

# PhD Town Hall – June 2019

## Marta Filizola, PhD

*Dean, Graduate School of Biomedical Sciences  
Sharon & Frederick A. Klingenstein-Nathan G. Kase, MD Professor  
Dept. of Pharmacological Sciences & Dept. of Neuroscience  
co-Director, Biomedical Data Science Initiative*

Icahn School of Medicine at Mount Sinai

[marta.filizola@mssm.edu](mailto:marta.filizola@mssm.edu)



The Icahn School of  
**WORLD  
CHANGERS**  
at Mount Sinai

# Updates Since Last Town Hall in 2017

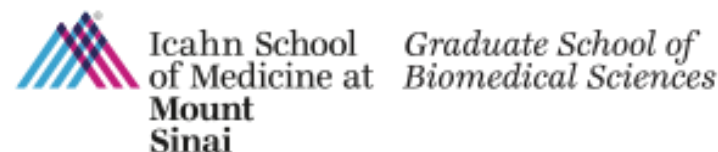
With the ultimate goal of elevating the Graduate School of Biomedical Sciences (GSBS) at the Icahn School of Medicine at Mount Sinai (ISMMS) to the world's leading center for graduate and post-graduate education, my leadership team and I have continued to make progress in the following key areas:

- ❖ GSBS and ISMMS Visibility
- ❖ Innovating in Graduate Education
- ❖ Expanding Academic Partnerships
- ❖ Embracing the Principles of Diversity and Inclusion
- ❖ Recruiting the Best and Brightest
- ❖ Enhancing Student and Trainee Support

# GSBS and ISMMS Visibility

# 2019 Graduate School of Biomedical Sciences

Fully integrated with a stand-alone top medical school—the Icahn School of Medicine at Mount Sinai



**Top 15**  
NIH funding  
**\$348.5 million**  
(Fiscal year 2018)

**Top 20**  
Best Medical Schools  
(2019 U.S. News & World Report)

## Top NIH-funded Basic Science Departments



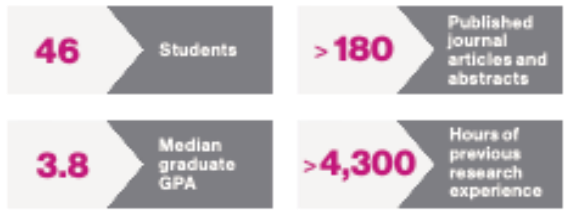
Blue Ridge Institute for Medical Research data for National Institutes of Health (NIH) funding among U.S. medical schools. Awards received by the Icahn School of Medicine at Mount Sinai during the NIH 2018 fiscal year.

**Renowned Faculty**

**23**  
Members of the National Academies of Sciences, Engineering, and Medicine

Number of Graduate Students and Trainees
<b>245</b> PhD Candidates
<b>95</b> MD/PhD Candidates
<b>343</b> Master's Candidates
<b>588</b> Postdocs

## 2019 – 2020 PhD Matriculants



**300+**  
Research Laboratories

**Degree-Granting Graduate Programs**

**3** PhD Programs:  
• Biomedical Sciences  
• Neuroscience  
• Clinical Research

**8** Master's Programs:  
• Master of Public Health  
• Master of Healthcare Administration

**Master of Science in:**  
• Biomedical Sciences  
• Biomedical Data Science  
• Biostatistics  
• Clinical Research  
• Genetic Counseling  
• Healthcare Delivery Leadership

**1** of only **50**  
U.S. institutions to offer an NIH-funded MD/PhD program

## Gender and Racial/Ethnic Diversity





# UNDERGRADUATE RESEARCH SYMPOSIUM



# Students Profiles and PlumX

## Students

Meet the students of the Neuroscience training area, who are committed to learning the nervous system at the molecular, cellular, systems, and behavioral levels, with both normal and pathological conditions.

Filter or Search by Clear All ^

Research Topics  Training Areas

Last Name  First Name   Sort By Name A-Z

All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



### RAWAN ABDELAAL

[GRADUATE ASSISTANT | Graduate School of Biomedical Sciences]

Rawan Abdelaal is a PhD student at Icahn School of Medicine at Mount Sinai. She is a stem cell biologist by training who has worked on understanding the interactions between motor neurons and glial cells in ALS pathology using mouse and iPS cell-based models. A major focus of her work is utilizing...

- ▶ Apply For Admission
- ▶ Find A Researcher
- ▶ Find Resources

## PhD in Neuroscience

Curriculum

Research

Laboratories

Faculty

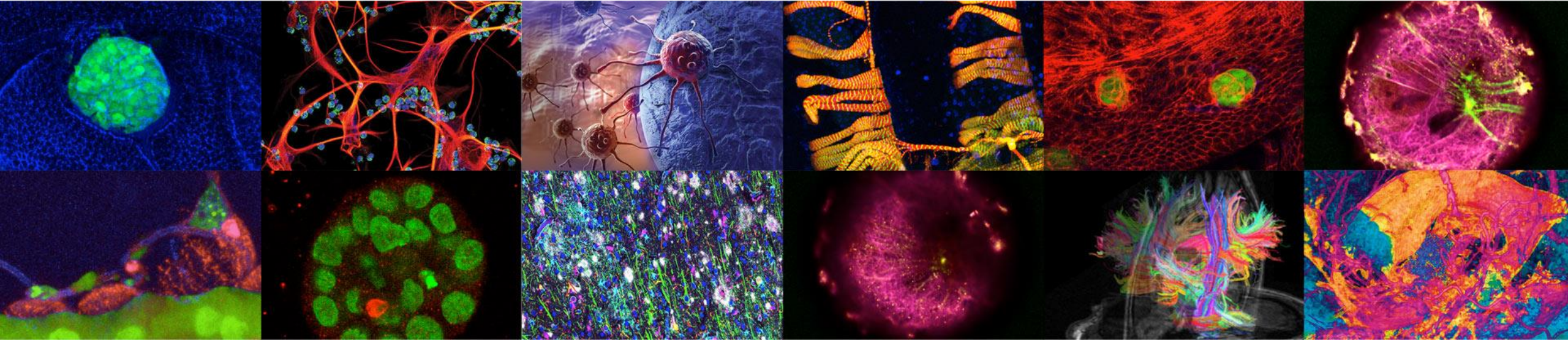
Students

Alumni

# Innovating in Graduate Education



# The Biomedical Data Science Initiative @ISMMS



- Bridging research and educational endeavors in computing and big data analytics across various departments and institutes at ISMMS in order to pursue insights that will better the lives of patients and their families.
- In addition to providing an intellectual home for collaborative data-driven research, it offers outstanding computational training to postdocs and graduate students through a variety of Master's, PhD, and post-graduate programs.



# Master of Science in Biomedical Data Science (launching in 2019)

Offers a unique training opportunity to students with a strong quantitative background and an interest in applying computational biology and data science techniques to biomedical problems to revolutionize personalized medicine and healthcare.

## **Eligibility**

- Undergraduate Degree in Computer Science, Mathematics, Physics, Engineering, Chemistry, or Related Discipline.
- Prior Quantitative Coursework (Calculus, Linear Algebra, Etc.)
- Prior Introductory To Computer Programming Coursework

## **Curriculum**

A minimum of 30 credits split between core courses, electives, and a capstone project in one of the various biomedical domain areas at Sinai, such as (a) computational genomics, (b) computational biophysics and systems pharmacology, (c) biomedical engineering, imaging, and visualization, (d) biostatistics, clinical epidemiology, and clinical trials, (e) environmental medicine and public health, (f) health systems design, and (g) health information technology.

# Expanded Curriculum and Broadened Learning Experiences in Quantitative Sciences

BIO6300: Introduction to R programming  
BIO8200: Analysis of categorical data  
BIO8700: Theory of linear & generalized linear models  
BMI1001: Intro to biomedical & translational informatics  
BMI1002: Intro to clinical information systems  
BMI1003: Introduction to healthcare systems  
BMI 1005: Computer Systems  
BMI 2005: Introduction to Algorithms  
BMI3001: Data analytics and mining  
BMI3002: Machine Learning for Biomedical Data Science  
BSR1015: Introduction to scientific computing  
BSR1803: Systems biology: biomedical modeling  
BSR2104: Intro to computer modeling & macromolecules  
BSR2400: Translational genomics  
BSR2401: Intro to human genome sequencing  
BSR3101: Computer-aided drug design  
BSR6402: Practical analysis of a personal genome  
BSR6803: BD2Kdata mining and network analysis  
BSR6806: Programming in sys bio & bioinformatics

CLR0320: Applied biostatistics in clinical trials  
CLR0501: Computational tools & information sources for clin. Res.  
Clr0810: Genetic Epidemiology  
CLR1010: Clinical trials management  
MPH0311: Multivariable methods  
MPH0400: Introduction to epidemiology  
MPH0412: Epidemiology II  
MPH0415: Case studies in Epidemiology: environmental & occupational health  
MPH0623: Applied Analysis of Epi & Outcomes Research  
MPH0624: Outcomes Research Methods  
MPH0802: Statistical Computing with SAS  
MPH0803: Introduction to SAS Programming  
MPH0812: Applied Linear Models I  
MPH0821: Analysis of Longitudinal Data  
MPH0822: Applied Linear Models II  
MPH0823: Survival Analysis

# Training in Entrepreneurship and Innovation

(in collaboration with Mount Sinai Innovation Partners)

## Certificate in Entrepreneurship

- BSR 2930: Intellectual Property and the Commercialization Process
- BSR 2931: Commercialization of Biomedical Innovation: Entrepreneurship and Business Fundamentals

## MSIP Programs

- Become an intern – gain experience in technology development and commercialization
- Executive in Residence – connects innovators with seasoned industry experts
- Shark Tank – healthcare startups pitch their game-changing technologies
- Innovation Hour – topics in healthcare, biotech, commercialization
- JLABS – Johnson & Johnson's leadership and networking events
- Venture Showcase – pitch brightest, new ideas to Venture Capital Firms

## Co-curricular Opportunities

- Sinai Innovations Conference
- Health Hackathon- Idea Prize
- Using NSF I-Corp™ Lean LaunchPad approach to create and test innovations in real time.

# Expanding Academic Partnerships



# Established Partnerships/Relationships with Several Academic Institutions

These have given students access to many courses in mathematics, engineering, computer science, chemistry, and physics that are complementary to those offered at ISMMS.



Rensselaer



Stony Brook  
University




THE COOPER UNION



GROVE SCHOOL  
OF ENGINEERING

# Embracing the Principles of Diversity and Inclusion as Key Drivers for Excellence and Innovation

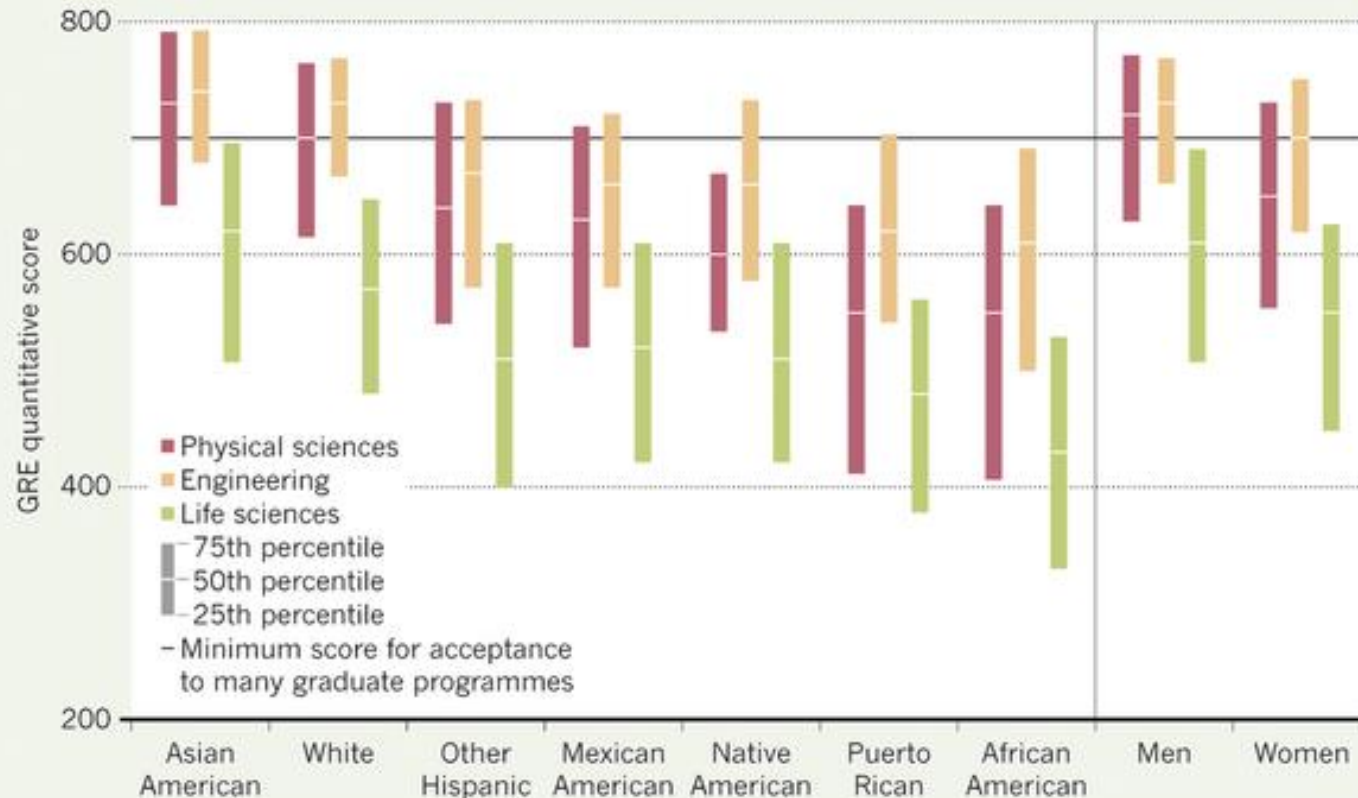
- The Mount Sinai Health System was ranked No. 1 on DiversityInc's Top Hospitals and Health Systems list for 2018. **For the second year in a row**, Mount Sinai was the highest-ranked health system nationally as well as in the New York metro area.
- Supported by several centers, councils, and offices:
  - Center for Multicultural and Community Affairs (CMCA)
  - Office for Diversity and Inclusion
  - Office for Women's Careers
  - Diversity in Biomedical Research Council (DBRC)
  - Faculty Diversity Council
  - Office for Disability Services
  - Office of Gender Equity in Science and Medicine 



# Action Taken To Further Promote Inclusion And Diversity In Science

## THE GREAT DIVIDE

The data represent the scores typically achieved in the quantitative reasoning test of the graduate record examinations (GRE) by US students from different ethnic groups applying for graduate school. In the physical sciences, a minimum score of 700 is required by many PhD programmes.



New York, NY (Apr 01, 2018):

<<As a critical step towards a more unbiased admissions process, but importantly, as a necessary step to ensure diversity in Graduate School representation, the Graduate School of Biomedical Sciences at the Icahn School of Medicine at Mount Sinai announced today, that it will join a growing group of schools by **“exiting the GRE” (#GRExit)**.>>



Working in **Partnership with the Office for Diversity and Inclusion** to identify and define the 2019-2020 strategic priorities for the GSBS in accordance to 4 Diversity, Inclusion, and Equity domains

Cultural Effectiveness and Education	Disparities and Clinical Outcomes	Engagement and Inclusion	Enhance Demographic Diversity	External Relationships
<p>Offer Unconscious Bias (UB) education to the Graduate School leadership team, program directors of PhD and Master's programs, postdocs, graduate students, and staff.</p> <p>Conduct an Iceberg Workshop for Systems Thinking with Grad School leadership (Identified by the Dean) and participate in an Iceberg workshop facilitated by Ann-Gel Palermo (ODI/MedEd) and Leona Hess (MedEd)</p>	<p>NA</p>	<p>Increase the number of UiSM student representatives on THAW and the Student Affairs Committee to ensure that all student voices are heard and needs are met.</p> <p>Strengthen the working relationship between SEOS and the Office of Student Affairs.</p> <p>Develop a community of support for our student who are first generation college students.</p>	<p>Partner with ODI/CMCA to advance recruitment and retention practices to ensure a diverse student and faculty body.</p>	<p>Determine partnership with postbac grad program with AMSNY</p> <p>Advance and expand partnerships with existing minority serving colleges and research universities: HBCUs, Hispanic Serving Institutions</p> <p>Conduct PREP Program Symposium</p> <p>Hold undergraduate and graduate research symposia aimed at UiS recruitment</p>

# New Partnerships: Meharry-Mount Sinai Research Scholars Program



- Collaboration on providing research opportunities to up to 3 selected advanced MMC graduate students per year through an 8-week summer research intensive study program at ISMMS.
- During this period, scholars will perform full-time research in laboratories at ISMMS. In addition to performing full-time research, scholars will engage with the broader ISMMS community in discussing cutting-edge research through participation in journal clubs and/or seminars.

