

# Touro Scholar

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GSBMS Dean's Report

NYMC Publications

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Spring 2024

## Dean's Report-Spring 2024

Marina K. Holz

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**Dear students,  
faculty, staff, alumni,  
and friends:**

Spring is a busy season for the GSBMS when we reap the rewards of hard work in previous semesters. The research accomplishments of our graduate students are featured in the 35th Graduate Student Research Forum. At the 165th Commencement for NYMC and the GSBMS hooding and awards ceremony, we will celebrate the achievements of our M.S. and Ph.D. graduates. We pride ourselves in training our future researchers, scientists and health professionals, and we look forward to recognizing and celebrating our students' successes.

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## Dr. Holz named 2024 Fellow of the ASBMB

**Marina K. Holz, Ph.D., M.P.H.'23**, GSBMS dean and professor of cell biology and anatomy, has been named the 2024 fellow of the American Society for Biochemistry and Molecular Biology (ASBMB). Fellows of the ASBMB are recognized for their outstanding commitment and participation in the Society as well as accomplishments in research, education, mentorship, diversity and inclusion, advocacy, and service to the scientific community. [Read about ASBMB 2024 fellows.](#)

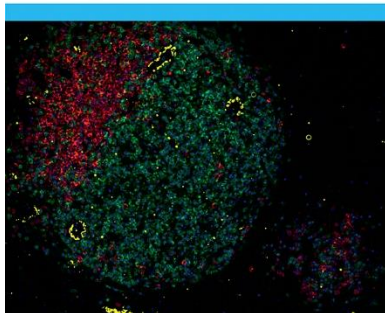


**BBA**  
Biochimica et Biophysica Acta

## Dr. Holz Appointed Chief Editor

### Reviews on Cancer

ISSN 0304-419X  
Volume 1879, Issue 1, January 2024



Marina K. Holz, Ph.D., M.P.H. '23, GSBMS dean, professor of cell biology and anatomy, and interim chair of biochemistry and molecular biology was appointed executive editor of [Biochimica et Biophysica Acta \(BBA\) - Reviews on Cancer.](#)

## Scholarship Awards for GSBMS Master's Students

The newly founded [Women's Institute for Science Entrepreneurship \(WISE\)](#), established through a federal grant, offers unique opportunities to women college students to leverage their education in STEM fields to explore new scientific concepts and launch new businesses. Five scholarships were awarded for the first time this past summer. Marina K. Holz, Ph.D., M.P.H '23, GSBMS dean, has recently awarded two more WISE scholarships to M.S. students who show dedicated interest in women-centered entrepreneurship in the field of biomedical sciences. The latest WISE Scholarship winners are Catherine Haralam and Ariana Sullivan.



### Catherine Haralam

"This scholarship will help me in the pursuit of an education in medicine and one day empower other women interested in making the same advancements in the field."



### Ariana Sullivan

"This scholarship will benefit me by allowing me to reach my higher education goals as a woman of color in hopes to inspire other women like me to defy the odds and do the same."





## **GSBMS Pens Conditional Admittance and Guaranteed Interview Agreements with TUCOM**

The GSBMS has recently entered into new benchmark agreements with Touro University California College of Osteopathic Medicine (TUCOM) for GSBMS Students. GSBMS students in select master's programs who seek admission to TUCOM will be guaranteed an interview or

offered the opportunity to enter into a conditional admittance agreement if they meet certain academic benchmarks.

Conditional admittance and guaranteed interview agreements are in place with several of our affiliate institutions for accelerated (AMP) and two-year master's program students. This year, more than half of current AMP students have taken advantage of these agreements with NYMC SOM. Benchmark-Conditional Admittance and/or Guaranteed Interview Agreement are offered for:

New York Medical College School of Medicine

Touro College of Dental Medicine

New York College of Podiatric Medicine

Touro College of Osteopathic Medicine, New York

Touro University California College of Osteopathic Medicine

Touro College School of Health Sciences, New York, Physician Assistant Program

[See our website's "Guaranteed Interviews" page](#) for details on all available opportunities.



