

Spring 2020

Dean's Report - Spring 2020

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New York Medical College

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Marina K. Holz, Ph.D.

For many, this is a time of uncertainty and confusion over what the future holds. Educational institutions across the country are pondering how current circumstances will affect the well-laid plans for our students' education and careers. The importance of training our future researchers, scientists and medical professionals has never been more evident than it is now. We would like to reassure you that despite the restrictions that have been put into place to contain the spread of COVID-19, here at New York Medical College (NYMC) we have risen to the challenge and continue to offer our students high quality education. Through online classes and advisory sessions, we are keeping our students on track in their educational pursuits. Our dedicated faculty are connecting with our students, teaching and advising as they always have, while faithfully adhering to the rules and guidelines that will help to keep our community safe and bring this crisis to an end as soon as possible. When this crisis comes to an end, we will be here, stronger than ever, ready to resume our traditional instruction after the restrictions are over. In the meantime, we will ensure that our students, current and future, will remain on course and will not suffer a setback in their educational plans and professional futures.

Marina K. Holz, Ph.D.
Dean of the Graduate School of Basic Medical Sciences
Professor of Cell Biology and Anatomy

New, Redesigned Master of Science Program

The Graduate School of Basic Medical Sciences (GSBMS) is proud to announce the implementation of an updated and redesigned structure for our Master's programs in Biochemistry and Molecular Biology, Cell Biology and Anatomy, Microbiology and Immunology, Pathology, Pharmacology, Physiology, and Basic Medical Sciences for the upcoming 2020-2021 academic year.

This innovative structure will allow all students to be exposed to interdisciplinary topics that are molecular, cellular and systems based. The core portion of the program will provide students with the flexibility to focus in a concentration area of their choice, while providing a rigorous curriculum that is well-suited for those who wish to pursue doctoral and post-graduate programs, such as medical school.

The addition of seminar-based courses will promote students' proficiency in critically analyzing the scientific literature and effectively communicating their understanding of research data relative to foundational core concepts. Students who desire to enter a research-based career will have the option to conduct research electives or to enter a research track.

More than ever, the graduates of our Master's programs will be well prepared for their choice of careers whether in academia, research, industry, or any of the health professions.



Biomedical Science and Management Program

Program Director: Dana G. Mordue, Ph.D.

The goal of the Biomedical Science and Management (BSM) program is to provide students with a strong basis in their scientific discipline coupled with professional knowledge and skills that will allow them to successfully practice science within the professional, business world. This Professional Science Master's program is available to students as a separate academic track within each of our six discipline-based basic medical science Master's programs: biochemistry and molecular biology, cell biology, microbiology and immunology, pathology, pharmacology and physiology.

This track incorporates new strategies for preparing students by including: (1) course work related to business, management, communication skills, regulatory affairs and other topics important to career success but not specifically related to the scientific content of the chosen discipline and (2) an internship experience that will provide practical, hands-on exposure to career opportunities in the pharmaceutical, biotechnology or health care industries or related placements in the private sector.

An information session on the BSM Program was held on February 10, 2020, with attendees from the tri-state area including several from Fordham University. Dana G. Mordue, Ph.D. presented detailed information about the specifics of the program to the group, followed by a robust Q&A session on the BSM and other graduate school programs with questions fielded by Dr. Mordue, presented and members of the Admissions Office.

Applications for fall 2020 are open until June 15.

Accelerated Master's Program

Program Director: Brian Ratliff, Ph.D.

Applications are rolling in for admission in the highly competitive Accelerated Master's Program's Class of 2021. Students in this program are preparing for application to medical school and have the opportunity to build their qualifications and prove themselves ready, while earning a Master's degree in the basic medical sciences in just one year. Applicants for the Accelerated Master's program are required to have taken the MCAT and show aptitude and proven dedication to a career in medicine. One of the most attractive features of this program is that our AMP students take classes alongside our first-year medical students, proving to themselves and to the medical school admissions committees that they are qualified. Our Master's students enjoy a guaranteed interview agreement with our School of Medicine if they meet MCAT and GPA thresholds. Many of our Class of 2020 students have already been invited to medical school interviews thanks in part to their hard work and success in the AMP.

Applications to this program are being accepted until June 15, 2020. Due to COVID-19 testing delays, MCAT test scores are no longer required from applicants who have not yet taken the exam, however, it is recommended that those applicants submit a timed, practice test score with documentation in order to make their application more competitive. Students who have taken the MCAT are still required to submit their test scores.

