC Graduate School

- Final Evaluation: “OUTSTANDING” (2\textsuperscript{nd} highest of 9 possible scores)
- Noted strengths include:
  - Improvements in student diversity
  - Active curricular review and revision
  - Good time to degree with unusually high student retention (~90%)
  - Excellent oversight of student progress
Applying to the NGP

What we look at:

- Academic achievement
- Research experience
- Personal statement
- Letters of recommendation
- No GREs required
- Interviews in Jan.-Feb.

Application Deadline: Dec. 7, 2021
NGP-UC and COVID-19

- All Classes in person (with options for remote learning)
- No disruption to student financial support
- UC Vaccine requirement Policy (Deadline Nov. 15th)
  (https://www.uc.edu/publichealth/vaccine/requirement.html)
- Free COVID testing offered weekly
- Organization of socially-distanced activities for students
- NGP Recruitment 2022 events will be in person (open to change)
For more information, please contact us at:

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**steve.davidson@uc.edu** (Steve Davidson)

**ana.madani@uc.edu** (Ana Madani)

Visit:

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Neuroscience Graduate Program

Applications Due: December 7th 2021

https://www.med.uc.edu/education/neurosciencesgrad

No GRE required

- R1 Research University with 70+ Interdisciplinary Neuro Faculty Members
- Collaborative between UC and Cincinnati Childrens’ Hospital and Medical Center
- Competitive Stipends, Health Insurance & Tuition covered
- Focused curriculum, research rotations, seminars, annual retreat
- Commitment to Diversity, Equity, and Inclusion