## The 35th Annual Graduate Student Research Forum

The 35th Annual Graduate Student Research Forum is a celebration of the exciting and substantial research conducted by the master's and Ph.D. students at the GSBMS. This event gives students the opportunity to present to colleagues, faculty, staff and other members of the scientific community in the tri-state area. The forum took place on March 22 in the Nevins Auditorium featuring keynote speaker, Ulrich Steidl, M.D., Ph.D., the Edward P. Evans Endowed Professor for

Myelodysplastic Syndromes, deputy director, and associate director for basic science at the Montefiore Einstein Comprehensive Cancer Center, and co-director of the Blood Cancer Institute; along with Dorina Krasniqi, first-year IPP student, serving as master of ceremonies. The Forum, coordinated by the Graduate Student Association, provides students the opportunity to present and share their research, engage with the NYMC community through oral presentations and a poster session.



"The Forum is a celebration of the scientific accomplishments conducted here at the College," said Marina K. Holz, Ph.D., dean of the GSBMS, professor of cell biology and anatomy, interim chair of the Department of Biochemistry and Molecular Biology, and director of Women's Institute for Science Entrepreneurship. "Our students collaboratively engage in many scientific investigations that range from unraveling physiological responses of cells and organisms to understanding novel strategies to combat human diseases. The collective work presented at the Forum represents months and years of painstaking research and study conducted in a coordinated fashion with the student's mentor, colleagues, as well as the technical staff within their respective laboratories and departments. [Read the full article](#) on the 35th Annual Graduate Student Research Forum and [view the photo gallery](#).

## Dr. Victor Garcia Empowers the Next Generation of Scientists



This summer, **Victor G. Garcia, Ph.D. '15**, assistant professor of pharmacology, opened his lab to 15 students, providing them with a unique opportunity to embark on a journey of discovery. [Read the full story on Dr. Garcia](#) and [view the YouTube video](#) on Dr. Garcia's lab.

## Grant News

**Chandra Bakshi, D.V.M., Ph.D.**, professor of pathology, microbiology, and immunology, received a \$110,311 grant from Veralox Therapeutics for "Development of New Inhibitors to Treat Inflammatory Damage of COVID-19."



**Mitchell Cairo, M.D.**, professor of pediatrics, cell biology and anatomy, medicine, and of pathology, microbiology, and immunology, received a \$250,000 grant from Alex's Lemonade Stand Foundation for "Circumventing Pediatric Solid Tumor Microenvironment Resistance by Combinatorial CAR NK and Immunomodulating Therapy" and a \$195,000 grant from Janssen for "NYMC-598, A Phase II Trial of Targeted Immunotherapy with Daratumumab Following Myeloablative Total Body Irritation (TBI)-Based Conditioning and Allogeneic Hematopoietic Cell Transplantation in Children, Adolescents and Young Adults with High-Risk T-Cell Acute Lymphoblastic Leukemia and Lymphoma (T ALL/TLLy) (ALLO-T-DART) (NCT05972942)."  
[Dr. Mitchell Cairo Awarded \\$2.6 Million Grant from Department of Defense for Pediatric Cancer Research](#)

**Abdelfattah El Ouaamari, Ph.D.**, associate professor of cell biology and anatomy and of pharmacology, received a \$475,273 grant from the NIH for "Sensory Neuromodulation of Pancreatic Beta Cells."

**Nicholas Ferrari, Ph.D.**, professor of pharmacology, received \$105,585 in grants from NIH for "Regulation of NKCC2 Isoforms and Blood Pressure by Tumor Necrosis Factor-alpha."

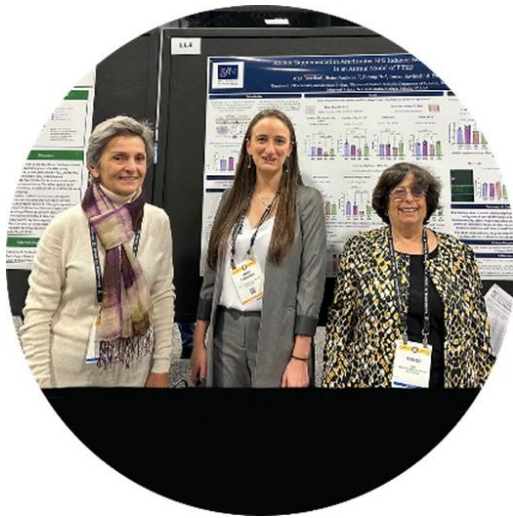
**Kristina Harris-Petersen, Ph.D.**, associate professor of biochemistry and molecular biology, received a \$5,000 grant from Altus Assessments/Acuity Insights for "Do Accommodated and Non-Accommodated US-Medical Student Applicants Perform Comparably Across Admission Metrics?"

