Become a Downstate MD-PhD!

COM Orientation 2025

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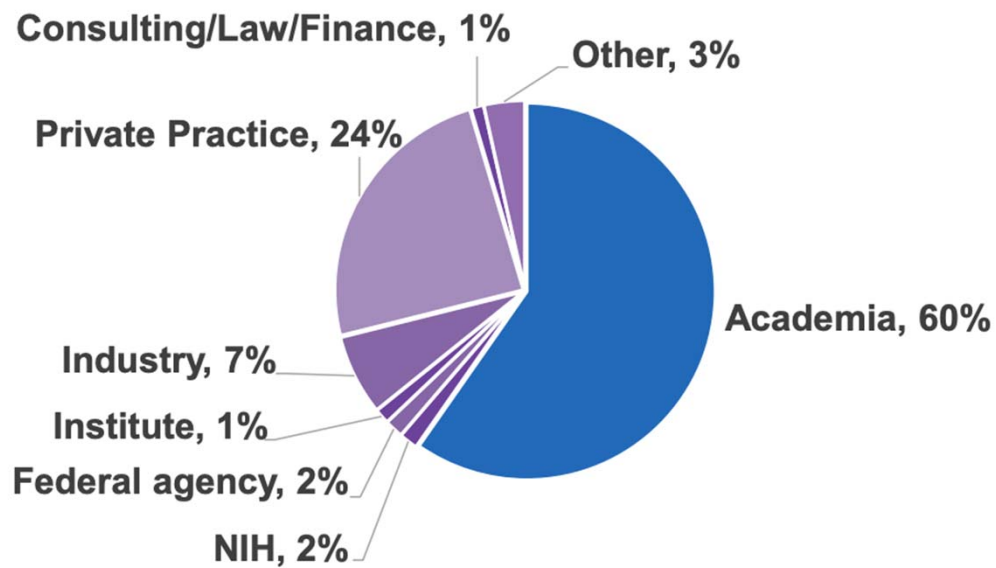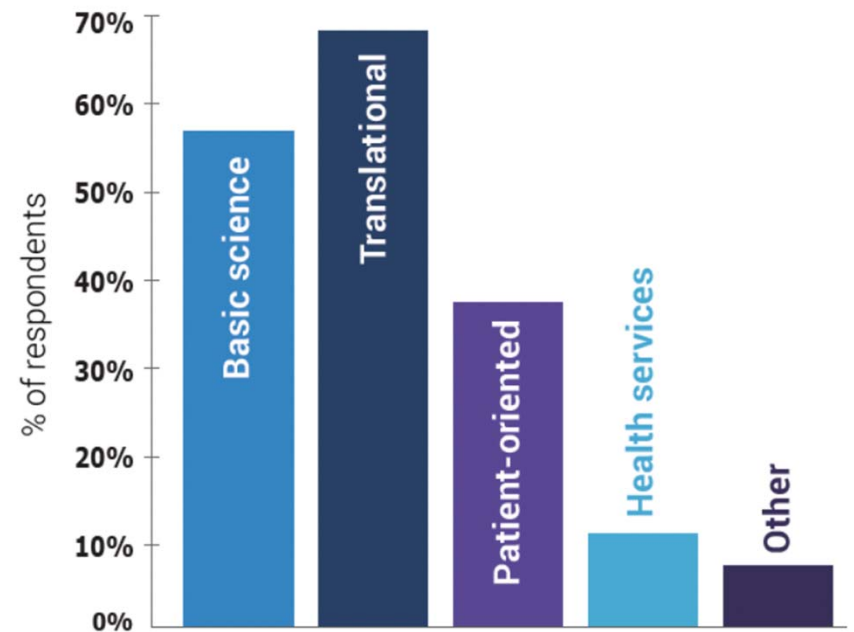