



Hackensack  
Meridian *Health*

# RESEARCH ROUNDUP

FALL 2023

## HMH RESEARCH NEWS



### MESSAGE FROM THE **PRESIDENT OF ACADEMICS, RESEARCH, AND INNOVATION**

The new leaps forward at Hackensack Meridian *Health* are gargantuan. A new spin-off company promises to diagnose cancer earlier than ever before, our physician-scientists are helping lead the way in national studies from very earliest stages of life, and we are tackling the rise of hypervirulent infectious diseases. As the adage goes, we ‘keep getting better.’

**Ihor Sawczuk, M.D., FACS**



### NOTE FROM THE **VICE PRESIDENT**

The progress made at the Hackensack Meridian *Health* Research Institute is across-the-board, and has been achieved through the efforts of nurses, scientists, physicians, and collaborations between all of them. Taken together, we are all moving forward.

**Cheryl Fittizzi, RN, MBA, CIP,**  
Vice President of Research and Regulatory Affairs



## Hackensack Meridian *Health* Research Institute Creates First Spin-off Company, EValue Diagnostics

The Hackensack Meridian *Health* Research Institute and its Office of Innovation and Commercialization have taken the step of establishing the first spin-off company based on science developed within the Hackensack Meridian *Health* network. The company aims to make tests detecting cancer and other diseases earlier than ever before.

EValue Diagnostics will market a new system for the capture of extracellular vesicles (EVs), including exosomes, which have been elusive to medicine thus far. Novel diagnostic assays derived from this technology will help select and identify disease biomarkers for earlier-than-ever detection of tumors and a wide range of other diseases.

“This is a remarkable breakthrough for our health network, and for patients of the future,” said Robert C. Garrett, FACHE, the chief executive officer of Hackensack Meridian *Health*. “We are taking the science produced by our terrific minds at the Hackensack Meridian *Health* Research Institute, and then moving it to the market so it can benefit all. Detecting deadly cancers as soon as possible means lives can, and will, be saved.”

The company is based upon the work of Olivier Loudig, Ph.D., an associate member of the Hackensack Meridian Center for Discovery and Innovation (CDI), who is directly involved with the development of EValue Diagnostics. His laboratory at the CDI has developed research programs for biomarker discovery and early detection of breast, lung, and prostate cancers using liquid biopsies.

Developing cancer lesions, which may remain elusive due to their small size by traditional imaging approaches or tissue biopsies, still leave a molecular trace in biofluids such as blood. The laboratory of Dr. Loudig has homed in on this minute trail and, using highly sensitive next-generation-sequencing technologies, has been able to detect RNA signature indicative of the developing lesions. The development of gene expression assays for diagnostics is widely used for evaluating large tumors, but with this novel tracking technology, and applied to early detection has the potential to exponentially help save patient lives.

“We are really establishing the threshold of detection,” said Dr. Loudig recently. [Read More](#)

**KEEP GETTING BETTER**



## HMH Physician Awarded \$5 Million NIH Grant as part of National ECHO Study

A Hackensack Meridian Health physician-scientist earned a National Institutes of Health (NIH) grant to research how environmental factors affect children with a variety of disabilities as part of a major nationwide study.

The two-year, \$5.6 million grant to Judy Aschner, M.D., and team is part of the Environmental Influences on Child Health Outcomes (ECHO) program, a massive national cohort started seven years ago.

The new funding will continue the long-term ECHO research of Dr. Aschner, the Marvin I. Gottlieb, M.D., Ph.D., Chair of Pediatrics at Hackensack University Medical Center (HUMC) Joseph M. Sanzari Children's Hospital, who is also a professor of pediatrics at the Hackensack Meridian School of Medicine, as well as the physician-in-chief for Hackensack Meridian Children's Health.

The grant, entitled "Enriching ECHO Cohorts with High-risk Pregnancies and Children with Disabilities (Enriching ECHO)" will advance disability inclusivity in ECHO research by studying children with a spectrum of disabilities, and by leveraging existing data from ECHO participants with disabilities.

The scientific premise of Aschner and her team is that psychosocial environmental exposures (such as social determinants of health, stress, social environment and discrimination) and modifiable personal factors (including parenting style, social supports and mental health) impact the physical and emotional health of children with disabilities. Aschner and team believe the observations will result in definable outcomes of function, well-being and participation in community and family life.

"Our hypothesis is that we can identify specific environmental factors associated with better-than-expected positive health outcomes along the continuum of disability to typical development," said Aschner.

Beginning in January 2024, pregnant women will be recruited before the 20th week of gestation from the high-risk obstetric practice at Hackensack University Medical Center and Prentice

Women's Hospital at Northwestern University with seven years of follow up of the women and their children at the Joseph M. Sanzari Children's Hospital at HUMC and Lurie Children's Hospital in Chicago.

Depending on the results of the first two years, the grant could bring further funding for five more years, with a potential total of \$32 million over seven years. [Read More](#)



## New Study by CDI Lab, NIH Assesses Rise of 'Hypervirulent' Strains of Klebsiella pneumoniae

*Klebsiella pneumoniae* (popularly known as KPC) is a little-known bacteria that causes a variety of afflictions, including pneumonia and urinary tract infections (UTIs), and which can be deadly.

"Hypervirulent" strains of the bacteria that cause severe infections, and their multidrug-resistant cousins, are beginning to evolve together, which has raised public health concerns.