# SinaiPRO

POSTDOCTORAL RESEARCH OPPORTUNITIES SYMPOSIUM

**JUNE 24, 2019 | NEW YORK, NY**

*Icahn School of Medicine at Mount Sinai, 1 Gustave L. Levy Place, New York, NY*



**CELEBRATING  
DIVERSITY IN SCIENCE**

**1<sup>st</sup> ANNUAL  
GRADUATE  
RESEARCH  
SYMPOSIUM**

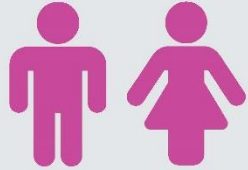
# Recruiting the Best and Brightest





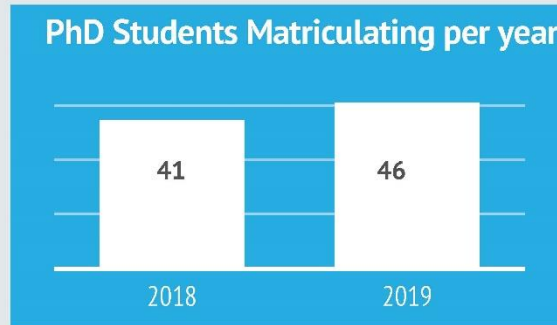
# 2019 – 2020 PHD MATRICULANTS

## ADMISSION & STUDENT STATS



46

Matriculating PhD Students



3.8

Median undergraduate GPA



>4,300

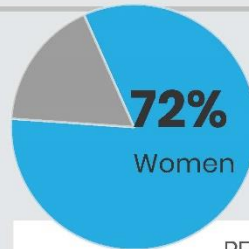
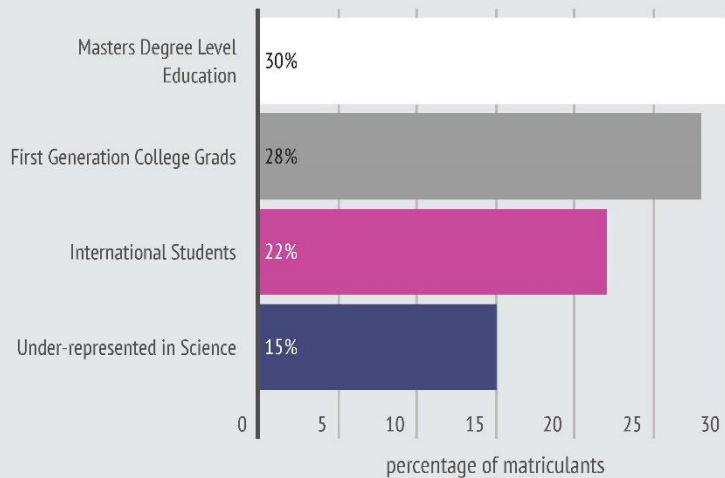
Hours of previous research experience



over 180

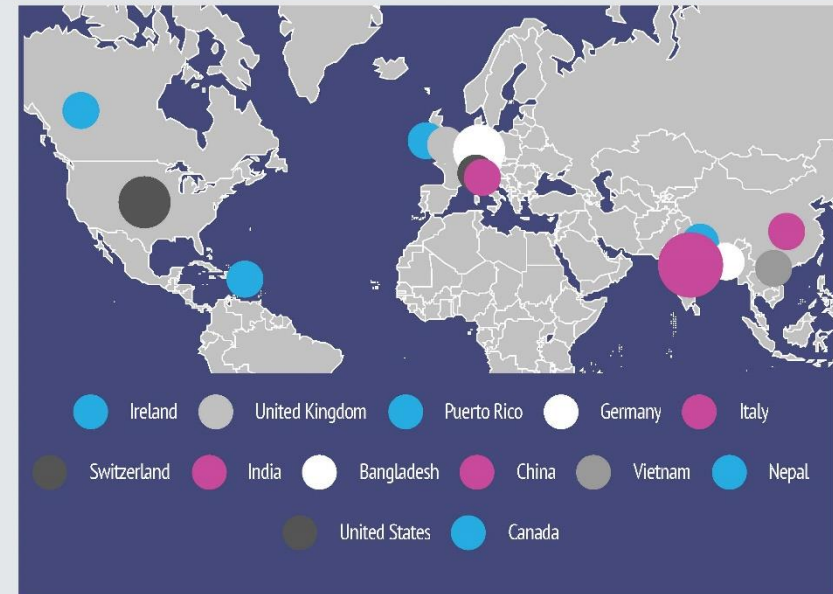
Published journal articles and abstracts