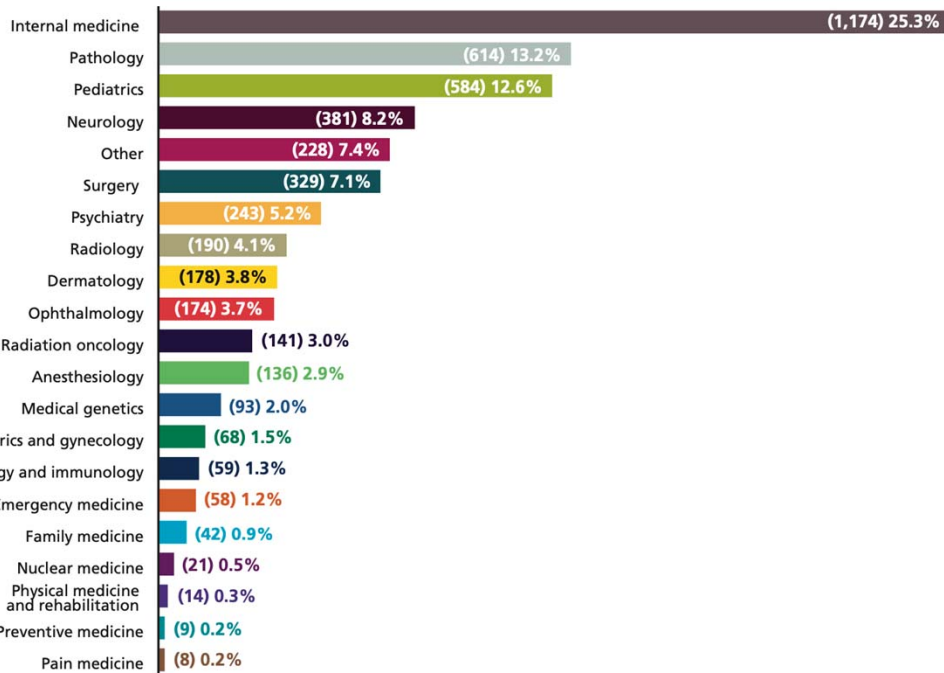# What is a Physician-Scientist? (AAMC)
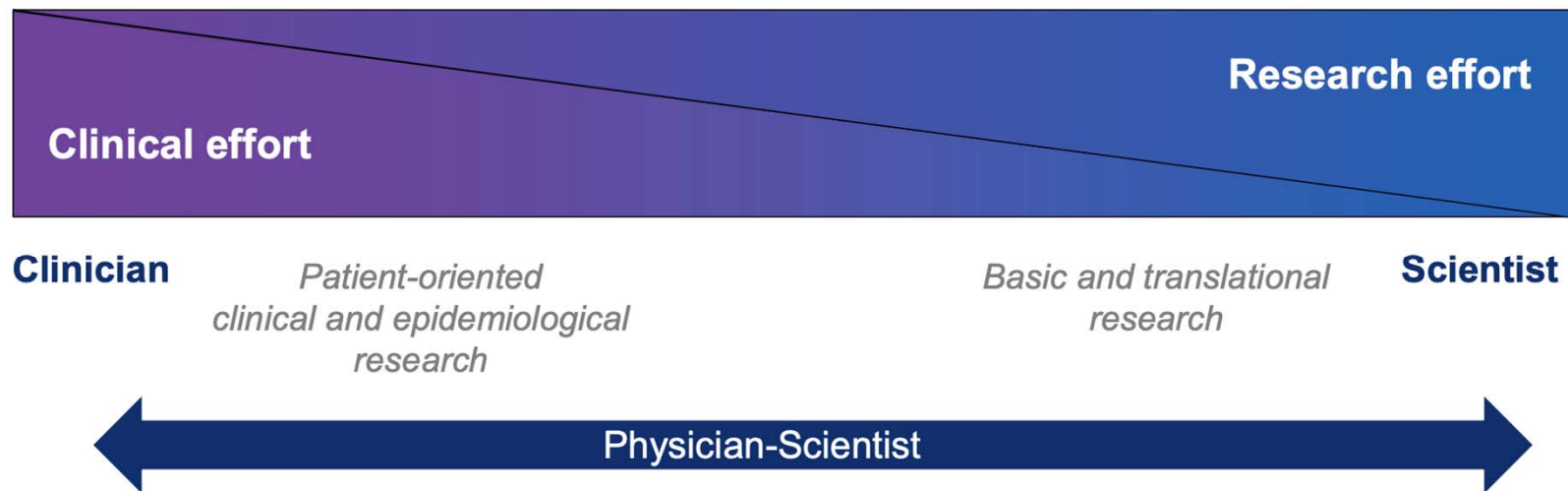
MD-PhD Careers (AAMC)