Now a team of Hackensack Meridian Center for Discovery and Innovation (CDI) scientists have partnered with colleagues at the National Institutes of Health's National Institute of Allergy and Infectious Disease (NIAID) in a study that shows which strains are more likely to survive in human blood and serum - and which are more susceptible to the human immune system. [The study was published in mBio.](#)

"This study is really about getting to know this emerging health threat," said Barry Kreiswirth, Ph.D., member of the CDI, assistant professor at the Hackensack Meridian School of Medicine, and one of the authors. "It's just part of the groundwork we're laying to better understand, and fight, this germ."

In the century since it was first identified, *K. pneumoniae* has evolved many different strains. Among these are multi-drug-resistant varieties found mostly in health care settings - and which mostly strike people with compromised immune systems. The "hypervirulent" strains, which are found in healthy people outside hospitals, can cause severe infections - but respond to existing antibiotics.

The concern is when new strains show both traits: drug resistance and dangerous virulence. [Read More](#)





## Hackensack Meridian Neuroscience Institute Set To Debut First-In-The-World ZAP-X Gyroscopic Radiosurgery®

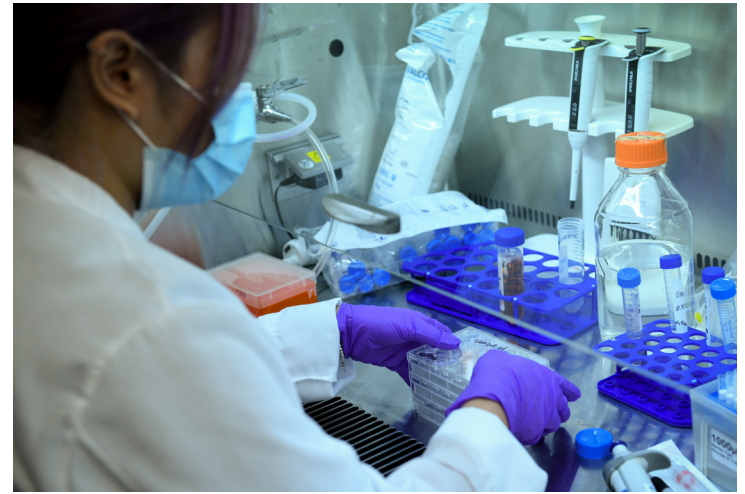
The Dr. Robert H. and Mary Ellen Harris ZAP-X Center for Noninvasive Neurosurgery at Hackensack Meridian Neuroscience Institute of Jersey Shore University Medical Center will soon debut the first in the world ZAP-X® Gyroscopic Radiosurgery® with Synaptive brain only silent MRI for the treatment of brain tumors and conditions of the brain including trigeminal neuralgia and arteriovenous malformations (AVM). The academic medical center will be the first hospital in the Northeast U.S. to offer ZAP-X, the first in the nation to offer Synaptive's head only MRI, and the only in the world to use the technologies in combination. This pairing of technologies will markedly reduce time from diagnosis to treatment.

“Having the latest advancements in technology to treat our patients is part of how Hackensack Meridian Health keeps getting better,” said Robert C. Garrett, FACHE, chief executive officer of Hackensack Meridian Health. “The addition of ZAP-X Gyroscopic Radiosurgery and Synaptive MRI in our network allows us to continue to offer the best care to the communities we serve throughout New Jersey. The first in the world pairing of technologies furthers our network as a health care leader and destination for care.”

The state of the art technology is set to begin seeing patients next month at Jersey Shore University Medical Center, Neptune, NJ, thanks to a significant gift from Mary Ellen Harris and the Golden Dome Foundation.

“Jersey Shore University Medical Center has always been home to state-of-the-art medical interventions. We are thrilled to bring this advanced form of cranial radiosurgery to our patients,” said Shabbar Danish, M.D., chair of neurosurgery at the Hackensack Meridian Neuroscience Institute at Jersey Shore University Medical Center. “ZAP-X is a powerful tool in the non-invasive treatment of brain tumors and other cranial conditions. While we are leaders in bringing this technology to our region, I think one day it will become an industry standard. It will make a big difference for our patients in the effective, non-invasive and timely treatment for conditions of the brain.” [Read More](#)

## New Institute for Immunologic Intervention (3i) at the CDI Drives Forward Discovery and Innovation



The Hackensack Meridian Center for Discovery and Innovation (CDI) has formed a new institute aiming to fight infections, cancer, and inflammatory diseases by finding a better way to restore and bolster the human immune system in its responses to disease.

The Institute for Immunologic Intervention (or “3i”) is searching for ways to unleash new advances in immunology to beat disease and save lives. The expert scientists in this new institute include basic researchers, physician-scientists, and leading clinicians who are working seamlessly to tackle major health problems of our time.

The Institute is dedicated to advancing the understanding of fundamental mechanisms of infectious immunity, tumor immunity, alloimmunity and autoimmunity within clinical contexts. By fostering collaborations with the CDI, the John Theurer Cancer Center at Hackensack University Medical Center and its consortium partner Georgetown University's Lombardi Comprehensive Cancer Center, and beyond, the 3i strives to apply this knowledge toward innovative strategies that enhance the effectiveness of cancer immunotherapy, interventions for autoimmune and alloimmune conditions, and the prevention of infections.

“We have recruited world-class talent to give this Institute critical mass,” said David Perlin, Ph.D., chief scientific officer and executive vice president of the CDI, and professor of medical sciences at the Hackensack Meridian School of Medicine. “These scientists are tackling disease at the basic level of discovery - but with an eye toward finding real-world solutions in the near future. This is what the CDI is all about.” Perlin is also a professor at Georgetown University.