## STUDENT REPRESENTATION



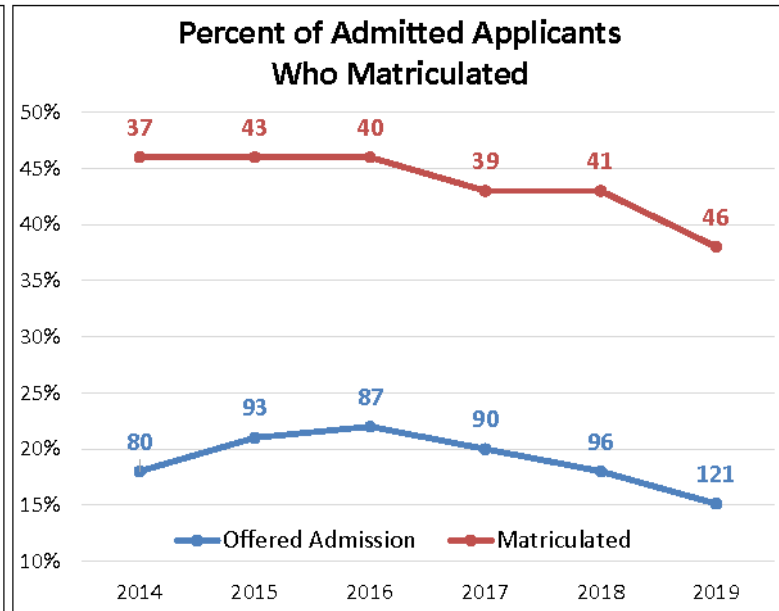
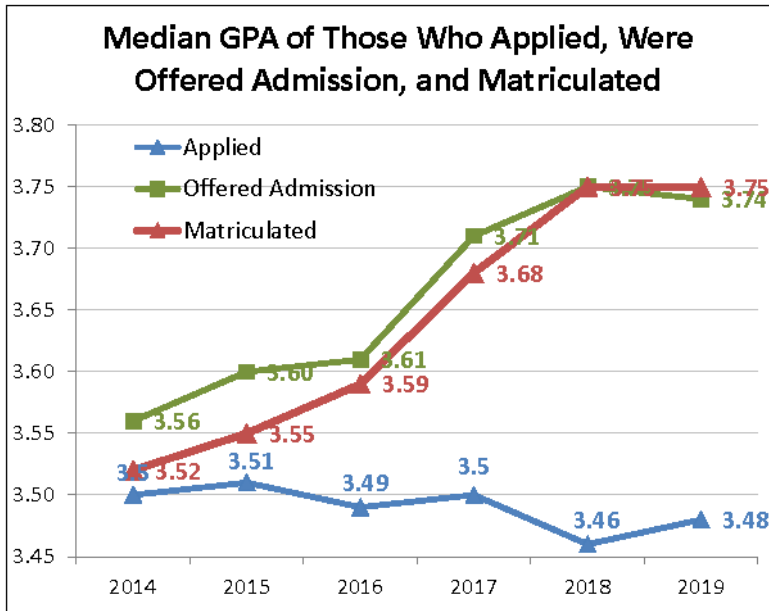
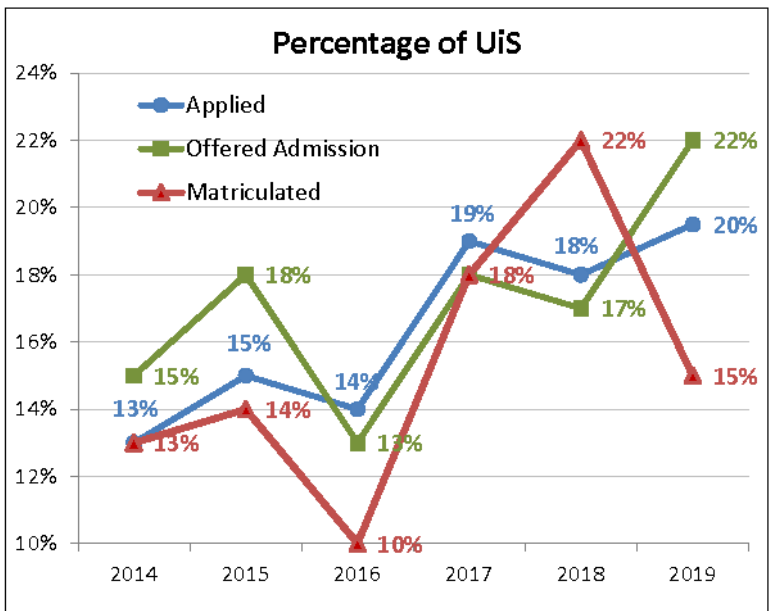
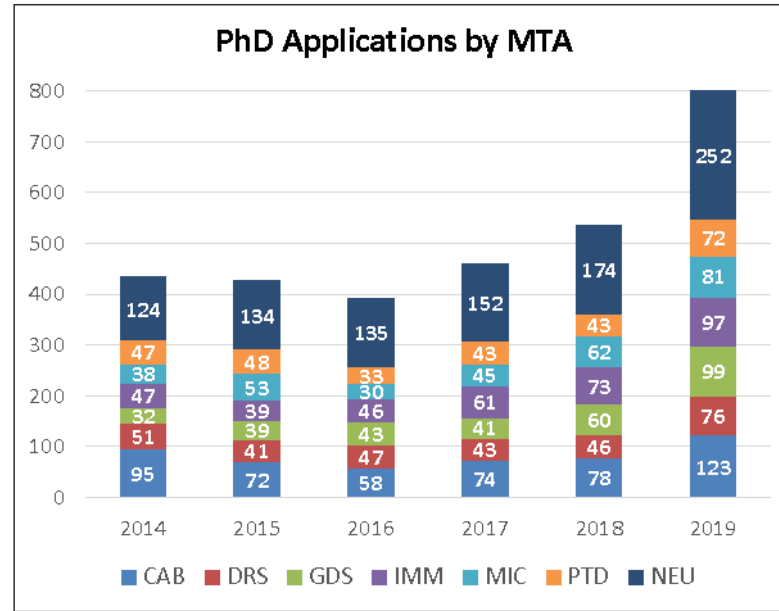
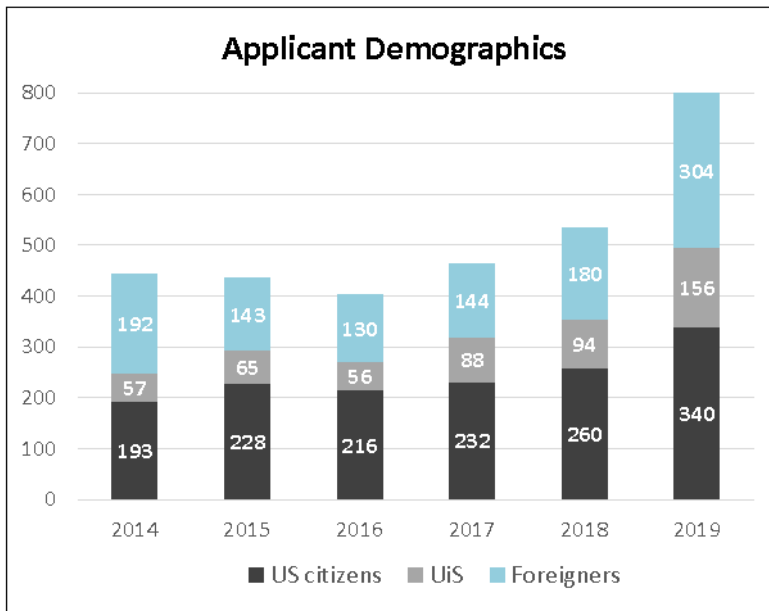
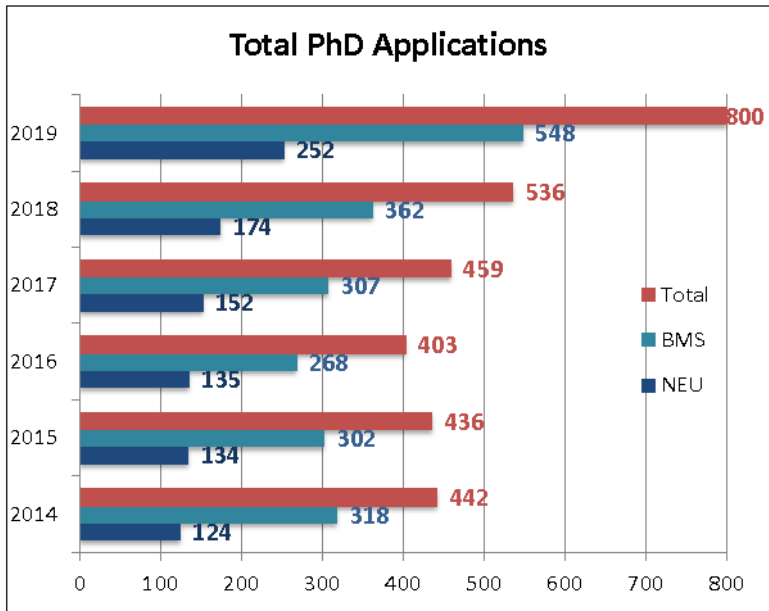
REPRESENTATIVE UNDERGRADUATE INSTITUTIONS

Harvey Mudd  
 Wellesley College  
 University of California  
 Columbia University  
 Duke University  
 Northeastern University  
 Smith College  
 Wesleyan