MD-PhDs conduct various types of research.

MD-PhD Specialties (AAMC)

Internal medicine (1,174) 25.3%
Pathology (614) 13.2%
Pediatrics (584) 12.6%
Neurology (381) 8.2%
Other (228) 7.4%
Surgery (329) 7.1%
Psychiatry (243) 5.2%
Radiology (190) 4.1%
Dermatology (178) 3.8%
Ophthalmology (174) 3.7%
Radiation oncology (141) 3.0%
Anesthesiology (136) 2.9%
Medical genetics (93) 2.0%
Obstetrics and gynecology (68) 1.5%
Allergy and immunology (59) 1.3%
Emergency medicine (58) 1.2%
Family medicine (42) 0.9%
Nuclear medicine (21) 0.5%
Physical medicine and rehabilitation (14) 0.3%
Preventive medicine (9) 0.2%
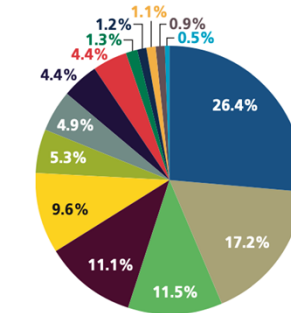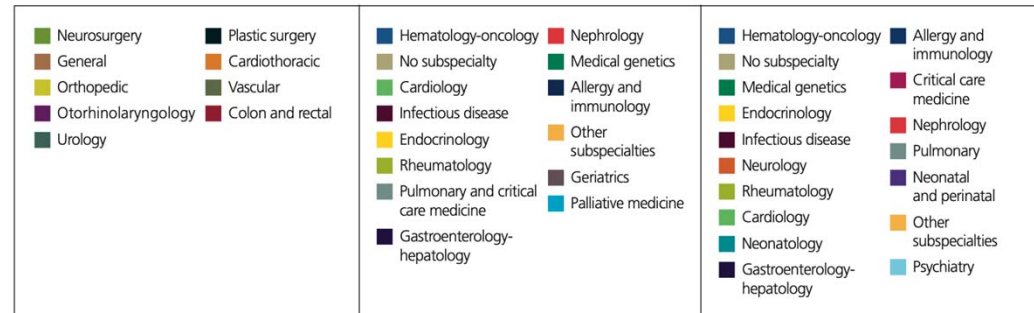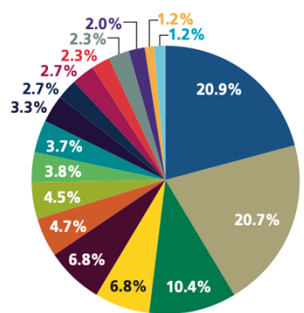Pain medicine (8) 0.2%

A. Surgical specialties
B. Internal medicine subspecialties
C. Pediatric subspecialties

Downstate MD-PhD Training Roadmap

Current MD-PhD Program Application & Matriculation Structure

Expected timeline:	Expectation/requirement				
MS1 (COM)	MD-PhD Application due by January 1, 2026	**Summer after MS2 year (Jul-Aug)**	2nd Rotation if thesis lab is not yet selected or begin thesis lab project. Return to payroll at standard rate.	**July post defense**	Return to COM with full tuition scholarship (in-state rate, limited to 4 semesters), and base Graduate Assistantship
Spring semester of MS1 (COM)	Application evaluation & interviews				
Summer between MS1 and MS2 (Jun-Jul)	Hiring as a Graduate Assistant at base rate and 1 rotation for 8 weeks	**G1 (SGS) (Sept – May)**	Initial enrollment in School of Graduate Studies with full tuition scholarship	**MS3 & MS4 (COM)**	Completion of MD degree, and commencement awarding the combined MD/PhD
MS2 (COM) (Aug-Jul)	Leave from payroll while attending COM including "Transition to Clerkships"	**G2+ (SGS)**	Progress towards PhD degree culminating in thesis defense		

Getting Your PhD At Downstate SGS

- Degree Programs:
  - **Neural and Behavioral Sciences** (Program Director: Dr. Jackie Meyers)
  - **Molecular and Cellular Biology** (Program Director: Dr. Laura Martello-Rooney)

- Class Requirements
  - G1 year: Core Program Classes (reduced requirement for MD-PhD Students
  - G2+: 2 Advanced Electives

- Teaching Requirements: 50 hours

- Degree Requirements:
  - Qualifying Exam: summer after G1
  - Thesis Proposal: end of G2
  - Thesis Defense
  - Annual Work in Progress Presentations (Program Specific)

For full requirements please reference the student handbook

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MD-PhD Thesis Topics

Evan Davis

Research Interests & Experience: I'm interested in diseases of the eye, specifically glaucoma and macular degeneration, and enjoy learning and employing computational methods to solve biological problems..