**Patric K. Stanton, Ph.D.**, professor of cell biology and anatomy and of neurology, received a \$50,294 Innovative Intramural Research Grant from Touro University/Lovelace Biomedical Research Institute for "Photobiomodulation Therapy as a New Noninvasive Treatment to Enhance Brain Repair after Traumatic Brain Injury."



**Libor Velisek, M.D., Ph.D.**, professor of cell biology and anatomy, pediatrics, and of neurology, received a \$12,219 grant from Emerald Gate Trust for "Processing Biofield-Exposed Mouse EEG."

## Dr. Sabban and Ph.D. Candidates Present Research at Society for Neuroscience



**Esther L. Sabban, Ph.D.**, right, professor of biochemistry and molecular biology and the Sidney E. Frank Distinguished Professor of Psychiatry and Behavioral Sciences, **Arax Tanelian**, center, Ph.D. candidate, and **Bistra Nankova, Ph.D.**, left associate professor of pediatrics, participated in the annual Meeting of the Society for Neuroscience in Washington D.C. on November 11-15. They presented "Therapeutic Potential of Acetate Supplementation in Mitigating Traumatic Stress-Induced

Impairments in Male Rats." See the story in the Faculty Feature section below for more about Dr. Sabban's career at NYMC.

## The NYMC 165th Commencement

### Graduate School of Biomedical Sciences

The GSBMS is making preparations and is looking forward to the upcoming commencement celebrations! The commencement and awards ceremonies will take place on Thursday, May 23, 2024, on the NYMC campus under a canopy by the Alumni House from 2:00-4:00 p.m..

The speaker for the GSBMS ceremony will be Brooke Grindlinger, Ph.D., chief scientific officer, New York Academy of Sciences.

Jerry L. Nadler, M.D., MACP, FAHA, FACE, former dean of the School of Medicine, is to be awarded the degree, Doctor of Science *honoris causa* at this year's ceremony.

[Read more about Dr. Nadler.](#)

Commencement activities will take place on campus and are by invitation only.



## Meet Tanishka Wiggins, First GSBMS Wellness Ambassador for Student Mental Health and Well-Being



Tanishka Wiggins, M.S. Class of 2025, has been appointed as a wellness ambassador for the GSBMS. Wiggins graduated from the University at Albany with a degree in biology and is pursuing her dream of becoming a physician. Although currently interested in anesthesiology, she plans to keep all options open once accepted into the School of Medicine.

Wiggins decided to join the Wellness Ambassador Program because it provides her with an excellent opportunity to connect with her peers, while also promoting awareness about the significance of taking care of one's mental health. As a wellness ambassador, she hopes to encourage students to be open about their emotions and not be afraid to talk to someone who understands the stress that comes with a rigorous academic program.

Wiggins would like GSBMS students to know, "I can be found around campus most of the time, whether it's in the library or the cafeteria. Please do not hesitate to contact me if you need someone to talk to, as I am always happy to lend a listening ear!"

[Read more about the Wellness Ambassador Program](#)

## FACULTY FEATURE

### **Esther L. Sabban, Ph.D., More Than 40 Years of Excellence in Research and Education at NYMC and Counting**



**Esther L. Sabban, Ph.D.,** professor of biochemistry and molecular biology and of psychiatry and behavioral sciences and Sidney E. Frank Distinguished Professor of Psychiatry and Behavioral Sciences, has served NYMC's GSBMS for 40 distinguished years and counting. She is a past president of the Catecholamine Society and recent secretary-general of the International Regulatory Peptide Society. Dr. Sabban is both a teacher and mentor to M.S., M.D., D.D.S., and Ph.D. students. Fourteen graduate students have completed their research in Dr. Sabban's laboratory, including two M.D./Ph.D. students who completed their doctoral research in her lab.

Dr. Sabban earned her bachelor's and master's degrees with honors in biochemistry from Hebrew University in Jerusalem, Israel, and her Ph.D. in biochemistry at New York University. Dr. Sabban joined the Department of Biochemistry and Molecular Biology as assistant professor in 1983. She has been a full professor since 1991 and has spent the better part of her 40-year career studying the molecular underpinnings of susceptibility and resilience to stress, particularly post-traumatic stress disorder (PTSD). With the support of the Sidney E. Frank Distinguished Professorship of Psychiatry and Behavioral Sciences' \$5 million endowment, she is working to translate her findings into tools that can help people.

