Dean's Research Newsletter, Winter 2020

Jerry L. Nadler
New York Medical College, jnadler@nymc.edu

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As dean of the School of Medicine (SOM), I am pleased about the exciting research being conducted by both our faculty and our students at New York Medical College (NYMC) and with our affiliated hospital partners. This newsletter offers just a sample of the activities underway as well as other valuable information on research opportunities available.

I was so impressed by the work I witnessed firsthand at the recent 23rd Annual Medical Student Research Forum, which had record participation. The NYMC SOM has the distinction of being one of the only medical schools to have an assistant dean in support of student research. Facilitating research, as you know, is very important in career growth for our students and at NYMC we are committed to wholeheartedly supporting that growth. Therefore, I’m pleased to announce that we will be offering increased faculty stipends of up to $1,000 for mentors to work with our students. These stipends can then be used in mentors’ budgets to support student professional development and activities. I hope you find the news of these awards and accolades as motivating as I do.

Congratulations to everyone as you continue your success with research, collaborations and grants.

Jerry L. Nadler, M.D., MACP, FAHA, FACE
Dean of the School of Medicine
Professor of Medicine and Pharmacology

Recommended Article
in the November/December issue of
Advancing Care in the Hudson Valley, a publication of
Westchester Medical Center.

WMCH Health Cardiology Director Publishes Study on
New Treatment Benchmark

Julio A. Panza, M.D., professor of medicine,
Division of Cardiology
RESEARCH SPOTLIGHT

NYMC Researchers to Advance Understanding of Future Health Issues for Low Birth Weight Babies

Brian B. Ratliff, Ph.D., assistant professor of medicine and physiology and director of the 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 (NIH) to support their research on heart and vascular diseases.

The federal funds, which will support the project “NOX4-associated Oxidative Stress Mediates Vascular and Kidney Impairment in the Low Birth Weight Adult,” will allow Dr. Ratliff and Dr. Wolin to document and define the driving factors such as oxidant and immune mechanisms that promote the progression of hypertension, cardiovascular and chronic kidney disease in adults who were low birth weight (LBW) babies.

“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 and Dr. Wolin. “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.”

“NYMC’s critical research will advance our understanding of the health issues faced by low birth weight babies in their adult years,” said Congresswoman Nita Lowey (D-Westchester/Rockland), Chair of the House Appropriations Committee, in announcing the funds. “This funding will improve our understanding of cardiovascular and chronic kidney disease and stimulate the development of new treatments. I will continue my work as chair on the House Appropriations Committee to bring these essential resources to the Lower Hudson Valley so institutions like NYMC can help Americans live longer, healthier lives.”

AFFILIATE HOSPITALS RESEARCH ACTIVITY

Ongoing Research at NYC + Hospitals/Metropolitan

Getaw Worku Hassen, M.D., Ph.D., professor of emergency medicine, is the site principal investigator for a study, being conducted in collaboration with Hunter College and NYU Langone Medical Center, to identify biobehavioral factors that interact with distinct patterns of suicidal thoughts to increase risk of suicide attempts.

Research findings are expected to improve risk assessment and better guide intervention. Two hundred racially and economically diverse adolescents will be recruited to participate in the four-year NIH-funded study, primarily from the three partnering NYC public hospitals – NYC Health + Hospitals/Metropolitan, NYC Health + Hospitals/Bellevue and NYC Health + Hospitals/Lincoln.
Grants Corner

Chandra Shekhar Bakshi, D.V.M., Ph.D., associate professor of microbiology and immunology, received a two-year $445,834 grant for “Advancement of a Mucosal Subunit Vaccine in an Outbred Model of Respiratory Tularemia” from the NIH.

Mitchell Cairo, M.D., professor of pediatrics, pathology, microbiology & immunology, medicine and cell biology & anatomy, will serve as PI on several grants he has been awarded over the last few months to further his cancer research, including:

- $2.7 million grant over three years from the Pediatric Cancer Research Foundation for “Comprehensive Cancer and Stem Cell Research Program”
- $1.9 million grant over four years from the FDA for “CMV, ADV and EBV Viral Cytotoxic T-Lymphocytes Generated by a Novel Cytokine Capture System in Children, Adolescents and Young Adults with Refractory Viral Infection and T-Cell Immunodeficiency”,
- $1 million grant over three years from Servier Pharmaceuticals LLC for a “Pilot Study Using Induction Chemo-Immunotherapy Followed by Consolidation with Reduced Toxicity Conditioning and Allogeneic Stem Cell Transplant in Advanced Stage Mature Non-Anaplastic T-Cell or NK Lymphoma/Leukemia in Children, Adolescents, and Young Adults”, and
- $949,000 grant over five years from the NIH for “Pediatric Ohio-New York Cancer (Peds-ONC) Immunotherapy Center.” (NYMC is a subcontract on this grant which was awarded to Nationwide Children’s Hospital)

Marcello Rota, Ph.D., research assistant professor of physiology, has been awarded a $300,000 grant over the course of three years by the American Heart Association for “Notch Signaling and Window of Opportunity for the Remodeling of the Infarcted Heart.”