Tadeusz Wroblewski

Research Interests & Experience: I am interested in computational genetics and research related to health disparities.

Shreya Desikan

Research Interests & Experience My PhD Thesis is focused on studying defective Germinal Center B Cell tolerance in Systemic Lupus Erythematosus (SLE/Lupus). Specifically, I am investigating how increases in immunoregulatory genes due to inadequate X Chromosome Inactivation (XCI) contribute to a novel B Cell tolerance pathway studied by our research team. With this work, we hope to elucidate a novel mechanism to improve our understanding of the gender and racial bias of SLE

Isaac Vingan

Research Interests & Experience My project is focused on investigating the neuro-molecular changes that coincide with behavioral experience in mice. Specifically, we are looking at the transcriptomic make up of the dorsal hippocampal network following the recall of a cognitively demanding behavioral paradigm known as active place avoidance. We plan to implement a variety of molecular techniques to interrogate the coincident transcriptional changes, such as, but not limited to: Bulk RNA-Seq, snRNA-Seq and Spatial Transcriptomics.

Rachel Furhang

Research Interests & Experience: Chronic effects of brain injury, neurodegeneration, and the influence of sex on recovery from injury.

Erica Griffith

Research Interests & Experience: I am interested in using computational neuroscience to investigate the multiscale dynamics of brain activity. Ultimately, I hope to use these techniques to further our understanding of the neurophysiology underlying psychiatric pathology.

Check out what other MD-PhD and PhD students are working on the SGS website

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Educational and Community Development Opport

- Monthly MD-PhD Seminar (all years)
  - Grand Rounds Style Student-Led Case presentation
  - Faculty mentor for input in area of specialization for each seminar
  - Improving based on student feedback each year!!

- Regular Graduate School Seminar Series (NBS & MCB)
- Clinical Exposure Experiences during PhD years
  - VA shadowing with Dr. Weiss
  - Downstate Infectious Disease Shadowing with Dr. Augenbraun

- Program Social (2x a semester)
- NYC-wide MD-PhD Social Events (hiking, picnic & more!)

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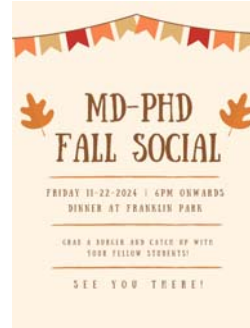
Career and Professional Development Opportunities

In partnership with Justine Lottermoser, Ph.D, Manager of Career and Professional Development at the School of Graduate Studies

- Quarterly Career Talks with alumni and other nominated MD-PhDs spanning academia and industry with varied career paths

- Travel awards to National MD-PhD Student Conference and/or American Physician-Scientists association annual meeting

- Participation in NYC-wide MD-PhD symposiums and career development events

- Access to Dr. Lottermoser (career and professional development advisor) as a graduate student