“We are excited about the possibilities - and also about the collaborations already happening among this group of scientists,” said Binfeng Lu, Ph.D., the director of the 3i. [Read More](#)



## HMH Deploys Google Cloud's Generative AI Tools to Improve Caregiver and Patient Experiences

Hackensack Meridian Health, New Jersey's largest health system, today announced an expansion of its strategic partnership with Google Cloud to deploy generative AI solutions to improve patient care and reduce the administrative burden on clinicians, caregivers and hospital operators. The partnership will leverage Google Cloud's generative AI technologies to develop and deploy solutions that will help Hackensack Meridian Health clinical staff focus more on care, improve overall decision-making and better personalize the patient experience.

Administrative costs in 2022 in the U.S. alone increased by \$18 billion — 30% in one year—to reach \$60 billion annually (CAQH). At the same time, health care generates about 30% of the world's data and remains the fastest-growing industry for data growth (Brunswick Group). It is no wonder that providers are increasingly turning to AI and machine learning to both reduce administrative burdens and unlock data for better patient care.

“Generative AI has the potential to revolutionize how we deliver care, making it more efficient, personalized, and effective,” said Robert C. Garrett, FACHE, CEO of Hackensack Meridian Health. “Artificial Intelligence coupled with experienced clinicians will be a game-changer for our nation's health care system and potentially revolutionize how we deliver and receive care.”

Google Cloud and Hackensack Meridian Health are currently working together on a broad digital transformation initiative, including programs that leverage analytics, artificial intelligence, and machine learning. The companies' generative AI work announced today will leverage Ekam, HMH's Cloud Data Platform built on Google Cloud, and will use Google Cloud's Vertex AI platform, which supports HIPAA compliance. [Read More](#)

## CDI Publishes Paper Showing Dynamics of COVID-19's Pandemic Peak

The SARS-CoV-2 virus swept across the globe at the beginning of 2020, and one of the earliest and hardest-hit areas of the United States was New Jersey.

Hackensack Meridian Health, the state's largest and most comprehensive health network, played a major role in virus detection and tracking of the virus's evolution and dynamics, due to the expertise of the Hackensack Meridian Center for Discovery and Innovation (CDI), the network's research institute.

Now the CDI experts have published their findings in tracking nasal swabs of thousands of patients over a critical 18-month period of the pandemic, with the results published this month in the journal, *Viruses*.

Many of the findings reinforce common understandings of the COVID-19 pandemic - but the data provides compelling new evidence about how important vaccination is.

“Overall, the results reinforce the positive impact of COVID-19 vaccination and the public health benefits of conducting genotypic surveillance of SARS-CoV-2 across a large hospital network,” conclude the authors, led by José Mediavilla, M.B.S., M.P.H., infectious disease laboratory supervisor in the laboratory of Barry Kreiswirth, Ph.D., and co-first author Tara Lozy, biostatistician.

The facts established include:

- The CDI team assessed more than 5,000 nasopharyngeal swabs of patients from nine HMH hospitals, from December 2020 to June 2022.
- The cross-sectional view of this part of the pandemic assessed the de-identified swabs to include variants, vaccination status, clinical outcomes and underlying risk factors.
- The scientists essentially tracked the evolution of the virus, especially in the appearance of successive variants. The major strains identified were Alpha, Delta, and Omicron, the last of which included subvariants BA.1, BA.2, and BA.4/5.

[Read More](#)



## CDI Study of Fevers in Children During COVID-19 Raises Further Questions

An uptick in fevers detected among children at more than two dozen hospitals in North America during COVID-19 highlights the question whether there are normally more autoinflammatory disorders such as recurrent fevers among children going overlooked in non-pandemic times, according to a new study by researchers including a CDI physician-scientist.

The paper “Increase in pediatric recurrent fever evaluations during the first year of the COVID-19 pandemic in North America” was published by *Frontiers in Pediatrics* on Aug. 3, and includes Sivia Lapidus, M.D., pediatric rheumatologist, Joseph M. Sanzari Children’s Hospital, Hackensack Meridian Health, the Hearst Foundation Physician-Scientist at the Hackensack Meridian Center for Discovery and Innovation (CDI), and an assistant professor of Pediatrics at the Hackensack Meridian School of Medicine.

The increase in new patients evaluated for recurrent fevers also suggests that recurrent fevers in children may be more common than previously thought and perhaps did not prompt early medical attention pre-pandemic as they were attributed to common infections of childhood,” conclude the authors, from the Childhood Arthritis and Rheumatology Research Alliance (CARRA) PFAPA/Autoinflammatory Disease Working Group.

The researchers assessed patient encounters at 27 sites in North America.

Their findings: that recurrent fevers jumped from 7.79 percent of pediatric patients pre-pandemic, to 10.9 percent after the arrival of SARS-CoV-2. [Read More](#)

## Animal Research Event: Shared Perspectives on Goals, Challenges and Solutions

Animal researchers, husbandry staff, veterinarians and Institutional Animal Care and Use Committee (IACUC) members were invited to a virtual event on September 19, 2023, to share their perspectives on their roles in animal research and to engage in productive discussion. The human subjects research community was also invited to attend the event to give them an opportunity to gain insight to this area of research and to ask questions of their non-human subjects research counterparts.

The day commenced with introductory remarks from Avery Freed, director of the Human and Animal Research Protection Programs at Hackensack Meridian Health, and David Perlin, Ph.D., chief scientific officer and executive vice president of the Center for Discovery Innovation (CDI). Freed spoke about PRIM&R’s (Public Responsibility in Medicine and Research) sponsorship of the event and her admiration of their work, and Dr. Perlin spoke about the use of animal models for research: that although they are limited in some respects, they are still needed in certain cases.