Current research includes preclinical studies on prophylactic, early intervention or treatment of PTSD in the single prolonged stress, animals PTSD model. "We were the first to provide proof of concept that intranasal delivery to the brain of neuropeptide Y or melanocortin 4 receptor antagonists prevented the development of many of PTSD- associated impairments. The molecular, behavioral and neuroendocrine effects of traumatic stress, with and without their intranasal delivery to the brain, are being investigated, with a focus on key brain regions involved in mediating the stress response such as the noradrenergic center in the locus coeruleus, the hypothalamus, hippocampus, amygdala, and prefrontal cortex."

Recently, her research has investigated the bidirectional relationship between the gut microbiome and resilience or susceptibility to traumatic stress-triggered PTSD-associated impairments. This may help identify useful biomarkers for the risk of the development of PTSD. Moreover, oral supplementation with metabolites of gut bacteria, such as acetate, enhanced resilience.

Ideally, such tools would allow clinicians to identify individuals who are resilient or susceptible to PTSD and inform the development of pharmaceutical interventions to prevent or treat its resulting cascade of harmful health effects. "Our research aims to not only increase resilience and alleviate symptoms of traumatic stress but also lead to clinical interventions that can reduce the long-term consequences of severe stress," Dr. Sabban says.

[Read more about Dr. Sabban's research on stress.](#)



## STUDENT FEATURE



### **AMP Student Anaz Uddin, SOM Class of 2025, Credits the AMP for Setting the Stage for Prolific Medical School Research**

Anaz Uddin, former Accelerated Masters Program (AMP) and current M3 student has already made his mark in research, participating in 40 research projects

and co-authoring 12 publications.

With a background in engineering, Uddin has served as a meta-analysis statistics specialist on many projects in the Department of Neurosurgery. He credits the support of his faculty mentors and investigative collaborators, which include NYMC faculty, students, and alumni, for his prolific research outcomes.

Students in the AMP take select pre-clinical medical school courses alongside first-year NYMC School of Medicine (SOM) students. This advanced exposure gives students who progress into the SOM a higher level of confidence in their first year to devote time to investigating their interests in clinical and research areas. Such was the experience of Uddin, who also serves as 2nd Lieutenant in the U.S. Army.

As a current medical student, Uddin was able to reflect on his time during the Accelerated Masters Program. "The AMP was great in helping me switch careers from engineering to medicine. The preparation I received put me ahead of my class during my first year in medical school, which subsequently gave me the time to find mentors like Dr. Al-Mufti and perform research. The AMP provided me with a solid foundation to excel in M1 and the free time during M1 to spend on research. Also, I didn't fall behind when I had to go to army training in the summer between M1-M2 while my peers were doing summer research because I had so much research frontloaded during M1."

[Read more about Anaz's research experience.](#)

# GSBMS Facts and Figures

**185** STUDENTS  
(As of Fall 2023)

## Academic Programs:

- M.S. Interdisciplinary Biomedical Sciences (General 2-year and Accelerated)
- M.S. and Ph.D. in Biochemistry and Molecular Biology
- M.S. and Ph.D. in Cell Biology
- M.S. and Ph.D. in Microbiology and Immunology
- M.S. and Ph.D. in Pathology
- M.S. and Ph.D. in Pharmacology
- M.S. and Ph.D. in Physiology
- Biomedical Science and Management (BSM) Master's in six disciplines
- M.S. in Clinical Laboratory Sciences
- Dual degree program — M.D./Ph.D. with the NYMC School of Medicine

**\$1,280**  
TUITION PER CREDIT



CAMPUS SIZE **54** ACRES



**~ 126,000**  
square feet

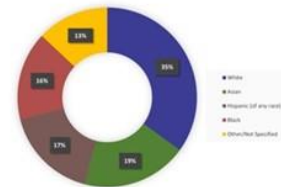


**96** FACULTY MEMBERS

**65% FEMALE**  
**35% MALE**

## GSBMS Diversity Numbers:

- 34% of GSBMS students self-reported as group currently underrepresented in the science
- GSBMS students self-reported as members of the groups:



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