- F30 NIH Grant Writing Support

- Participation in Downstate Annual Research Day
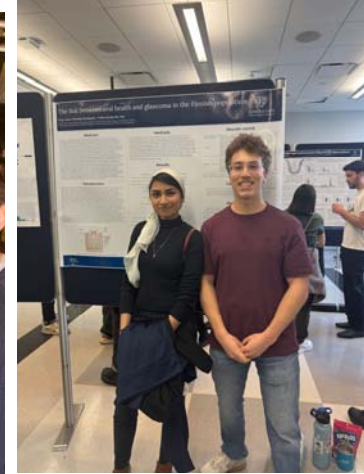
MD-PhD Students Presenting Their Work!
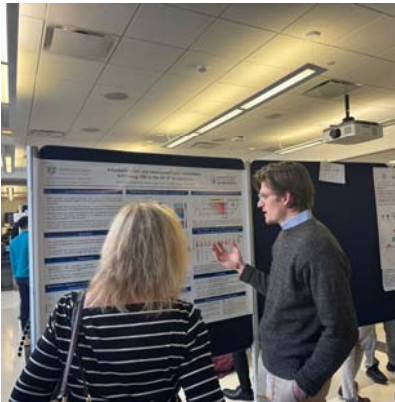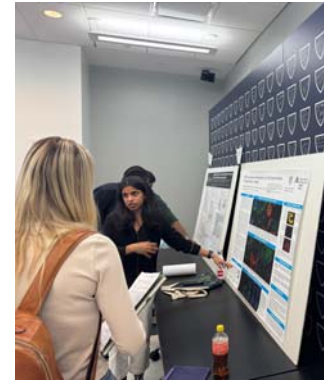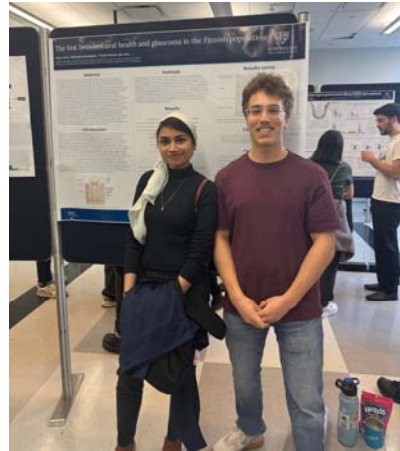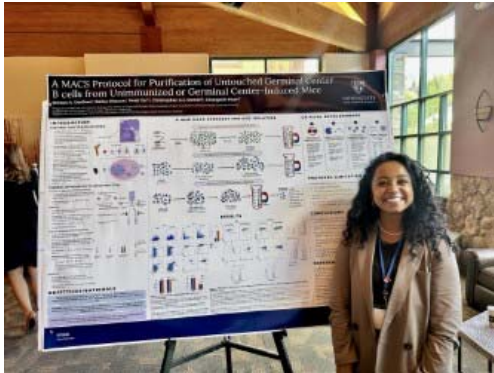
Who Are We Looking For?

- Highly motivated students with a solid basic science research background

- Passion and commitment towards scientific investigation

- Interest in pursuing a translational research career

- Community-minded individuals who want to solve disease-oriented scientific problems to advance medicine

Our MD-PhD Community!

How to Apply

[Online Application PDF](#)

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MD/PhD Application - School of Graduate Studies

Name:_____ Downstate SID:_____
(please print) Last Name   First Name

Application Year 20_____ for entering the SGS in the fall of 20_____

Indicate the Ph.D. program in which you are most interested:
⦿ Molecular & Cellular Biology   ◯ Neural & Behavioral Science

Applications are due by January 1 of your first year in the College of Medicine. Evaluation of your application will be based on 1. your application to the College of Medicine, 2. your academic history in the College of Medicine, 3. any additional letters of research support, 4. this page of your interests and 5. interviews if you are selected.

Additional letters: Please have your research mentor use this PDF form: (https://www.downstate.edu/education-training/school-of-graduate-studies/_documents/rec-let.pdf) sent directly to the School of Graduate Studies. The deadline for our receipt of recommendations is January 1 of your first year in the College of Medicine.

What areas of faculty research have contributed to your interest in pursuing a PhD in addition to the MD degree? (Attach an additional sheet if necessary.)

Please provide a statement of purpose for why you would like to pursue the PhD (Attach and additional sheet if necessary.)

I hereby release my applicant and student records to the School of Graduate Studies for the purpose of evaluation for entry into the MD/PhD program. ☐ *Please check to signify your agreement, and sign below.*

_____   _____
Signature   Date

Return this form to Ms. Denise Sheares, Director of Admissions, School of Graduate Studies, MSC 41, 450 Clarkson Avenue, Brooklyn, NY 11203, sgsadmissions@downstate.edu or to Room BSB 3-114A.

This signature authorizes officials of the School of Graduate Studies access to all admissions documents for purpose of evaluation. The State University of New York Downstate Medical Center does not discriminate on the basis of sex, race, color, creed, national origin, religion, age, sexual orientation, disability, marital status, handicap, or status as a disabled veteran or veteran of the Vietnam era, in the recruitment of students or in the operation of any of its programs or activities, as specified by Federal and State laws and regulations. For more information, contact the Office of Opportunity and Diversity at (718) 270-1738 which is at 151 E. 34th Street.

Contact us!

MD-PhD Faculty Leadership

Dr. Jeffrey P. Weiss– MD/PhD Program Director
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Dr. David Christini – Dean, School of Graduate Studies
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MD-PhD Student Leadership

Shreya D Shai – Chair, MD-PhD Student Committee
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Graduate Program Leadership

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Dr. Jackie Meyers – Neural and Behavioral Sciences
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More information here