Dr. Thomas Hartung, Chair of Doerenkamp-Zbinden Foundation and Professor at Johns Hopkins University, delivered the keynote presentation titled “Is Animal Research Still Necessary?” The presentation outlined some of the alternatives to research with animals (bioinformatics and AI, robotics, sensor technologies, bioprinting and bioengineering of microphysiological systems) and some of the limitations and challenges to the approaches with and without animal models. He also shared recent developments in the regulatory and scientific fields that seem to point to a movement focused less on animal models and more on the alternatives. Finally, he discussed some of the initiatives that he’s been undertaking to further educate the research community on alternatives. His presentation was followed by an engaging and thought-provoking Q&A session.

The keynote was followed by presentations by a principal investigator, animal care representative, veterinarian and IACUC chairperson, each sharing their perspectives on the goals and challenges of research with animals, animal husbandry in a research facility, veterinary care in a research facility, and IACUC oversight, respectively. Attendees asked the presenters questions about their experiences and had the unique opportunity to really understand each other’s roles, concerns and accomplishments. For example, a principal investigator asked the animal care representative what seemed to worry the husbandry team the most about caring for the animals. An IACUC member asked the principal investigator presenter what concerned him the most about submitting to the IACUC.

The event was well-attended, with more than 55 individuals joining for the keynote presentation and 45 staying on for the entire event.

## Top Grants from Last Quarter

PI Name	Sponsor	Award Number	Grant Title	Date Awarded / Signed Agreement	Proposed Period of Performance	Direct Cost	Indirect Cost	Total Budget
Mu, Liancai	DOD	HT94252310481	Mechanisms of impaired swallowing, speech and voice in Parkinson's disease	6/16/2023	07/01/2023-06/30/2026	\$677,583	\$522,417	\$1,200,000
Gengenbacher, Martin	NIH - NIAID	5R01AI161013-03	Harnessing B cells for TB vaccine development to improve therapy of TB and TB-HIV coinfection	6/22/2023	07/01/2023-06/30/2024	\$890,199	\$386,304	\$1,276,503
Perlin, David	NIH - NIAID	2R01AI109025-11	Critical Factors Influencing Echinocandin Resistance in <i>Candida glabrata</i>	6/26/2023	08/01/2023-07/31/2024	\$543,632	\$313,389	\$857,021
Xue, Hai Hui	NIH - NIAID	5R01AI121080-07	CTCF in CD8 T cell homeostasis and anti-viral/tumor immunity	7/20/2023	08/01/2023-07/31/2024	\$332,560	\$190,479	\$523,039
Aschner, Judy	NIH	1UG3OD035546-01	Enriching ECHO Cohorts with High-risk Pregnancies and Children with Disabilities (Enriching ECHO)	8/25/2023	09/01/2023-05/31/2024	\$1,602,261	\$471,247	\$2,073,508





# RESEARCH UPDATES & EVENTS

FALL 2023

## Year 20 for Linda Regensburg



Join us in celebrating Human Research Protection Specialist Linda Regensburg's 20 year work anniversary! The Hackensack Meridian Health Research Institute (HMHRI) is forever grateful for her continued commitment to the entire HMH network. Congratulations on this milestone!

The DSMB is a voluntary, multi-disciplinary, independent group consisting of MDs, PhDs, and statisticians. Meeting virtually on the fourth Wednesday of each month at 12:30 p.m., the DSMB reviews adverse event reports, protocols' data safety monitoring plans and stopping rules, and determines if studies should continue or if any issues regarding safety need to be addressed.

Anyone interested in being part of the HMH DSMB should contact Research Integrity Office Manager Daniel Alderson at [daniel.alderson@hmhn.org](mailto:daniel.alderson@hmhn.org).

## Key Regulatory Facts You May Not Know:

1. The FDA 1572 document is a critical one for principal investigators involved in investigational drug trials. By signing it, the principal investigator is taking responsibility for the study's conduct and agreeing to comply with all FDA regulations.
2. Knowing in advance what information and documents will be needed for the study application helps to expedite the research review process. Click [here](#) for the list.
3. A monitoring visit is a great opportunity to ensure that the researcher and sponsor are on the same page. The objective of the visit is to ensure that the study team is following the protocol, check up on subject enrollment, ensure that the CRFs are completed, and more. Monitoring visits allow the research team to identify discrepancies early and correct them right away.
4. The following are some guidelines for the study teams to retain their records:
  - IRB Records: 3 years after study completion
  - Federal Grants: 3 years after expiration of grant period
  - HIPAA Authorization: 6 years after completion of study
  - HIPAA Waiver: 6 years after completion of study
  - FDA: 2 years after last marketing approval

## eResearch Submissions for Emergency Use

Reportable New Information (RNI) submissions in eResearch now have "Emergency Use" as an available category.

As a reminder, federal regulations and institutional policy allow for the emergency use of a test article for a single patient without prospective IRB approval if an appropriately trained and licensed health care provider in an emergency situation determines that IRB approval for the use of an investigational drug/device cannot be obtained in time to prevent serious harm or death to a patient, the drug or device may be used without prior IRB approval. The health care provider must, within five days after the emergency, provide notification of the use to the IRB via an RNI submission in eResearch.

## Interested in joining the DSMB?

The HMHRI is looking for physicians to serve as members of the HMH Data Safety Monitoring Board (DSMB). The HMH DSMB is charged with monitoring the safety of research participants and the integrity of data collected in investigator-initiated human subjects protocols being conducted at HMH.