Bridge & Seed Funding Grant Program – Spring 2020 Competition

The Office of Research Administration has announced the continuation of the Intramural Research Grant Initiative consisting of Bridge and Seed Funding Grant Programs for the upcoming 2020-2021 Academic Year. These programs were established with the goal of continuing to support and aid faculty in performance of high quality research.

The Bridge Funding Grant Program aims to improve the likelihood of securing renewed funding for projects already initiated. The application deadline for this year’s program is Monday, April 27, 2020. The Seed Funding Grant Program is designed to encourage collaboration and possible interdisciplinary research between and among faculty, colleges and campuses throughout the Touro College & University System. The application deadline for this year’s program is also Monday, April 27, 2020. Program guidelines, instructions, and application forms are available here.

Research Information Updates/NIH Links

See Weekly NIH Announcements and NIH Funding Opportunities here

Learn more about the Harrington Discovery Institute 2021 Harrington Scholar-Innovator Award here

NYMC Office of Research Administration: Learn more about funding opportunities here

Research Gate: Read about recent publications here
Annual Medical Student Research Forum Has Record Student Participation

With student participation in the annual Medical Student Research Forum (MSRF) once again surging to record numbers, this year’s forum, held on February 6, featured oral and poster presentations of their research projects by 105 NYMC students.

“The MSRF celebrates medical student research across all specialties in the categories of basic science, clinical science, medical education and public health studies. The success of this year’s forum is thanks to the teamwork and collaboration of both students and faculty who took time out of their busy schedules to support student research,” said Brian Tung, SOM Class of 2022, and a member of the Medical Student Research Committee.

Special thanks to Mary Petzke, Ph.D., assistant dean for medical student research, associate professor of microbiology and immunology and program director of M.D. Research Concentration, for her outstanding effort in support of advancing student research. Read full article and view more photos.

First Karmen Award for Outstanding Medical Student Research Bestowed

The first Arthur Karmen, M.D., Award was presented at this year’s MSRF to Nadera Rahman, left, SOM Class of 2022, and Jacob Hehir, right, SOM Class of 2022, for their clinical science poster, “Differences in Vestibulo-Ocular Reflex Measured During Rotary Chair Testing of Patients with Vestibular Migraine vs. Vestibular Neuritis/Labyrinthitis.” The award was established by Carol L. Karmen, M.D., center, clinical professor of medicine, in honor of her late father.

Dr. Arthur Karmen was the first to discover that the heart released enzymes during a myocardial infarction and to devise a method to measure these enzymes in blood. The enzymes were measured in "Karmen Units," a method still used today in laboratory testing around the world.

“I had the choice of presenting this award at other institutions, but I could think of none more worthy than NYMC, which was the first to offer my father admission to medical school and where I have devoted my entire career.”
**Student Study on Infant Wheezing in Honduras Provides New Insight**

For their summer research fellowship, **Elizabeth Sillcocks**, left, and **Jeanne Shi**, NYMC SOM Class of 2022, chose a subject with which Elizabeth had a great deal of personal experience. In the year leading up to medical school, Ms. Sillcocks spent several months in rural Honduras doing an internship with a doctor who ran a hospital there. It was during her time there that Elizabeth observed that there was a high volume of infants being treated for respiratory distress at Dyer Rural Hospital and also that her own asthma was worse.

“It was actually during my pulmonary unit that I started thinking about [the high-rates of infant asthma in Honduras] as a potential topic for summer research,” recalls Ms. Sillcocks. After speaking with Ms. Shi, the two decided to conduct a major literature review and develop their own unique study on respiratory illness in infants in Honduras. For their study, they went through the entire Institutional Review Board (IRB) approval process, ultimately receiving IRB approval in both the United States and Honduras. Last summer, they spent two months in Honduras, conducting a 45-question survey through in-person Spanish interviews in 16 rural communities in the Cuenca del Rio Cangrejal region of Honduras, with the goal of measuring socio-economic, environmental and genetic health factors which contributed to the wheezing in infants. [Read full article.](#)

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**Department of Surgery Hosts Research Day**

The Sixteenth Annual Louis R.M. DelGuercio Distinguished Visiting Professorship and Research Day, held in December, was a success on all fronts—with a significant increase in abstract submissions and attendance and featuring a stimulating keynote speech by **Michal Laniado Schwartzman**, Ph.D., professor and chair of the Department of Pharmacology. [Read full article.](#)

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**Research Symposium Held by Department of Pediatrics**

The Ninth Annual Assistant Professor Pediatric Research Symposium was held in November at Maria Fareri Children’s Hospital and featured oral presentations in basic, clinical, quality and translational research areas in the pediatrics field, followed by a general poster session. [Read full article.](#)