Clinical Laboratory Sciences Program

Program Director: Carol Carbonaro, Ph.D.

The GSBMS' newest master's program, the Clinical Laboratory Sciences Program is well underway, at more than halfway through its first year. Our students have been working in area hospitals, receiving clinical laboratory training during the day and receiving their didactic work at NYMC through evening classes. This innovative, new program is training clinical laboratory scientists (CLS) qualified to work in medical or industrial/pharmaceutical laboratories. A clinical laboratory scientist is at the heart of clinical care, performing diagnostic tests which monitor treatments and uncover new disease states. They continuously communicate with physicians to provide improved patient care and treatment outcomes. Training for CLS encompasses all areas of clinical laboratory testing: chemistry, toxicology, hematology, urinalysis, immunohematology, hemostasis, diagnostic immunology, clinical microbiology, histocompatibility and molecular diagnostics. Students are instructed on state-of-the-art instrumentation and digital technology. Recent, new arrangements have expanded our training locations to additional area hospitals.

The knowledge obtained in our intensive one-year classroom and hospital laboratory internship will qualify the student to take the New York State licensure exam. The program is currently pending accreditation by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Applications for Fall 2020 are open with a new extended deadline of May 15.

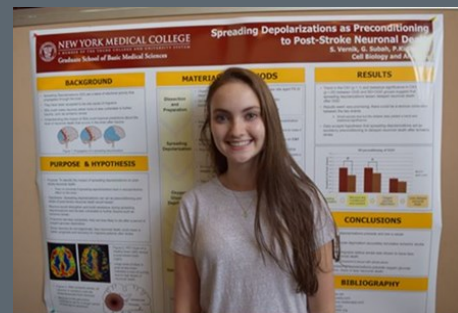
New Articulation Agreement with Manhattanville College



We are pleased to announce a newly established articulation agreement with Manhattanville College, Purchase, New York. This agreement will allow Manhattanville seniors who are interested in pursuing a career in the biomedical sciences and health professions and who meet established criteria, to enroll as visiting students in a limited number of classes in the GSBMS. Students will be recommended by their professors and their credentials will be reviewed by our faculty for approval to register. Students will be allowed to earn up to twelve graduate credits over two semesters which may be applied to continued study here upon completion of their undergraduate degree. We look forward to welcoming Manhattanville students as early as Fall 2020.

STAR Program Alum Named in Regeneron Top 300!

STAR Program Alum, Sophie Vernik, 17, was named as one of the top 300 Scholars in the Regeneron Science Talent Search 2020, the nation's oldest and most prestigious science and math competition for high school seniors. The finalists who each completed an original research project and completed an extensive application process were selected from 1,993 highly qualified entrants based on their projects' scientific rigor and their potential to become world-changing scientists and leaders. Sophie's research submission, "Spreading Depolarizations as Preconditioning to Post-Stroke Neuronal Death," was conducted this summer in the STAR Program, under the mentorship of Patric K. Stanton, Ph.D., professor of cell biology and anatomy and of neurology. We are extremely proud of Sophie's accomplishment and look forward to watching her very promising future.



*The STAR Program is a summer research opportunity at the GSBMS aimed at enhancing the research experience of high school and undergraduate students.



\$410,000 NIH Grant for New York Medical College

Brian B. Ratliff, Ph.D., assistant professor of medicine and physiology and director, Accelerated Master's Program, and **Michael S. Wolin, Ph.D.**, professor of physiology, received a five-year \$410,000 grant from the National Institutes of Health for "NOX4-associated Oxidative Stress Mediates Vascular and Kidney Impairment in the Low Birth Weight Adult."



"Recent advances in neonatal medicine have increased the population of LBW babies that are incredibly susceptible for development of hypertension, cardiovascular disease and chronic kidney disease for unknown reasons as they mature through adulthood," said Dr. Ratliff. "This grant will allow us to identify new and improved therapeutic approaches that target the systems that drive the progression of hypertension, cardiovascular and chronic kidney disease," said Dr. Wolin.

Faculty Spotlight: Dana G. Mordue, Ph.D.