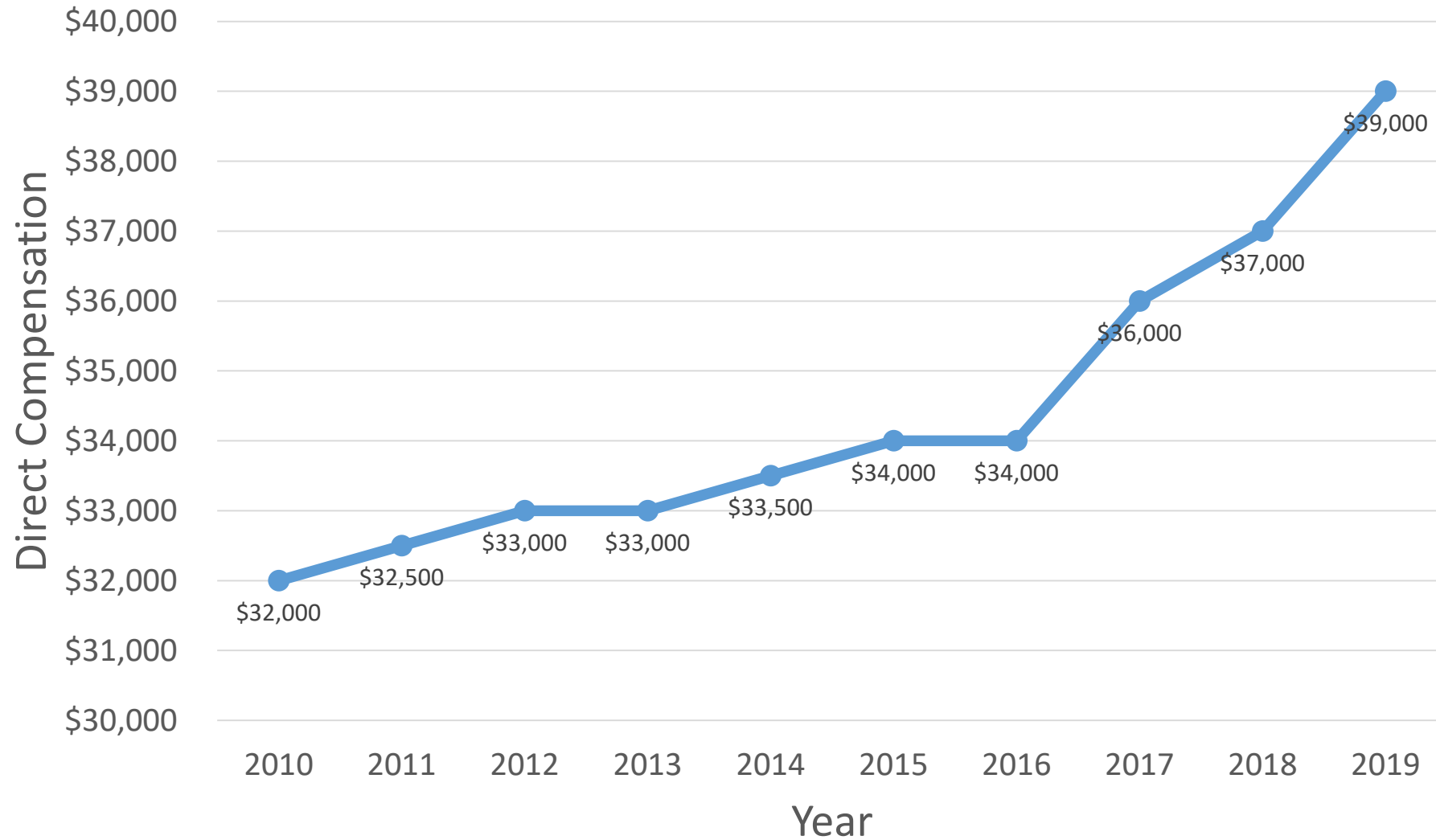
# Graduate School Dashboard

## PhD Programs in Biomedical Sciences and Neuroscience 2014 - 2019



# Enhancing Student and Trainee Support

# Direct Compensation Increases





# Remodeling





# GRADUATE SCHOOL STAFF



## **RANDI SCHWARTZ, MBA**

*Associate Dean for Administration*

Oversees Graduate School staff. Provides administrative oversight for day to day operations in areas such as finance, marketing, IT as well as academic programs.



## **OSEI TUTU**

*Senior Financial Analyst*

Responsible for financial operations including budget preparation and submissions, tuitions and fees information, check requests, fund transfers, purchase orders, employee reimbursements, stipends, transfers, reference letters, travel awards, teaching assistance. Handles payroll related issues.



## **THERESA SCARABINO**

*Program Manager, Office of Postdoctoral Affairs*

Manages postdoctoral new-hire process; Taleo Requisitions, Postdoctoral Orientation. Management of professional development, seminars, workshops, awards, listserv, surveys, exit interviews. Meets with postdocs at their request.



## **COLLEEN BALDINO**

*Program Coordinator II*

Assists with program management, recruitment efforts, admissions, marketing and events for MS in Biomedical Sciences and MS in Biomedical Data Sciences.



## **REWTIE OFFIN, M. ED.**

*Program Manager, PhD & MSBS Program*

Responsible for all aspects of PhD program and MSBS program including admissions, recruitment, orientation, and all daily program needs and events. Management & oversight of student milestones.



## **BIANCA TAYLOR, M.S.ED.**

*Program Manager, MD/PhD*

Manages many projects in support of the goals and objectives of the MD/PhD program. Oversee all recruitment and admissions efforts, provide student support, track milestones, manage NIH grant-related activities, plan MSTP retreat and other efforts.



## **ARJANA GJOKAJ**

*Program Coordinator, Support/Admissions*

Coordinates and assists with MD/PhD and PhD admissions; provide Blackboard/curriculum support to students, professors and staff, management of course evaluation; provide administrative support for SURP & PREP programs.



## **CAROL JOHNSON**

*Administrative Secretary*

Provides support and customer service at front desk; coordinates & schedules rooms for professors & doctors; assist project managers with events for MD/PhD, PhD & MSBS Programs. Submit Laboratory/Evaluation information to Empower.



## **ELLIE SCHMELZER, PHD**

*Director, Career Services & Strategy*

Designs & delivers programming, counsels graduate students and postdocs and implements new PhD graduation requirements.



## **ROLAND PINZON, MBA**

*Program Manager*

Assists with recruitment efforts for all programs, with a focus on MS in Biomedical Data Science. Responsible for coordinating all webinars, managing communication plans and attending off-campus recruitment events to promote the school and programs.



## **COURTNEY SCOTT, MPA**

*Marketing Coordinator*

Responsible for all marketing plans & projects within Grad School: advertising, social media, website management, print collateral, promotional items, newsletters, videos, photoshoots, etc., as well as event coordination.



## **SOPHIE MILLER**

*Supervisor of Technology & Learning Environments*

Develops streamlined and automated business processes for the Graduate School. Research, evaluates and implements systems design. Develops tools, techniques, and procedures for improving performance of system-related applications.

## The Icahn School of AVID COLLABORATORS at Mount Sinai >

This is not an ordinary education; this is an extraordinary life experience. Join us and change the world.

[Home](#) > [Education](#) > [The Graduate School](#)

[Share](#) [f](#) [t](#) [in](#) [e](#)

### The Graduate School

At the Graduate School of Biomedical Sciences, we are deeply invested in cultivating the next generation of scientists and health professionals who make a profound impact on human health, locally and globally. Uniquely positioned within the Icahn School of Medicine at Mount Sinai, and the expansive Mount Sinai Health System, we are a preeminent graduate school and research center known for transformative research and innovative education.

As a student at our Graduate School, you will work hand-in-hand with some of the nation's top researchers and join an ever-inquisitive community of scholars, who make strategic and meaningful connections between science, medicine, education, and health care delivery.

#### [▶ Graduate School Admissions Process](#)

The Graduate School of Biomedical Sciences offers numerous PhD programs, Master's degree programs, dual degree, specialty programs, and certification programs for your specialization. Research training opportunities are also offered for college undergraduate and post graduates. Learn how to apply to your program of choice.

#### [▶ About Us](#)

At the Graduate School of Biomedical Sciences, we prepare you with the critical thinking and innovative technical skills you need to become leaders and change-makers in the rapidly-evolving world of biomedical sciences, public health policy and health care, as well as for a variety other fields in which these skills are applied.

#### [▶ Our Programs](#)

We prepare our graduates for rewarding careers by offering a number of top-ranked PhD, Master's, Dual-Degree, and Specialty programs.

#### [▶ Training in Biomedical Innovation & Entrepreneurship](#)

The Graduate School of Biomedical Sciences offers a wide range of entrepreneurial and co-curricular learning opportunities for students wishing to pursue careers related to biomedical innovation and entrepreneurship.

#### [▶ Biomedical Data Science Initiative](#)

The Biomedical Data Science Initiative seeks to bridge research and educational endeavors in computing and big data analytics across various departments and institutes in order to pursue insights that will better the lives of patients and their families.

#### [▶ Office of Student Affairs](#)

[▶ Apply Now](#)

[▶ Find Faculty](#)

[▶ Request Information](#)

#### More In This Section

Select [v](#)

#### Contact Us

**The Graduate School of Biomedical Sciences**

Tel: 212-241-6546

[grads@mssm.edu](mailto:grads@mssm.edu)

[One Gustave L. Levy Place](#)

[Box 1022](#)

[New York, NY 10029](#)

**For application specific questions:**

Admissions Office

Tel: 212-241-6696

[admissions@mssm.edu](mailto:admissions@mssm.edu)

Graduate School  
Course Catalog





# Introduced New Ways to Celebrate PhD Achievements and Build Community



**PhD LAB COAT CEREMONY**

**September 9, 2019**

# Data

## FOR A STRONGER WORKFORCE

Our goal is to bring transparency to PhD and postdoctoral training in order to empower and inform training for the next generation of scientists around the world. Our members commit to collecting and publishing data using common standards on their life science training programs.

## COALITION MEMBERS COMMIT TO COLLECTING AND PUBLISHING DATA USING COMMON STANDARDS ON:

- Admissions and matriculation data of PhD students.
- Median time-to-degree and completion data for PhD programs.
- Demographics of PhD students and postdoctoral scholars by gender, underrepresented minority status, and citizenship status.
- Median time in postdoctoral status at the institution.
- Career outcomes for PhD and postdoctoral alumni, classified by job sector and career type using a common taxonomy.

## Coalition for Next Generation Life Science

The Graduate School of Biomedical Sciences at Icahn School of Medicine at Mount Sinai is a proud member of the [Coalition for Next Generation Life Science \(CNGLS\)](#). The Coalition is comprised of members committed to increasing transparency related to PhD and postdoctoral training in the life sciences. The goal of CNGLS is to empower and inform training for the next generation of scientists around the world. It provides data that allows you to make choices with full information.

The Graduate School of Biomedical Sciences is committed to bringing honesty and openness to data collected on our life science training programs. We work hard to make these data accessible to allow trainees to make informed decisions and improve life science training for PhD students and postdocs. The data also helps us to identify areas for improvement in our educational efforts.

Career outcomes data will be forthcoming.

### PhD Program Statistics

The Graduate School of Biomedical Sciences at the Icahn School of Medicine at Mount Sinai offers a PhD in Biomedical Sciences and Neuroscience. Within the Biomedical Sciences program, students choose a multidisciplinary training area (MTA) - Cancer Biology; Development, Regeneration, and Stem Cells; Genetics and Data Science; Immunology; Microbiology; and Pharmacology and Therapeutics Discovery. Our CNGLS data has been broken out by MTA to allow for a further in depth look into our program.

The Graduate School of Biomedical Sciences at Icahn School of Medicine at Mount Sinai is committed to providing PhD Program [statistics](#) annually as a member of the CNGLS. As part of our pledge, we are providing PhD program data on demographics of enrolled students (gender, citizenship status, race, and ethnicity), admissions, enrollment, matriculation, time-to-degree and completion rates.

A [tabular form](#) of our PhD Program Statistics is also available.

➤ [Apply Now](#)

➤ [Find A Faculty](#)

➤ [Request Information](#)

## The Graduate School

### Graduate School Admissions Process

#### ^ About Us

- [Quick Facts](#)
- [Message from the Dean](#)
- [Graduate School Leadership](#)
- [Program Directors](#)

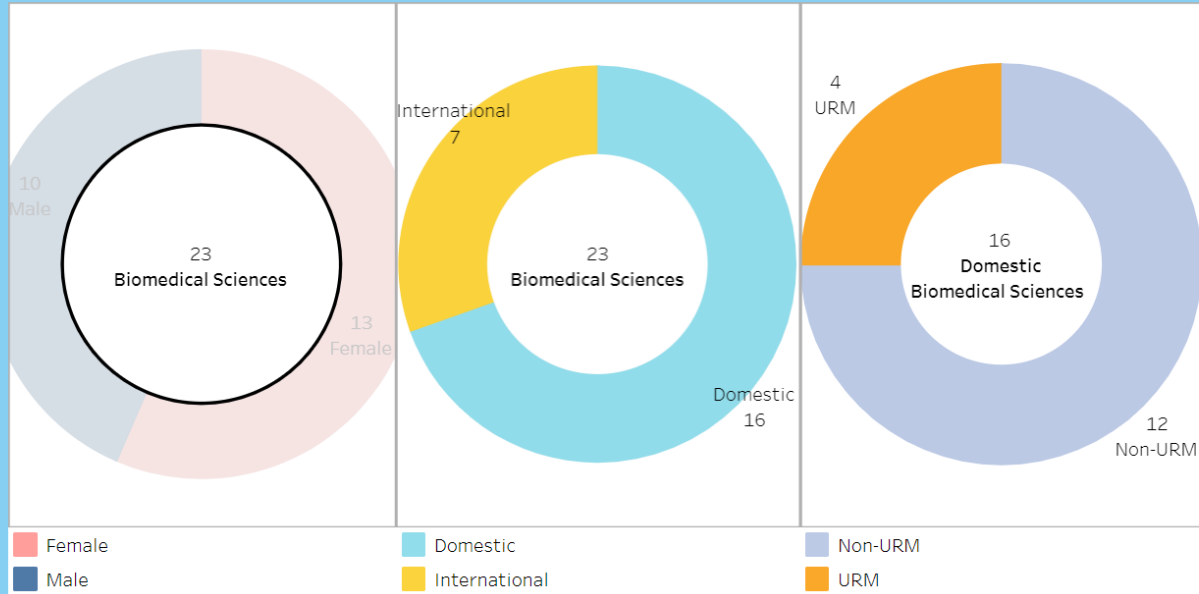
• [Coalition for Next Generation Life Science](#)



## Enrollment Fall 2018

PhD Program

Biomedical Sciences

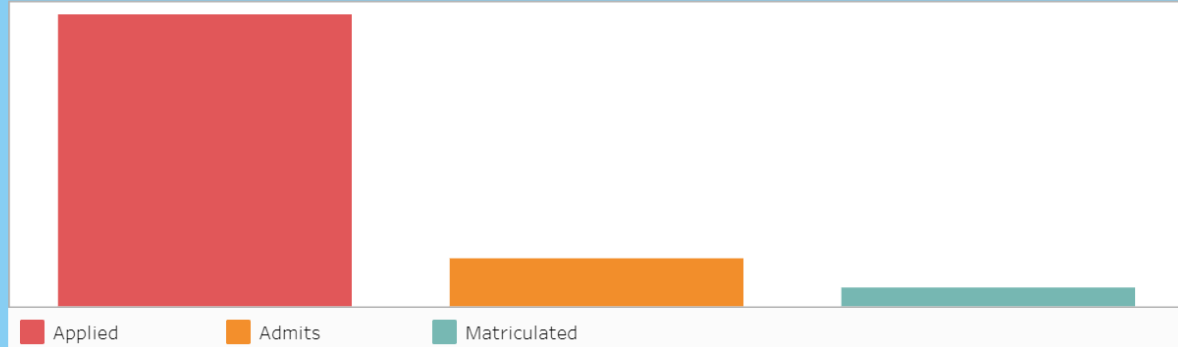


## Admissions

PhD Program Biomedical Sciences

Year 2018

Fall 2018: Biomedical Sciences



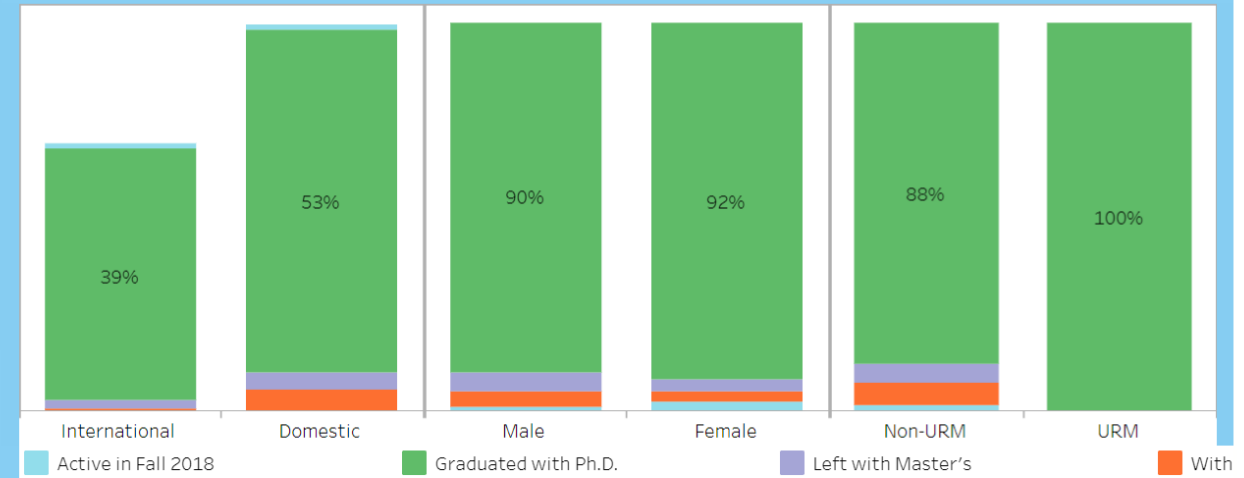
Multidisciplinary Training Area

(All)

Entry Cohort

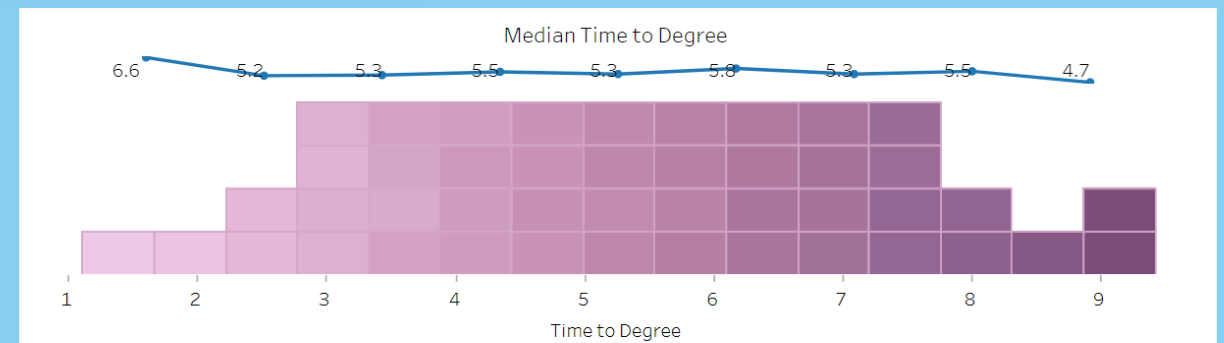
(All)

## Completion & Attrition

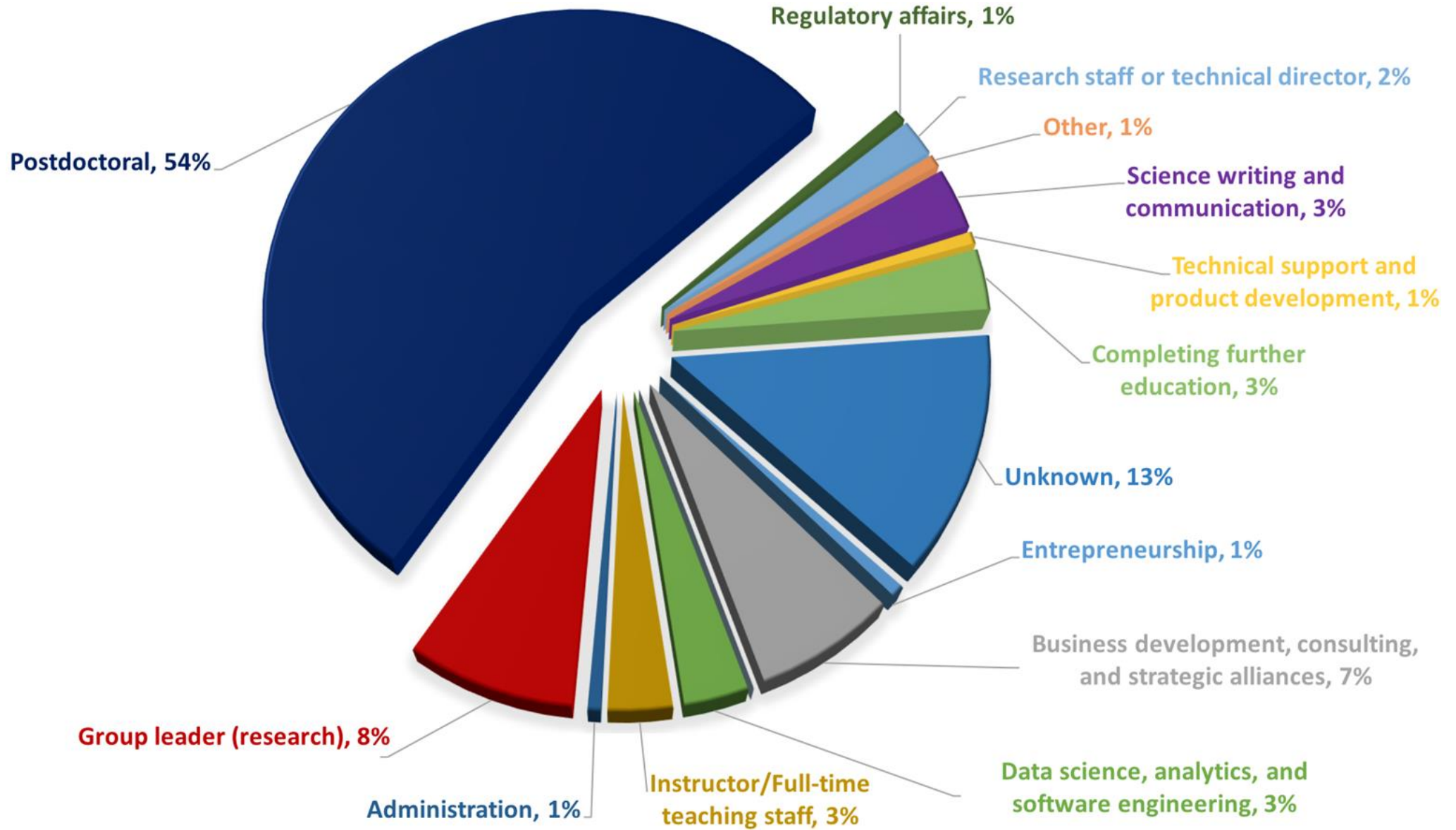


## Time-to-Degree (TTD)

Entry Cohort (All)

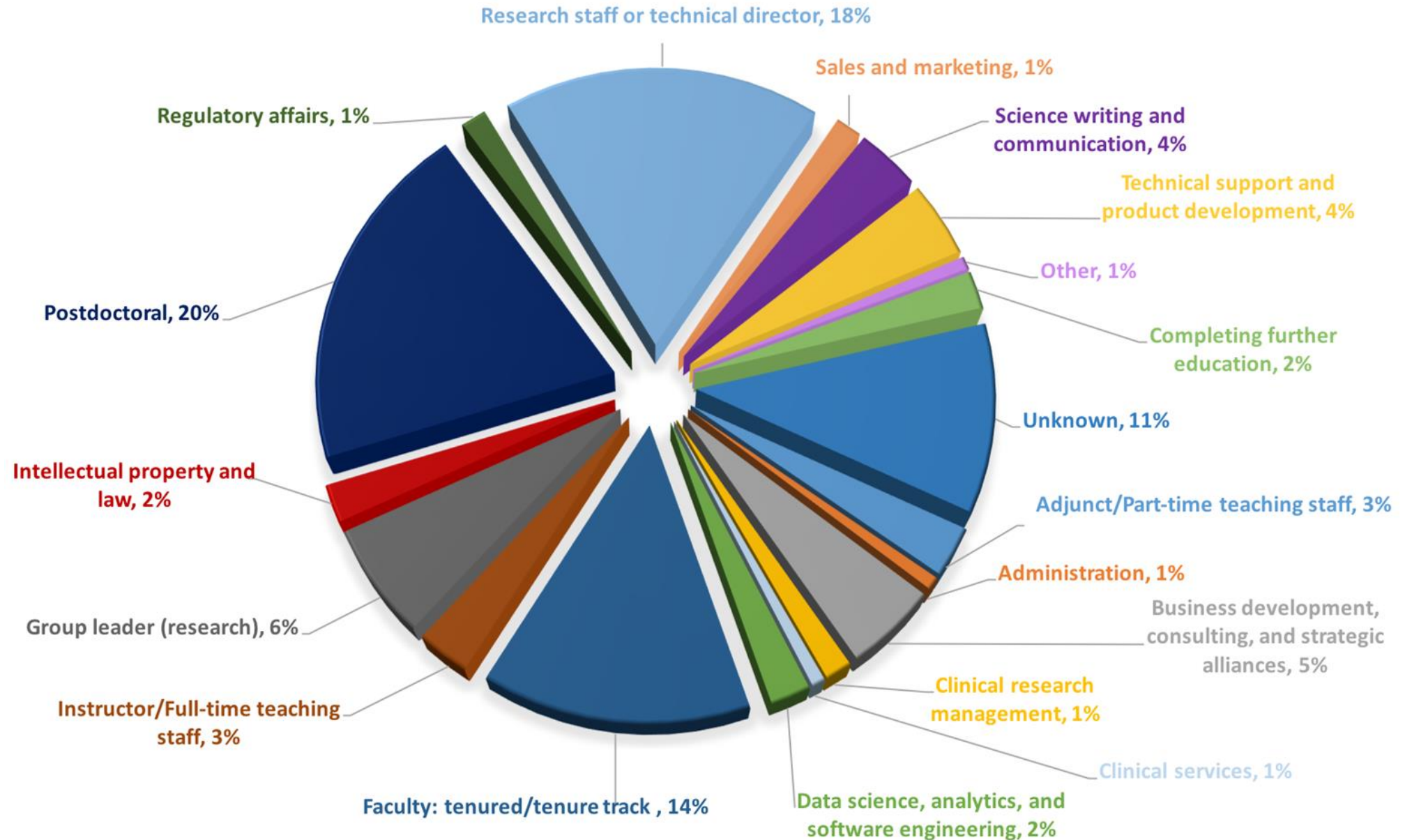


# Our Alumni – First Destination



PhD students graduated in 2013-2018; N=156

# Our Alumni – Five Years Out



PhD students graduated in 2008-2013; N=141

# Committed to Students Well-Being



## Office of Well-Being and Resilience

[Jonathan A. Ripp, MD, MPH](#)

Chief Wellness Officer

Senior Associate Dean for Well-Being and Resilience

[Lauren Peccoralo, MD, MPH](#)

Associate Dean for Faculty Well-Being and Resilience

[Basil Hanss, PhD](#)

Associate Dean for Graduate School Well-Being and Resilience

[Alicia Hurtado, MD](#)

Associate Dean for Undergraduate Medical Education (UME) Well-Being and Resilience

[Saadia Akhtar, MD](#)

Associate Dean for Graduate Medical Education (GME)  
Well-Being and Resilience

[Anu Anandaraja, MD, MPH](#)

Director, Office of Well-Being and Resilience

[Craig Katz, MD](#)

Mental Health Advisor, Office of Well-Being and Resilience

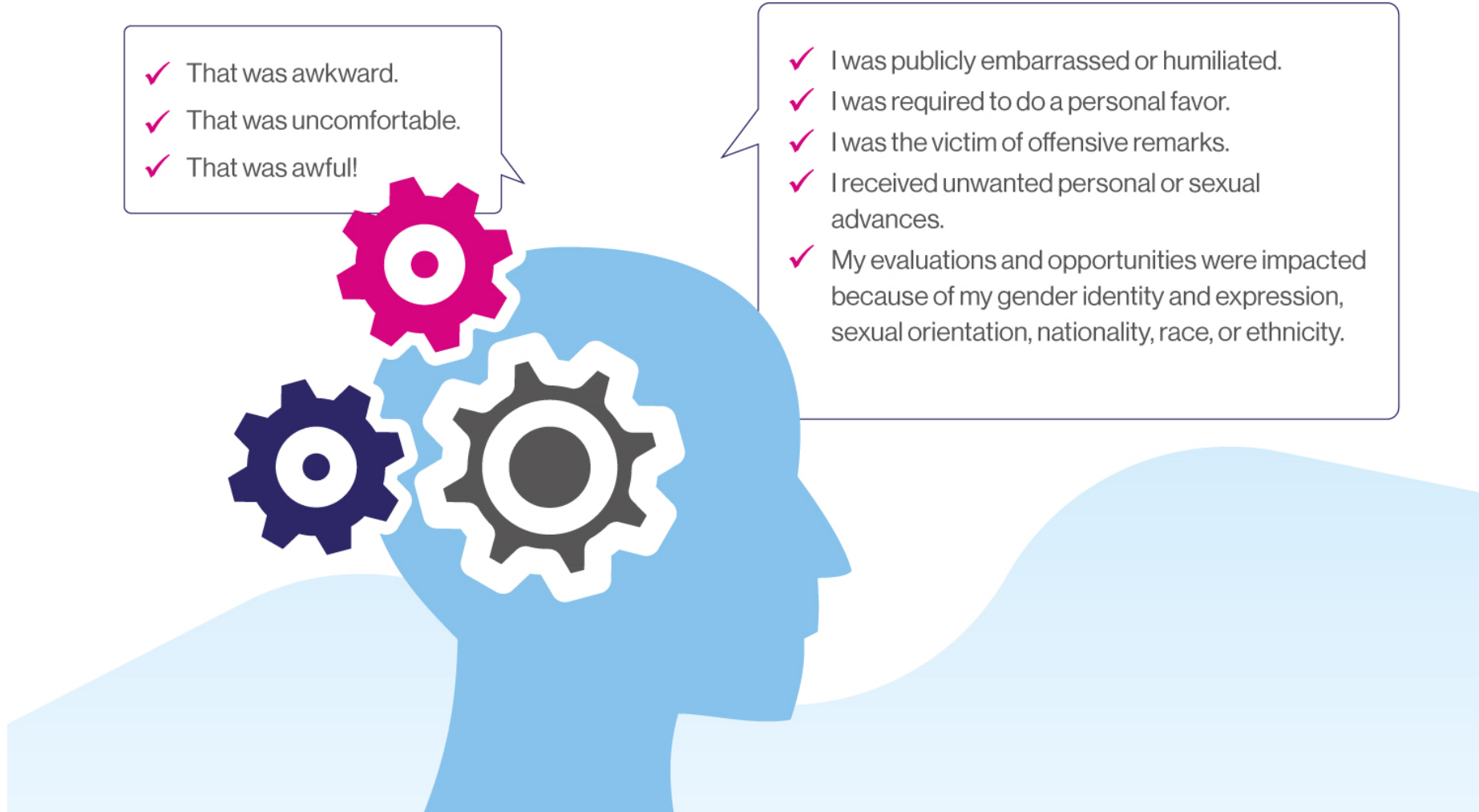


# Mistreatment Policy and Reporting

Everyone at ISMMS deserves to experience a learning and working environment that is respectful, dignified, inclusive, and supportive. We are committed to creating a community that is free of mistreatment, abuse, coercion, and fear of retaliation.

- ✓ That was awkward.
- ✓ That was uncomfortable.
- ✓ That was awful!

- ✓ I was publicly embarrassed or humiliated.
- ✓ I was required to do a personal favor.
- ✓ I was the victim of offensive remarks.
- ✓ I received unwanted personal or sexual advances.
- ✓ My evaluations and opportunities were impacted because of my gender identity and expression, sexual orientation, nationality, race, or ethnicity.





# Revamped Graduate School Steering Committee (GSSC)

Chair: Robert Krauss

Members: James Manfredi, Eric Sobie, Jeremiah Faith, George Huntley, Marty Walsh, Sander Houten, Brad Rosenberg, Jim Duehr (PhD rep), Ali Keenan (MD/PhD rep), Ashley Humphries (postdocs rep)

Issues resolved with the GSSC:

- Exit pathway for PhD programs – MS or MPhil degree depending on scientific status
- Duration of PhD program – 7 years max, no change of lab after 5 years
- PhD theses: Clarifications on formatting and copyright issues + templates
- New Student progress report/advisory committee forms

# THANK YOU!



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