## HMH Statement on Acceptance of Gifts

In general, acceptance of gifts by team members are prohibited by HMH policies.

Federal laws impose substantial criminal and/or civil penalties on entities and individuals who solicit or accept anything of value from a referral source (physician, nursing home, home health agency, durable medical equipment company, laboratory or any other party that can submit claims for items or services to a governmental health program) in exchange for the purchase, lease or referral of services or items which could be paid for by the Medicare or Medicaid programs. These laws are designed to prevent circumstances where gifts or other remunerations can influence clinical decisionmaking, impact quality of care or lead to overutilization of services. Any offers of payment (in cash or in kind) or gifts to a referral source or the acceptance of payment or gifts by a team member or agent of Hackensack Meridian Health from a referral source are prohibited.

Specific questions regarding gifts can be directed to [coi@hmn.org](mailto:coi@hmn.org).

## Upcoming Educational Events

Our educational events are in full swing! To learn more about the types of research training and education offered, please visit the [Investigator Training webpage](#). You can also check out upcoming events on the [research education calendar](#). If you won't be able to make a lecture, don't worry! All HMH employees are able to access recorded lectures on a wide array of research topics [here](#).

For any questions about how your team might benefit from our educational offerings, please contact [ora@hmn.org](mailto:ora@hmn.org).







# FEATURED RESEARCHER

FALL 2023

## Lana Zhovtis Ryerson, M.D.

Research Director

Neuroscience Institute - Multiple Sclerosis Center  
Jersey Shore University Medical Center

Dr. Lana Zhovtis Ryerson, Research Director of the Neuroscience Institute at JSUMC, empowers all of her colleagues and trainees to be researchers. She believes that research and medicine are inextricably connected and that physicians encounter potential research questions in the clinic on a regular basis. Anyone can be a researcher by collecting data in a HIPAA- and IRB-compliant manner. Early career physicians or those that are not as familiar with research are advised to work with a mentor, but research is not out of anyone's reach.

Dr. Zhovtis Ryerson shared with us a bit more about her (very) early interest in medicine, what drew her to her area of specialty and how she helps promote research today.

### **You mention that you were born in Ukraine. Can you tell us a little bit about how you came to settle in the United States?**

My family moved to the United States when I was 10 years old. We settled in an area where there were a lot of people like ourselves who were fleeing the USSR. At the time, the USSR included both Russia and Ukraine. We came as refugees because we were Jewish and were able to show that we were being persecuted there. There were many Eastern European Jews who were in similar circumstances.

As immigrants who escaped a very dire situation, but with very few material possessions, my parents instilled in me the importance of hard work and of making the absolute most with the little we had. Growing up, I took nothing for granted.

### **How did you become interested in medicine?**

I have always been very driven and have been interested in medicine for as long as I can remember. I have always loved science, and fortunately, it was a topic that came easily to me. I actually have a book from the fifth grade, the year I arrived in the United States. One of my ESL teachers signed it and said, "Come and visit me when you're a doctor." Being a physician was always my dream, even as a young kid. I couldn't imagine doing anything else.

I went to a specialized high school where I had a lot of exposure to biomedical engineering and science. There was a program where students could apply to medical school out of high school. This afforded me the security of medical school acceptance early on. It allowed me to spend time learning things that weren't directly related to science and getting a liberal arts education. I majored in Biology, but minored in Russian Literature and Psychology.

### **Not all physicians become involved in research; yet you have been quite prolific in that realm. What led you to take the research route?**

I have always felt that research is married to medicine in a very close way. This belief has only strengthened over the years. Research is what drives medicine. You don't have to be a laboratory scientist, but clinical questions arise every day and making those observations and collecting the data is so powerful. Bringing the clinical perspective can really help further science and spur meaningful research.

One of the things that really defined my career in research was a clinical question in the multiple sclerosis (MS) clinic. Essentially, there is a very effective medication for the treatment of multiple sclerosis symptoms called natalizumab, but it is also dangerous to take because of the potential for brain infection. I became interested in research focused on using the medication more safely in the patient population. This research question came from seeing patients and getting a sense of their challenges. It was really about solving a clinical dilemma.

### **The bulk of your research focus in the last few years has been on MS. My impression is that it can be complicated to both diagnose and treat. Why are you drawn to this disease in particular?**

The initial clinical trials for MS were coming out right as I was graduating from medical school. It seemed so exciting to be part of a neuroscience frontier. There were finally medications that seemed to be effective for this disease. I was really drawn to the progress, the systematic way that efficacy could be evaluated via statistically stringent criteria. I loved being a part of that in my early career and onward. I also really enjoyed being able to share information with patients about the newer therapies that were becoming available to them.

### **How do you facilitate research in your current role?**

I joined HMH to help develop neuroscience research at JSUMC, so much of my role involves helping researchers develop their projects in all parts of neuroscience, including neuro-oncology, amyotrophic lateral sclerosis (ALS) and more. It's a little bit less hands-on in the sense that I am not a PI for a specific study, but I really enjoy helping other PIs design and execute their projects. I've been collaborating with many teams here in an effort to keep growing research at JSUMC.

### **What are some of your interests or hobbies outside of work?**

My three daughters, ages twelve, eight, and five, keep me busy in the best way possible. I am also an avid runner. I ran the Asbury half-marathon last spring.

KEEP GETTING BETTER



# FEATURED RESEARCHER

FALL 2023

he will be working in the CDI's Cancer Prevention Precision Control Institute (CPPCI) with researchers investigating similar themes. To CDI leadership, it's work which proves the old adage: an ounce of prevention is worth a pound of cure.

"Abraham Aragonés's work is really exploring a critical niche," said David Perlin, Ph.D., the chief scientific officer and executive vice president of the CDI. "HPV and its many health effects are very common - and proactively addressing the problem is going to be crucial in the decades to come. For some time, New Jersey has lagged behind other states in total HPV vaccination rates, and Abraham is here to help change the status quo."

## The CDI Experts: Aragonés and Preventing Cancer Across Groups

When COVID-19 vaccines started to appear, offering some hope of jump-starting normal life after about a year of quarantines and isolation, it brought much of the general public a sense of relief. But a vehement opposition instead reacted with dread to the mass vaccination campaign, and some of the mandates.

This came as no shock to Abraham Aragonés, who had been studying the tendencies for vaccine skepticism and outright opposition for more than a decade at the point SARS-CoV-2 first came into existence.

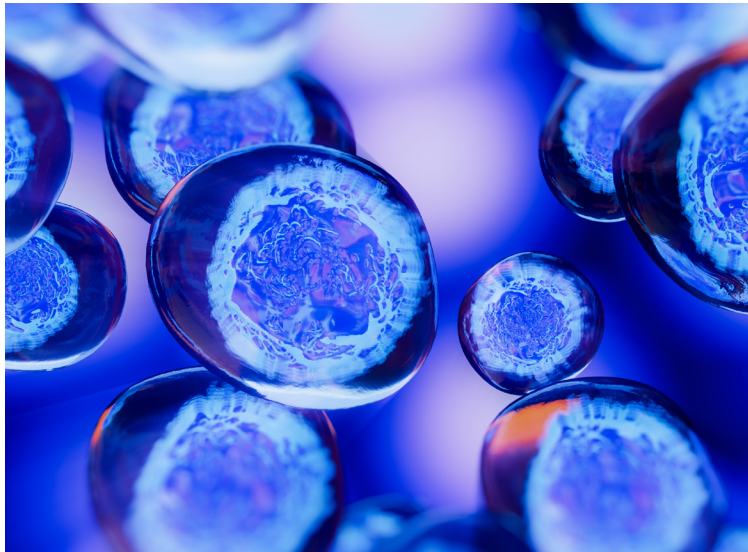
"It was no surprise at all," said Aragonés, M.D., M.S., associate member of the Hackensack Meridian Center for Discovery and Innovation (CDI). "We saw this with other vaccines. It can be so hard to contradict misinformation once it's out there."

Aragonés, who arrived at the CDI in early 2023, brought his laboratory and work from Memorial Sloan Kettering Cancer Center in New York City, where he focused on the public health study of cancer prevention in underserved groups. Of particular focus was the human papillomavirus (HPV) which causes cervical and a variety of other cancers in both males and females. Aragonés's work focuses on population-level dynamics of health policy and the value of social media and communication in directing - or misleading - it. As such,

### A Very Common Public Health Menace

"My work has always been in early detection and cancer prevention," said Aragonés recently in his office.

HPV is an incredibly common - and by some measures, incredibly overlooked - health threat. By some estimates, approximately 80 percent of all sexually-active people will get the virus at some point during their lifetime. Recently, while teaching a class at The City College of New York (CCNY), Aragonés stunned the class to silence when he said almost the entire group in attendance had it already or were going to get it. [Read More](#)



# FEATURED RESEARCH ADMINISTRATOR

FALL 2023



## **Mariya Morris, DVM** Attending Veterinarian

Dr. Mariya Morris spends her time caring for a range of different animals (and one little human at home). As the Attending Veterinarian at the Center for Discovery and Innovation, she oversees the clinical care of animals used in research and ensures animal colony health. She also reviews research-related proposals as a member of the Institutional Animal Care and Use Committee (IACUC) to ensure that all the veterinary

components are appropriate. These include checking the species to be utilized and the monitoring and care proposed. Her ultimate goal is to ensure that all the animals are as healthy as possible, for research purposes, and primarily, for their comfort.

Dr. Morris took a short break to tell us a little bit about the combination of hard work and serendipity that led to her current occupation, what she finds meaningful about her role and what she wants people to know about this type of research.

### **What led you to become a veterinarian?**

A lot of people want to be veterinarians when they're little kids, but I wasn't one of them. It didn't really occur to me until high school. At my school, students had to choose a "major" in junior year, which would then be their focus. I had always been a science and math person and choosing a major seemed like a catalyst to decide what I wanted to do. I volunteered with animals during high school and then majored in Animal Science in college.

### **What led you to work in this area, as opposed to a traditional veterinary path? Was this something you knew you wanted to do early on?**

After I decided that I wanted to go to veterinary school, I knew that I needed a certain number of hours working with different

species to be a competitive applicant. Being from Brooklyn, the majority of opportunities to gain experience were with dogs and cats. Fortunately, one of my parents' friends was developing animal logistics and protocol software at Memorial Sloan Kettering. He put me in touch with the animal facility there, and it was a really good fit for what I needed at the time. They wanted volunteers, and I needed the opportunity. This experience while still in college shaped my understanding of the different ways one could be a veterinarian; it opened my eyes to these non-traditional types of roles.

Throughout vet school, I was able to experience many different types of veterinary practice, but I remained most interested in veterinary care in the laboratory setting. I found it the most interesting. For example, if an animal is sick, can that be attributed to the experiment or a spontaneous illness? Would the animal still serve as a good subject in the experiment? There is also the compliance component: is the proposed protocol good science? Is the study in compliance with the approved protocol? There is so much more than standard clinical care.

I also enjoy understanding things on a deeper level. I found the idea of modeling a disease that humans experience on an animal to be a very intriguing concept. It is about finding parallels between the animal and the human bodies.

Lastly, I found work in this field meaningful because I can impact the way in which society is improved through science. In most places, once researchers are using animals for experiments, it means they are closer to the end of the discovery process than the vast majority of other researchers with ideas. The ability to play a part in translating the idea to human medicine is very exciting.

### **How has your experience at HMH differed from other places you have worked?**

I am accustomed to working at places that have very long-standing animal care and use programs. HMH has been housing animals in its current facility for less than five years, so there is still a lot to be developed. It's been really rewarding to be one of the people working on projects that are aimed at preparing ourselves for greater expansion. It has also been a bit of a puzzle to try to predict what will be needed in the future. (Cont'd)



## FEATURED RESEARCH ADMINISTRATOR:

**Mariya Morris, DVM** (Cont'd)

### **Is there anything you would like the research community to know about research with animals for the purpose of drug or device development?**

Research with animals is a very tightly regulated area within the institution, and a lot of consideration goes into the use and welfare of the animals here. The research is overseen by a series of federal and other regulatory bodies, just as would be the case with research with humans. There are also other similarities, such as review processes for all research protocols, whistleblower policies and reporting structures. HMMH holds the highest standards for welfare and has maintained Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) accreditation, which indicates a high level of protection of animals in science.

There is also a relatively large staff that provides day-to-day care for the animals. Their care is a collaborative process among the research team and the research animal facility staff. There is a lot of collaboration in terms of training and how to conduct research within this specific research facility and to use facilities that we provide in terms of imaging, surgery suites and quarantine facilities.

### **What do you most enjoy about what you do?**

I enjoy being able to contribute to projects by offering advice to researchers on how to refine studies to be more efficient and how to perform more in line with animal care and use recommendations. It is meaningful to be able to provide a component of support to labs that are otherwise so knowledgeable and specialized in their realms.

### **Given how critical some of the foundational work is before beginning clinical trials, what are some suggestions you would like to provide to researchers who are interested in beginning work with animal models?**

Know early on that your animal use protocol is congruent with the description within the grant. If you have any questions, you can always reach out to the IACUC for help with writing the protocol in such a way that promotes compliance and fits in with what the facility has to offer.

### **Do you have a pet?**

I have a dog, a little Corgi named Ralph. He had been put up for adoption because he had Demodex, mites in his hair follicles. The condition is characterized by bald patches on his body where he lost his fur, so it was hard for him to find a home. Coincidentally, my postdoc research was on the immunological effects of Demodex in mites, so we were perfect for each other.

### **What are some of your hobbies or interests?**

I have a toddler who is going to be 2. I also like to cook. My recent hobby has been figuring out how to sneak vegetables into as many foods as possible for my daughter.



# ACADEMICS BULLETIN

FALL 2023

## Research Pilot Project Funding Program Realizes Excellent Early Returns for Investigators

The Hackensack Meridian *Health* Research Institute, in collaboration with the Hackensack Meridian Hackensack University Medical Center Foundation and the Hackensack Meridian School of Medicine (HMSOM) provided seed funds for 11 research pilot project awards totaling greater than \$200,000 in 2020 and 2021. The grants were designed to focus on the generation of data for use in pursuing greater research initiatives - to jump-start projects with big potential.

The early results are in, and they are a combination of publications, further grant support from Hackensack Meridian *Health* and other major funders - and progress on work which may benefit untold patients of the future.

“This program was always intended to jump-start promising research,” said Ihor Sawczuk, M.D., FACS, president of Academics, Research and Innovation at HMH. “Looking at these early results, it did exactly that.”

In close alignment with the research mission of the network’s care transformation services initiative and the Hackensack Meridian School of Medicine, this program provided one-time financial support for principal investigators to help generate the preliminary

results/data necessary to prepare competitive applications for federal and other external national and international competitive research awards.

A review of the progress made by funding-recipients has revealed exciting results. [Read More](#)



## SOM Welcomes Dr. Peter Hotez, Vaccine and Science Advocate, in Global Health Seminar

The Hackensack Meridian School of Medicine (HMSOM) welcomed one of the world’s most well-known vaccine and science advocates, Peter Hotez, M.D., Ph.D., on Sept. 21, 2023.

Dr. Hotez is the dean of the National School of Tropical Medicine at the Baylor College of Medicine in Houston, Texas - and during the COVID-19 pandemic, he became a nearly ubiquitous presence on TV news talking about the value of the new vaccines to save lives against the spread of the SARS-CoV-2 virus.

Dr. Hotez gave a talk in the HMSOM amphitheater titled “Global Vaccinations and the Antipoverty Vaccines: The Science vs. The Anti-Science,” which echoes his brand-new book on the topic. Dr. Hotez reviewed the historical success of vaccines - highlighting the fact that many infectious diseases feared for high mortality rates and lifelong impacts for survivors have been marginalized throughout much of the developed world.

“We still could do better - but boy, what an impact,” he said, showing a chart which indicated the under-5 child deaths over the last century.

But there are sobering realities in the developing world - and also right here in the United States - brought into stark relief with the advent of the COVID-19 pandemic. [Read More](#)







### HMH Northern Region Boat Cruise for Residents and Fellows

The food was delicious, the night was filled with socializing and dancing, and the backdrop was incredible views of the New York City skyline and the Statue of Liberty.

It was the 3rd Annual HMH Northern Region Resident/Fellow Boat Cruise, for all the residents/fellows within the northern region to get together and network.

Next year we expect all the more success for our incredible professionals.



### Hackensack Meridian School of Medicine White Coat Ceremony Welcomes Sixth Cohort of Students



The Hackensack Meridian School of Medicine welcomed its newest class of 167 students with a White Coat Ceremony at the Venetian in Garfield on July 21, 2023.

The future physicians donned their distinctive coats during the ceremony, starting their journey toward acquisition of a medical degree (M.D.), which will be completed in three or four years, depending on their selected academic track.

“We are thrilled to welcome a new class of future physicians who will help us transform health care,” said Robert C. Garrett, FACHE, CEO of Hackensack Meridian Health. “We believe that the best way to improve health care is to start at the beginning and change the way we educate physicians so that they focus as much on maintaining health as they do curing disease.”

“The school has reached new heights, with full accreditation in February, and this promising new group of students,” said Jeffrey Boscamp, M.D., president and dean of the Hackensack Meridian School of Medicine. [Read more](#)





## Inaugural Bonita Stanton, M.D., Memorial 5K Run/Walk Supports HMSOM

The first-ever Bonita Stanton, M.D., Memorial 5K Run/Walk was held on October 15, 2023, at Brookdale Park in Bloomfield. Proceeds from the inaugural Bonita Stanton, M.D., Memorial 5K will directly benefit the established Bonita Stanton, M.D., Scholarship Fund at the Hackensack Meridian School of Medicine, to provide vital scholarships to future physicians accepted into the highly sought-after medical school.

More than 200 runners took part in the Sunday morning run and stroll along the path once run every morning by Dr. Stanton.

In January 2022, Hackensack Meridian *Health* lost a beloved

leader and true friend when Dr. Stanton, the founding dean of Hackensack Meridian School of Medicine and president of its Academic Enterprise, unexpectedly passed away. Dean Stanton was a prolific researcher, author and educator committed to health care equality. Her legacy extends from the impoverished corners of the globe to the most prestigious halls of academia, including Hackensack Meridian School of Medicine - the medical school she helped create in a new mold amid the promise of a better 21st Century future.

Dean Stanton's leadership and mission has structured Hackensack Meridian School of Medicine's unique curriculum to foster teamwork and a humanistic focus on community wellness through its Human Dimension program. The program integrates biomedical, behavioral, social and population sciences and is placed in the context of the patients and communities, which touches underserved cities across New Jersey.

"We are so pleased to host the inaugural Bonita Stanton, M.D., 5K Run/Walk this year," said Sheila Wolfinger, executive director, Hackensack Meridian School of Medicine. "Dean Stanton was truly admired by all who were lucky enough to know her, especially her colleagues and students. She had such a profound impact on her students through her kindness, support and medical teaching, so much so that this event was highly requested by them! It is only right that we honor her memory through raising funds to offer scholarships to the next generation of physicians at the school she founded."

"Bonnie Stanton was a history-making educational leader, and a committed runner," said Jeffrey Boscamp, M.D., the current president and dean of the Hackensack Meridian School of Medicine. "This event honors her legacy in the best way - by helping support the great doctors-to-be from the school she founded as a culmination of a great career." [Read More](#)







# ACADEMIC AFFAIRS ROUNDUP

FALL 2023

## Northern Region

- The PGY2 Emergency Medicine Pharmacy Residency Program received the maximum accreditation of eight years by the American Society of Health-System Pharmacists (ASHP).
- The Infectious Diseases and Pulmonary and Critical Care Medicine Fellowships received continued accreditation by the ACGME.
- The Hackensack University Medical Center (HUMC) Trainee Wellness Committee hosted their 2nd annual cruise around New York City harbor on Sept. 28 (see related story).

## Central Region

- Three new leaders have been appointed to leadership roles in Neurology fellowships - Haralabos Zacharatos, D.O. (Interventional Neurology); Navid Tabibzadeh, D.O. (Neurocritical Care); and Spozhmy Panezai, M.D. (Vascular Neurology).
- The American Academy of Sleep Medicine was seeking sleep medicine fellowship training programs interested in participating in innovative pilot programs as part of the Advancing Innovation in Residency Education (AIRE) initiative. JFK University Medical Center (JFKUMC)'s program applied and was granted approval for the part-time model where the fellow works part-time as a fellow and part-time as an attending.
- Joseph Landolfi, D.O., the chief medical officer of JFKUMC, and Gregory Rokosz, D.O., J.D., the chief medical officer of Raritan Bay Medical Center, will be featured at a session on Leadership at the Chief Resident Leadership Retreat on Nov. 3.

## Southern Region

- Jersey Shore University Medical Center (JSUMC)'s application for an Anesthesiology Residency program was approved by ACGME. The first six trainees will begin in July 2024.
- JSUMC has established a non-ACGME, budget-neutral Fellowship in Quality and Patient Safety, where the fellow will learn PI and QI under the direction of Raj Gurunathan, M.D., 40 percent of the time and practice clinically in the Department of Medicine 60 percent of the time. Recruitment is underway for the first fellow in July 2024. If successful, this model can be adapted to other HMM campuses.
- Tom Bauer, M.D., Chair of Surgery at JSUMC, was appointed Vice-Chair of Surgery for HMSOM.



# QUARTERLY QUESTION

FALL 2023

**Which of the following is NOT a committee at HMH?**

- (a) Institutional Review Board
- (b) Institutional Research Analysis Committee
- (c) Institutional Animal Care and Use Committee
- (d) Data Safety and Monitoring Board
- (e) Institutional Biosafety Committee

To answer the question, please click [here](#).

The first person to submit the correct answer will receive a Hackensack Meridian *Health* gift.