Director of the Biomedical Sciences and Management Program
Associate Professor of Microbiology and Immunology,
Secretary of the NYMC Faculty Senate, Executive Committee
of the Faculty Senate, Vice Chancellor for Middle States
Accreditation, Co-Chair of the Strategic Planning Committee



Dr. Mordue is a long-time member of the NYMC community, a dedicated, highly respected professor of microbiology and immunology, an infectious disease researcher and parasitologist known for her work on diseases caused by Apicomplexa parasites including Babesiosis, and highly favored student mentor.

Among her many responsibilities at NYMC, Dr. Mordue serves as the director of the Biomedical Sciences and Management Program, a Professional Science

Master's Program introduced just a few years ago. The GSBMS recently held an information session for interested students. As described by Dr. Mordue, "The Biomedical Sciences and Management Program is designed for each individual student in partnership with employers, and features learning in real-world environments. It is an innovative terminal degree that prepares graduates for science careers in business, government, or nonprofit sectors."

Alumni Profile: Galadu Subah, M.S. '16, M.D./Ph.D. Candidate



Galadu Subah's aspirations to become a physician began while volunteering at a hospital near his home in Maryland. He enrolled in the Graduate School's Basic Medical Sciences Program to prepare for medical school and a career as a physician. Almost by chance, he discovered his passion for neuroscience and the process of biomedical research. "By luck or fate, I attended a research forum during my first week on campus at which the keynote speaker was Dr. Patric K. Stanton. I was so

enamored by his talk that I immediately asked about research opportunities in his lab. Once I began volunteering in the lab, a new curiosity for the process of scientific research was stoked." He still planned on becoming a physician, but once accepted into NYMC's medical school, Galadu applied for the M.D./Ph.D. Program. He is currently working in the Ph.D. program and will soon return to the pursuit of his M.D. "The intellectual fulfillment I received in the lab and the community I felt around the graduate school was all I needed to realize that this detour on my path toward medical school could actually become a part of the final destination, as a physician-scientist. NYMC and the lab of Dr. Stanton has and continues to provide me with the community and guidance in which I can develop into a productive member of the medical and scientific communities."



NEW YORK MEDICAL COLLEGE

A MEMBER OF THE TOURO COLLEGE AND UNIVERSITY SYSTEM

Graduate School of Basic Medical Sciences

Whether a student aims to discover the next life-changing drug or vaccine, investigate the basic principles of biology, educate the future generation of researchers or manage a science-focused non-profit, we offer M.S., Ph.D. and M.D./Ph.D. programs to meet their goal. Our Accelerated Master's Program offers two years of coursework in just one and graduates of this program have a distinct advantage when applying to medical school, enjoying an acceptance rate of 85 percent. Our two-year M.S. programs offer options for research training, non-research thesis or project-based internships in industry. The newly launched Biomedical Science and Management Master's track is designed for students interested in pursuing careers in the pharmaceutical, biotechnology, or other biomedical science industries – or in the government and not-for-profit sectors. A new Master of Science in Clinical Laboratory Sciences program trains professionals to work in medical or pharmaceutical laboratories. Our Integrated Ph.D. program focuses on core scientific knowledge and the interrelatedness of the basic sciences while conducting original laboratory research.



GSBMS Facts and Figures

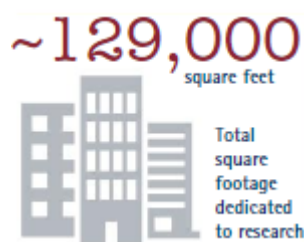
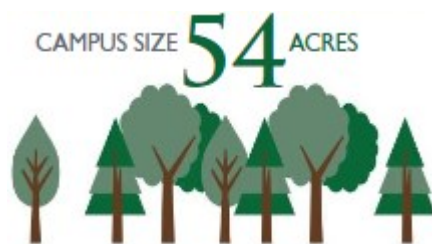
130 STUDENTS

Academic Programs:

- M.S. Interdisciplinary Basic Medical Sciences (Traditional 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 Master's in six disciplines
- M.S. in Clinical Laboratory Sciences
- Dual degree program
— M.D./Ph.D. with the NYMC School of Medicine

Number of GSBMS Faculty: 97

GSBMS Tuition: \$1,200 per credit



60% FEMALE
40% MALE

GSBMS Diversity Numbers:

- 25% of GSBMS students self-reported as part of a group currently underrepresented in the sciences
- GSBMS students self-reported as members of the following groups:

