



RESEARCH ROUNDUP

WINTER 2025



HMM RESEARCH NEWS



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

Our talent across the breadth of Hackensack Meridian *Health* continues to pay dividends — and expand our influence in New Jersey and beyond. Just a glance at the partnerships we have fostered with Binghamton University and with promising companies in Ireland shows how we are driving innovation into 2025 - and for many years to come.

Ihor Sawczuk, M.D., FACS



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

Every quarter, it is gratifying to see all these disparate updates come together, showing the narrative of the entire network's progress.

Cheryl Pinto, RN, MBA, CIP

Vice President of Research and Regulatory Affairs



Hackensack Meridian *Health* and Binghamton University Agree to Collaborate on Academic Medical Missions

Hackensack Meridian *Health* and Binghamton University have agreed to work together on a mutual goal of excellence in medical education, research and clinical care.

Hackensack Meridian *Health* and Binghamton University recently signed a memorandum of understanding to further their work together. The two entities have a history of collaboration, with a recently created pharmacy residency, and a joint research symposium held in Fall 2023 to share ideas and learning, among other ventures.

The new agreement would open further opportunities and intends to enable collaboration for a variety of goals, including educational excellence, cutting-edge research and community service initiatives.

“This is a fantastic collaboration between two elite institutions,” said Robert C. Garrett, FACHE, chief executive officer of Hackensack Meridian *Health*. “When talented people from different locations are allowed to work together, great things can happen. We cannot wait to get the great work started and see what breakthroughs are possible when we bring such a large health network together with a top-notch research university.”

Binghamton University’s School of Pharmacy Dean and SUNY Distinguished Professor Kanneboyina Nagaraju spoke highly of Hackensack Meridian *Health* and shared his excitement to continue building the relationship between Binghamton University and Hackensack Meridian *Health*.

“This memorandum of understanding strengthens our collaboration with the co-funded postgraduate year two (PGY-2) Ambulatory Care Residency program at Hackensack Meridian *Health*,” said Nagaraju. “I am particularly thankful to Drs. Lucrecia Campisi and William Carroll for their hard work in jump-starting the summer internship program for our PharmD students. I eagerly look forward to expanding collaborations to translational and clinical research programs.”

[Read more](#)



Hackensack Meridian CDI Researcher Loudig Earns NJ R&D Council's Emerging Tech Award

A Hackensack Meridian Center for Discovery and Innovation (CDI) researcher was honored with the Research & Development Council of New Jersey's inaugural Emerging Tech Award — the first such distinction for a scientist from Hackensack Meridian Health, New Jersey's largest and most comprehensive health network.

Olivier Loudig, Ph.D., an associate member of the CDI, received the inaugural Emerging Tech Award for his innovative efforts on biomarker discovery for early detection of metastasizing breast cancer and lung cancer, at the 45th annual Edison Patent Awards Ceremony and Reception in November 2024.

Dr. Loudig's award was announced on the list of winners by the Research & Development Council of New Jersey (R&D Council) on July 24, 2024. For the 2024 honorees, the R&D Council included 14 patents created by 66 inventors and five individual award winners.

"This is a major recognition for Dr. Loudig's innovative, exciting work," said Robert C. Garrett, FACHE, chief executive officer of Hackensack Meridian Health. "It is also a fantastic milestone for our health network, which continues to develop bold new ideas to push the envelope for 21st-century health care."

"Olivier Loudig's work is a great example of the CDI's science accelerating discoveries into innovations to change lives as soon as possible," added Ihor Sawczuk, M.D., FACS, Hackensack Meridian Health's president of Academics, Research and Innovation, founding chair of the Hackensack Meridian Health Research Institute and associate dean of Clinical Integration, and professor and chair emeritus of Urology at the Hackensack Meridian School of Medicine.

[Read more](#)

John Theurer Cancer Center Researchers Present Transformative Findings and Pioneering Studies at Annual Cancer Meeting

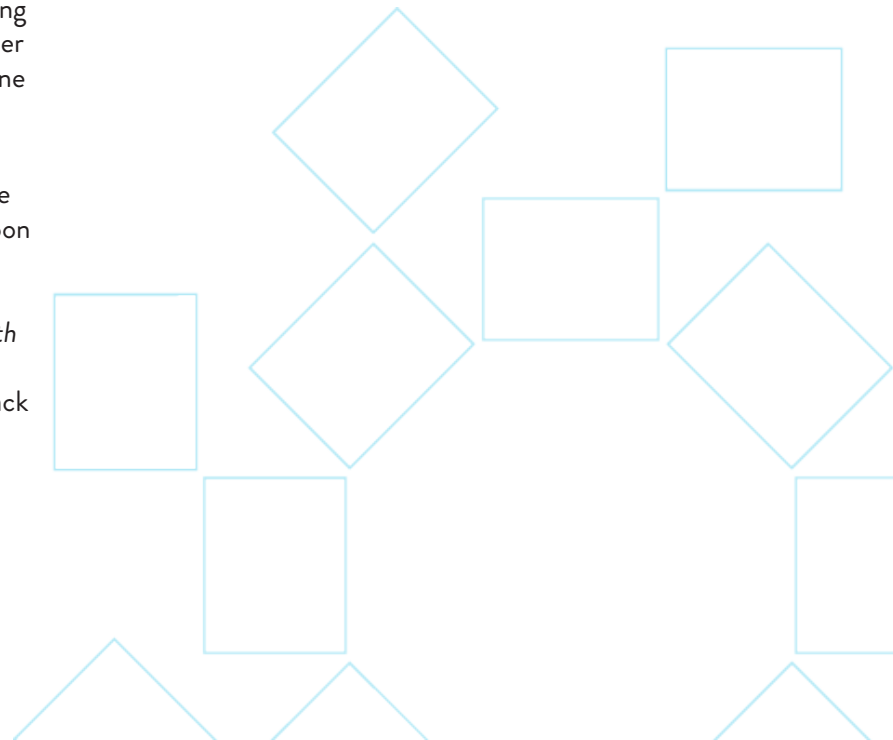
Researchers from [Hackensack Meridian Health's John Theurer Cancer Center](#), a research partner with Georgetown University's Lombardi Comprehensive Cancer Center, an NCI-designated comprehensive cancer center, presented the latest data from their investigations in hematologic oncology at the 66th Annual Meeting of the American Society of Hematology (ASH) held in San Diego, California, from December 7-10, 2024.

"The John Theurer Cancer Center is known for depth, breadth, and scope of expertise across hematologic oncology," said [Andre Goy, M.D., MS](#), chairman and executive director of the [John Theurer Cancer Center](#). "This year's presentations highlight new treatments that show promise for treating these diseases more effectively than standard therapies, as well as update the public as to our advancement in treatment of blood cancers that transcends all demographics of patient populations."

Several of Dr. Goy's colleagues from the John Theurer Cancer Center attended ASH representing Hackensack Meridian Health.

At the event, the team was on-hand to speak on research from several, out of more than 70, ASH-accepted abstracts — first-authored or co-authored by John Theurer Cancer Center/ Hackensack Meridian Health researchers. Research topics included bone marrow transplantation, hematologic oncology, leukemia, lymphoma, multiple myeloma and pediatric cancers, among others.

[Read more](#)





CDI and MAVDA Partners Publish Nature Paper on Promising Antiviral



Scientists from The Rockefeller University, the Hackensack Meridian Center for Discovery and Innovation (CDI), and partners who are part of the [Metropolitan Antiviral Drug Accelerator \(MAVDA\)](#) consortium identified a new pathway to inhibit viruses such as SARS-CoV-2 and other deadly pathogens. The team published their findings in a new paper titled “Small-molecule inhibition of SARS-CoV-2 NSP14 RNA cap methyltransferase,” which appeared online in the journal [Nature](#) on December 11, 2024. The lead author is Thomas Tuschl, Ph.D., of The Rockefeller University, and one of the MAVDA project leaders. Among the other authors is [David Perlin, Ph.D.](#), the CDI’s chief scientific officer and executive vice president and MAVDA’s lead co-principal investigator, alongside Nobel Laureate Charles Rice, Ph.D. The new pathway identified by the paper focuses on targeting methyltransferase enzymes to inhibit RNA viruses. Such enzymes are critical in viral replication and molecular stability – and also evasion of immune system defenses. This pathway differs from many other antivirals, such as the well-known Paxlovid treatment for COVID-19 infection, which are protease inhibitors that focus on a different family of enzymes entirely.

In the search for methyltransferase inhibitors, Dr. Tuschl and his laboratory screened 430,000 compounds and homed in on a small number of candidates that inhibited the viral cap methyltransferase known as NSP14.

[From a recent Rockfeller feature on the work:](#)

“Those compounds then went through an extensive chemical developmental process to create optimized drug candidates in partnership with the Sanders Tri-Institutional Therapeutics Discovery Institute. Compounds with improved biochemical inhibition were then subjected to cell-based assays conducted by researchers led by Charles M. Rice, who heads the Laboratory of Virology and Infectious Disease at Rockefeller. Finally, colleagues at the Center for Discovery and Innovation in New Jersey then tested the compound in mice under BL3 safety conditions and demonstrated that it could treat COVID-19 on par with Paxlovid. Tuschl and colleagues also demonstrated that the treatment remained effective even if the virus mutated in response to it, and that there was synergy when combined with protease inhibitors.

‘Even in isolation, a virus would have trouble escaping this compound,’ Tuschl says. ‘But as a combined therapy along with a protease inhibitor – escape would be almost impossible.’”

The work could have implications beyond COVID-19, potentially for other viral pathogens such as Ebola, Zika, and Dengue, among other infections. Dr. Perlin said it was, “the MAVDA consortium’s highly integrated network of science and product development cores, which helped to advance this exciting antiviral candidate.” [Read more](#)

CDI Researcher Co-Authors Commentary on Community Outreach & Engagement (COE) in Prestigious, Peer-Reviewed Journal

[Lisa Carter-Bawa, Ph.D., MPH, APRN, ANP-C, FAAN, CDI faculty member](#) and member of the Alliance of Black COE Directors, reflects on healthcare’s crucial mission to fight racial and socioeconomic disparities in cancer care.

In a recently published commentary, the Alliance of Black Community Outreach & Engagement (COE) urged increased investment and inclusion in community efforts with regard to involvement in cancer centers nationwide.

The article was published [in this month’s issue of JNCI: Journal of the National Cancer Institute](#) by lead author Dr. Hayley S. Thompson, and co-authored by [Lisa Carter-Bawa, Ph.D., MPH, APRN, ANP-C, FAAN](#), faculty member of the Hackensack Meridian Center for Discovery and Innovation (CDI), and director of Cancer Community Outreach and Engagement at the John Theurer Cancer Center. Dr. Carter-Bawa is also deputy associate director for Community Outreach and Engagement for John Theurer Cancer Center’s research partner, Georgetown University’s Lombardi Comprehensive Cancer Center.

Points throughout the commentary stressed the value of the COE’s role in addressing issues related to cancer burden and disparities in cancer centers’ catchment area communities.

“We must ensure that research, prevention, and treatment efforts are tailored to the demands of each community that these NCI-designated cancer centers serve,” said Dr. Carter-Bawa, who is director of the CDI’s Cancer Prevention Precision Control Institute (CPPCI), as well as a professor of Medical Sciences at the Hackensack Meridian School of Medicine. “Such community outreach and engagement is too often marginalized within the scientific community.”

[Read more](#)

John Theurer Cancer Center First in the Country to Evaluate New AI Technology Assessing Aggressiveness of Prostate Cancer Post Surgery

Urologic oncology researchers in the Department of Urology at Hackensack Meridian John Theurer Cancer Center (JTCC) at Hackensack University Medical Center — a research partner with Georgetown University’s Lombardi Comprehensive Cancer Center, an NCI-designated comprehensive cancer center — received a significant grant to evaluate a new artificial intelligence-based technology from Artera that would enable doctors to better estimate how aggressive a prostate cancer might be after undergoing radical prostatectomy (prostate removal surgery). Such information would allow clinicians to know which patients may need more intensive therapy post surgery.

Prostate cancer is the most commonly diagnosed cancer among men in the United States. Nearly 300,000 men will learn they have the disease in 2024, but not all of them have prostate cancer that requires treatment. For many years, doctors have been assessing imaging tests, genomics, and biomarkers that may differentiate aggressive cancers from slow-growing (indolent), early-stage prostate cancers.

The ArteraAI Prostate Test, an AI-enabled test, is the first of its kind to provide both prognostic and predictive results for patients with localized prostate cancer. Artera’s multimodal artificial intelligence (MMAI) platform leverages a unique algorithm that assesses digital images from a patient’s histopathology biopsy slide and their clinical data. The AI combines this information to determine their prognosis and predict whether a patient will benefit from a particular therapy. **Nitin Yerram, M.D.**, co-director of urologic oncology at John Theurer Cancer Center, received a grant from Artera to assess the MMAI platform for estimating prostate cancer aggressiveness in men who have had a prostate biopsy and underwent surgery.

“After a patient undergoes radical prostatectomy, we still need to determine if that cancer is an aggressive form of cancer that may require additional treatments or a low-risk cancer,” he explained. “While the test has been validated in prostate cancer patients who underwent other treatments like radiation therapy, we are excited to use their MMAI platform to predict patient outcomes for those who underwent surgery. [Read more](#)



HMH Emerge Program Selects Two Winning Irish Companies from Pitch Competition

The HMH Emerge Program, a pitch competition jointly run by Hackensack Meridian Health and Choose New Jersey, has selected two promising companies from Ireland to support through their growing stage.

Spiorad and NeuroBell are the two winning companies, as selected by the HMH Emerge board of directors on November 8, 2024. Spiorad Medical is simplifying the closure of femoral vascular access, making complex cardiovascular procedures safer for patients and easier for physicians. NeuroBell offers a pocket-sized EEG monitor with automated neonatal seizure detection, with minimal setup and maintenance.

The companies will receive a combination of financial support, clinical support by way of trials or clinical studies, and business model refinement to help better position them for the U.S. provider market. This would be applied in line with the company’s needs.

“HMH Emerge has selected two companies with absolutely winning ideas to address common health challenges,” said Ihor Sawczuk, M.D., FACS, Hackensack Meridian Health’s president of Academics, Research and Innovation, founding chair of the Hackensack Meridian Health Research Institute, and also associate dean of Clinical Integration and professor and chair emeritus of Urology at the Hackensack Meridian School of Medicine. “We eagerly anticipate what these groups can do in the marketplace — and in the clinical setting.”

“The innovation coming out of Ireland is truly remarkable, and we are proud to help Spiorad and NeuroBell expand their transformative solutions here in New Jersey,” said Bill Noonan, chief business development officer at Choose New Jersey. “This partnership exemplifies how our state fosters cutting-edge health care advancements by connecting global talent with unparalleled resources.” [Read more](#)

New Edition of Nursing Research Newsletter

The Winter 2025 issue of the New Knowledge & Innovation “*What’s Percolating?*” has just been published.

This Hackensack Meridian Health publication is developed by the New Knowledge & Innovation Council of the network-wide Nursing Congress to share nurse-led research and project updates across the network.

Find it on MyHMH under “Institute for Nursing Leadership and Practice” or directly [here](#).

Top Grants from the Past Quarter

Principal Investigator	Grant Number	Project	Grant Amount
Dick, Thomas	NIH 1R01AI184502-01A1	Shorter and more effective oral regimens for <i>M. abscessus</i> pulmonary disease	\$895,538
Xue, Hai-Hui	NIH 2R01AI112579-10	Regulation of T cell exhaustion via 3D chromatin architecture	\$624,855
Zakrzewski, Johannes	NIH 5R37CA250661-04	Harnessing the thymus for long-term tumor control with hematopoietic stem cell-derived naive CAR T cells	\$485,503
Ganapathy, Uday	NIH 1R21AI187674-01	SC25-modified rifabutin analogs as a novel medicinal chemistry strategy to overcome drug-resistant tuberculosis	\$265,650
Cofield, Vanessa	NJEDA PROD-00313174	NJ Child Care Facilities Improvement Program	\$199,642.56



RESEARCH UPDATES & EVENTS

WINTER 2025

HMH Research: New “RDP” Platform Streamlines Projects Network-Wide

The HMH Research Data Platform (RDP) empowers Hackensack Meridian Health research, clinical and administrative stakeholders to assess the potential of research projects by providing streamlined access to aggregate data based on specific criteria. Researchers no longer need to request a preliminary report from DTS in order to retrieve aggregate data.

This centralized platform simplifies data querying, enabling efficient study cohort construction and feasibility testing through structured storage and management of Hackensack Meridian Health data. The RDP’s advanced search functionality allows for refined criteria selection, leading to more specific study populations. The inclusion and exclusion criteria can be copied into study protocols, facilitating data extraction with clear, unambiguous definitions and minimizing reliance on technical support. This accelerates the research process from concept to feasibility assessment. Furthermore, the RDP summarizes aggregate data stratified by gender, age at admission, race/ethnicity and the patient’s primary language. These results can be used for grant applications without requiring a formal data request or IRB approval.

The RDP accelerates the research lifecycle, strengthens grant submissions, streamlines protocol development, enhances clinical research, and improves patient care. The RDP is constantly evolving to meet the growing needs of our research community. Future developments include:

- Enhanced collaboration: Facilitating data-sharing and analysis among researchers.
- Expanded data access: Building a data catalog with readily available data items, enabling approved researchers direct access to study-specific data.
- Integration with additional data sources: Incorporating data from, for example, Huron, ATune, OpenSpocimen and Oncore.
- Continuous improvement: Ongoing platform development based on user feedback and evolving research needs.

The DTS team will offer a training session on how to best utilize the platform on Wednesday, March 26, 2025, from 2-3 p.m.

Please contact ora@hmn.org for the login information for the training session.

For questions about the platform, please contact: rdp_support@hmn.org

This is a link to the platform: <https://rdp.ekam.hmn.org>

To request access, submit this [Data and Analytics - Service Access Request \(SAR\)](#) form. Under “Select Application,” select “Data & Analytics (Business Intelligence),” under “Tool,” type in “Research Data Platform,” and under “Report or Dashboard,” type in “RDP.”

Registration Now Open for the Fourth Annual HMHRI Research Symposium

The fourth annual HMHRI Research Symposium is now open for registration. All Hackensack Meridian Health research leaders and team members are invited to attend the event, which will be held on May 29, 2025, from 8 a.m. - 2 p.m. at the Hackensack Meridian School of Medicine. A virtual link will be provided to those who cannot attend in person.

The symposium highlights some of the most promising research conducted within the network in the last year. Opening remarks will be delivered by Ihor S. Sawczuk, M.D., FACS, president of Academics, Research and Innovation. They will be followed by presentations on a variety of topics, including environmental influences on child health outcomes, lung cancer screening approaches to address inequities and sleep and shift work. There will also be two panels: one on the topic of cannabis in research and another on the clinical implications of emerging CAR T cell research. The event will conclude with a networking lunch.

Space is limited, so registration is required for entry to the event. Researchers can learn more about the symposium, including the topics and presenters, and register at <https://events.hackensackmeridianhealth.org/hmhri2025>.

Resident / Fellow Research Day Will Feature Dr. Judy Aschner as Keynote Speaker

Judy Aschner, M.D., director and member scientist at the Center for Discovery and Innovation, and Hackensack Meridian *Health* Professor of Pediatrics at the Hackensack Meridian School of Medicine, will be delivering the keynote address titled, “Pursue Your Professional Passion,” for the Resident / Fellow Research Day. More about Dr. Aschner’s background and research interests can be found [here](#).

The Resident / Fellow Research Day is an annual event that provides opportunities for residents and fellows affiliated with Hackensack Meridian *Health* to present original research studies and vignettes to the academic and professional communities. It is conducted to enable health care professionals to maintain proficiency in evaluating critical scientific data, and to promote and present examples of practice-based learning.

The event will take place virtually on May 22, 2025, from 8 a.m to 12:45 p.m. Abstracts were due on March 2, 2025, and are currently being reviewed, so no further submissions will be accepted. However, the entire Hackensack Meridian *Health* research community is invited to attend the event. More information, including a link to add the event to your calendar, is available [here](#).

Director and Manager of the Hackensack Meridian Health Investigator Initiated Research Program to Present at the ACRP 2025 Conference

Elli Gouna Paleoudis, Ph.D., director of the Investigator Initiated Research Program and Support Services, and Pamela Cooper, manager of the Investigator Initiated Research Program, will be presenting on April 26, 2025, at the annual Association for Clinical Research Professionals (ACRP) conference in New Orleans, Louisiana. Their session, titled, “Starting from Scratch to Establish an Investigator-Initiated Research Program,” will focus on the importance of offering this type of support program at research institutions, regardless of research portfolio size. They will also deliver scalable steps for success and will highlight Hackensack Meridian *Health*’s program as an example of a bottom-up approach to establishing this infrastructure. The session will provide a framework for discussion and an opportunity to share lessons learned. Dr. Gouna Paleoudis and Cooper are also currently featured in the ACRP blog, which can be accessed [here](#).

Resources for Determining Whether Your Project is Research (and May Require IRB Approval)

Whether or not a project is considered “human subjects research” from a regulatory standpoint can have significant implications for the approval process that the investigator must follow. If a project is considered human subjects research, it must be submitted (and approved) by the Institutional Review Board before the researcher can begin to collect data. Researchers can utilize the [Human Subjects Determination Worksheet](#) to help them gain insight into their study status.

Although some studies are relatively clear-cut and can be easily categorized as research (versus quality improvement, for example), other studies may be a little more nuanced. Fortunately, resources are available to help researchers make that determination. For example, a recent presentation was delivered to the research community addressing the topic. A recording of it is available [here](#) and the slides from the presentation are available [here](#). If researchers need further guidance, they are also welcome to contact hmhrib@hmhn.org

Upcoming Educational Events Not to be Missed

The Office of Research Communications and Education is excited to share its upcoming educational opportunities and initiatives. There will be several new Investigator Training Lecture Series presentations addressing a variety of topics, such as research-related policies and standard operating procedures (SOPs), reliance agreements and pediatric consent/assent. Additionally, a [multi-part series on peer reviews](#) will begin on March 26, 2025, in collaboration with the Center for Discovery and Innovation (CDI). This series will begin with an introduction to the peer review process. Subsequent presentations will include individual lectures and discussions on special considerations for basic, translational, clinical and behavioral manuscripts, respectively. The series will then conclude with an overview of the grant review process, reviewer responsibilities, and confidentiality considerations as they relate to the peer review of grants. Featured presenters will include Drs. Milena Kordalewska, Alvin Makohon-Moore, Florian Thomas, Heather Derry-Vick and Erika Shor.

As a reminder, the quarterly orientation for staff members continues to be offered on an ongoing basis. It is mandatory for research staff, but it is available for anyone to join — for the first time or as a refresher. We are also still offering a 1:1 orientation for principal investigators; they can register for a session at any time. More information about the orientation programs and about other educational opportunities is available [here](#).

Conflicts of Interest Policy for Research Updating Guidance for Outside Activities

Purpose

HMH recognizes the importance of researchers engaging with industry to bring important discoveries to the public. These engagements must reflect the highest standards of research integrity that reach beyond applicable laws and regulations. However, not all activities represent these values and therefore to ensure HMH continues to align with the highest-standards of academic medical research, HMH policies on Conflict of Interest (COI) and Research are being updated.

HMH policies are meant to safeguard the institution and protect the reputation of researchers. By adopting this policy, we are ensuring that our approach to conflicts of interest is in line with those followed by similar organizations.

Key Changes

Prohibited Outside Activities describe outside relationships (whether compensated or uncompensated) that present a financial conflict of interest that is not manageable conflict of interest per HMH COI and Research Policies. These include:

- Any activity in which HMH resources (including facilities), funding and/or personnel are diverted for the business growth and financial gain of an Outside Entity. Exceptions are granted for relationships that provide mutual benefit to HMH's non-profit Research Mission and an Outside Entity and are managed and negotiated through the appropriate contracting office.
- Industry-Sponsored Promotional Speaking Relationships, also known as Speakers' Bureaus, in which they are designed solely and/or predominately for company promotional purposes, such as sales and/or marketing. Exceptions are industry-sponsored events with the purpose to disseminate research, scientific and or professional knowledge to peers. In these circumstances, the following must be true:
 - Presentation is free from company influence and branding (e.g. content, tone or views). Researcher has full control of the content including slides and handouts.
 - Researchers are not provided additional training and or compensation including travel and meal reimbursement as preparatory for their speaking engagement.
 - Any compensation received, including travel and meals, are fair market value and set-forth in a written agreement.
- Consulting Arrangements without deliverables, such as guaranteed payment without any associated duties or scope of work. Exceptions to this are consulting agreements that provide specific tasks and deliverables for a specific issue and/or scientific question.
- Industry-Sponsored travel and meals associated with promotional events (prohibited by [HMH Gift's Policy](#)).
- Malign Foreign Talent Programs as defined by [OSTP Guidelines](#).

Researchers who participate in prohibited outside activities will not be permitted to engage in research at HMH in which they have a financial conflict of interest. Therefore, a researcher's option will be to:

- Conclude relationship with Outside Entity, or withdraw from HMH research study.

Resources

[HMH COI Website](#)

[New Jersey's Pharma Ban](#)

[OIG Special Fraud Alert: Speaker Programs](#)

[AAMC Recommendations \(2008\)](#)

[PromotionalSpeakingChecklist.pdf](#)

New Translational Research Office Established to Forge Connections Between Researchers and Clinicians

The John Theurer Cancer Center (JTCC) and the Hackensack Meridian Health Center for Discovery and Innovation (CDI) Translational Research Office (JCTO) was developed to serve as an essential bridge bringing together CDI researchers and JTCC clinicians with the mission to deliver innovation from the bench to the clinic. Its founders' goal is to support the network-wide Oncology Translational Research Program to execute preparatory/preliminary proof-of-concept studies developed between physicians and basic research scientists at the CDI. The JCTO collaborates with researchers and clinicians throughout the network to identify, collaboratively develop and execute translational studies ensuring full compliance with all local, state and federal regulations and Hackensack Meridian Health policies. Thus far, the Office has already supported a handful of translational studies, including activating study sites, screening patients, enrolling participants and completing a total of around 1,000 patient visits. The team has also implemented a data assessment plan for improving data accuracy and quality, designed and built a REDcap database for clinical data capture, improved amendment approval times for studies the office/team is supporting, helped expand and accelerate the CDI Organoids program and provided project-based and ad-hoc support to CDI researchers.



FEATURED RESEARCHER

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The CDI Experts: Chauhan's Childhood Curiosity Sparks Successful Career In Research of Fungi

Neeraj Chauhan, Ph.D., has been accustomed to life in a lab since he was a child. Growing up in India, his curiosity was sparked by the opportunity to regularly visit the lab where his father worked as a professor of chemistry. The early exposure to research put him on a continuing scientific path, now as an adult with two college-aged children of his own.

"I was especially fascinated by a giant glass distillation unit to make distilled water. I thought that was the coolest thing in the world," said Dr. Chauhan. "Looking back, I feel that spending time with my dad and those frequent visits to his laboratory developed my interest and allowed me to pursue a career in research."

Now that career spanning more than 30 years has landed Dr. Chauhan a position at Hackensack Meridian Health Center For Discovery and Innovation (CDI). As associate member for the past two years, he continues to focus his research on fungal pathogens of the *Candida* genus; particularly two leading human pathogens that can cause both mucosal and invasive infections.

"The work of Neeraj Chauhan is a terrific complement to the groundbreaking work we have in fungi across multiple laboratories," said David Perlin, Ph.D., chief scientific officer and executive vice president of the CDI. "He is a valued colleague."

The Road To CDI

Although he received his initial education in India, eventually Dr. Chauhan didn't have to travel far to find his fit at the CDI. His previous role was as a faculty member at Rutgers New Jersey Medical School. According to Dr. Chauhan, the move to Hackensack Meridian Health has been excellent.

"What really drew me to the CDI is its focus on translational research and the ability to collaborate with clinician scientists. The quality and breadth of research done at CDI is absolutely amazing," he said. "Collaborating with colleagues who are experts in various fields, we can do really high impact research. This has allowed me to integrate my background in basic science with clinical research which is quite difficult in a more traditional academic set up."

Dr. Chauhan says his interest in medical mycology (study of fungi) began during his postdoctoral years at Georgetown University. He explains that's where he learned to appreciate the profound impact fungi have on human health, wanting to answer questions like: what makes this fungus so sticky to human skin? Why does it colonize? What makes it so resistant to drugs? And how can we stop outbreaks in nursing homes and hospitals?

And he says the expertise and research portfolio of fungi at the CDI under the leadership of Dr. Perlin was a huge draw in coming to Nutley. [Read more](#)





FEATURED RESEARCHER

WINTER 2025

Charles E. Binkley, M.D., FACS, HEC-C

Director of AI Ethics and Quality
Hackensack Meridian Health
Associate Professor of Surgery
Hackensack Meridian School of Medicine

The recent spike in the use and abilities of artificial intelligence (AI) has been the source of tremendous discussion, concern and speculation. People have written about and predicted a “Brave New World” where AI supercedes all human capacities and renders them useless. And they have continued to wonder what their new roles will be, given what AI is able to do in today’s day and age. Writers, accountants, lawyers and many other professionals are pondering whether their skill sets will still be needed and utilized in a future where AI has access to practically unlimited data and can provide responses to complicated questions within seconds.

Healthcare professionals, including physicians, are asking the same questions. If AI gains the ability to provide better predictive models and more objective diagnoses, what do physicians bring to the table? If AI does not fall prey to frustration, fatigue and human error, then how can physicians “compete”? Although this topic has been met with trepidation by many in a wide range of professional fields, Charles Binkley, M.D., FACS, HEC-C, a surgeon and ethicist, is actually quite optimistic about the future of AI and health care. He met with us to share his take on the future of AI and medicine, how he got to his current position at the intersection of surgery and ethics and some of the exciting projects on which he has been working (including a new book).

How did you decide to go into medicine and specifically become a surgeon and ethicist?

I have always wanted to be either a doctor or a priest. In fact, I was recently cleaning out some old boxes and discovered an essay that I had written at the age of six in which I stated that I wanted to be a doctor or a priest.

I earned my undergraduate degree from a Catholic seminary, so I began the route of priesthood, but ultimately chose medicine for my career. I opted to specialize in surgery for the most pernicious cancers, those of the pancreas and liver. I did so because those patients need technical excellence as well as compassion and kindness, and I wanted to be able to provide all of those things.

Medicine for me is not just a science, but an art as well. There are those humanistic qualities that must be part of the equation.

In terms of my route to a specialization in bioethics, I think I’ve always been intrigued by that realm. As doctors, we encounter ethical questions on a daily basis. For example, it is challenging to always know the right thing to do as a physician. There are cognitive, emotional, ethical and moral challenges inherent in our role.

What led you to specialize in the area of AI research within bioethics, and what are your thoughts on the future of AI in medicine?

I became interested in AI because of its potential for good and bad and because of the ethical implications that it held. AI can be helpful because it narrows the range of possibilities. We are always contending with what is the right thing for the patient, and most clinicians live with a significant amount of uncertainty. When used responsibly, AI can be a powerful tool for clinicians to utilize to narrow that range of uncertainty. It can allow physicians and other health care professionals to better engage with patients and share decision-making.

I am also optimistic because I believe that the advent of AI in medicine offers an opportunity for physicians to refine their roles within the field and think carefully about what they bring to the relationship that AI cannot. They need to consider what about being human is unique to patient care beyond an AI model. The models will be more accurate, kinder, cheaper and more accessible. But physicians have a place in medicine, as well, and it is important to be intentional in considering what it means to be a human in this relationship. The medical profession has struggled with its identity for the last half a century, and this is an important time for health care professionals to define what they bring to patient care that an AI model can’t.

When it comes down to it, AI is like a scalpel; it can be used for benefit or harm. We need to skew in the direction of benefit, and I am very hopeful that this is possible. I believe that humanity is intrinsically good and that we will get to where we need to be. At Hackensack Meridian Health, it looks promising. I am humbled and honored to be in the role that I am at Hackensack Meridian Health, and it is clear that everyone here wants to make sure we implement clinical AI in the most responsible way possible. I hope to be able to continue to work in that capacity to facilitate that for the clinicians and patients.

Are you currently involved in any research projects or are there any recent projects you would like to share?

I am exploring concerns related to transparency and AI in medicine and trying to think about how we can use our values and systems in place to foster transparency and trust when deploying AI models.

I have also been working on approaches that will help clinicians reconcile disagreements with AI models. As AI becomes more and more sophisticated, physicians will need a way to utilize the AI model to systematically make a prediction and to figure out what to do with it. There needs to be a standardized tool to handle disagreements between what AI proposes and what the physician believes is in the best interest of the patient.

In addition to those two projects, I also recently co-wrote a book titled *Encoding Bioethics: AI in Clinical Decision-Making*. The book addresses ethical concerns from the perspective of each of the stakeholders who will develop, deploy, and use artificial intelligence systems to support clinical decisions. This includes the perspectives of programmers, health system and health insurance leaders, clinicians and patients.

What led to your writing the book and how did you prepare for it?

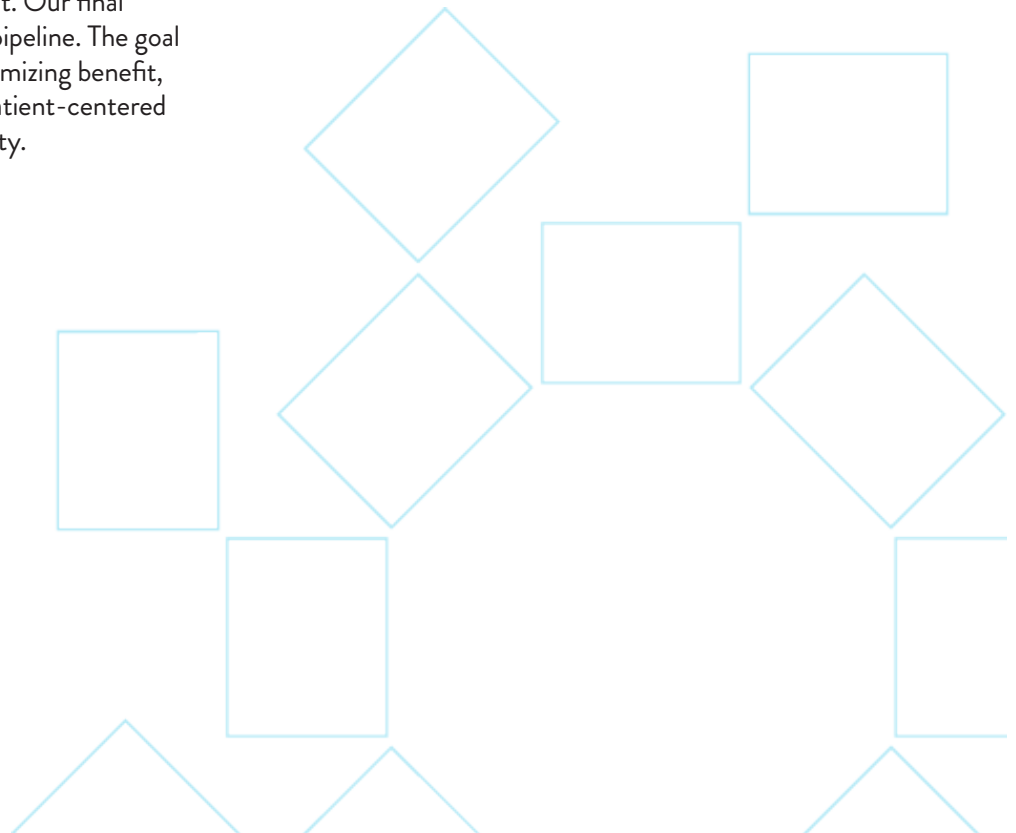
I was actually asked to write it. The University of California Press contacted me. They had heard about my work and mentioned that they liked my translational approach to AI. They asked me to share my concerns about AI and some ways of addressing them. My clinical background informed my work, and I tried to make the content as accessible as possible for people. I also included another surgeon who I knew was getting his PhD in data science, my co-author, Dr. Tyler Loftus. He wrote more about the technical aspect of AI, and I wrote more about the ethical side of it. Our final chapter is on governance and overseeing the AI pipeline. The goal is to integrate AI into good clinical practice: maximizing benefit, minimizing harm, being transparent, delivering patient-centered care, being truthful and maintaining confidentiality.

Where do you think more work related to AI and medicine is especially needed?

I think that we need to focus on helping medical students think about AI in clinical practice and as opportunities for research. It is also important to help investigators to think about how best to implement AI in their work.

What do you find most gratifying about your career as a physician-scientist?

I find it incredibly gratifying to help foster others to be leaders in the field of AI and medicine. I really enjoy helping other people recognize their potential for leadership, and that is where my efforts have been most recently. I run an AI ethics lab in the medical school and try to mentor other clinicians interested in AI. I love that I can combine clinical and leadership experiences, as well as knowledge about AI into one.





FEATURED RESEARCH ADMINISTRATOR

WINTER 2025

Lisa Ogaret Asmar, RPh, MBA Network Director, Research Pharmacy-IDS *Hackensack Meridian Health*

Research pharmacy plays a crucial role in clinical research by ensuring the safe and effective administration of investigational products, prioritizing patient safety and adhering to regulatory requirements. It is not the first department that you would think of when you consider all of the groups involved in research. The principal investigator, research nurses and even data managers and other coordinators are usually the groups that receive the most attention. However, the pharmacy team plays a crucial and irreplaceable role in the successes of clinical trials. They are the ones who oversee the procurement, inventory and compound of investigational products and ensure proper administration and storage conditions.

The Hackensack Meridian Health network research pharmacy team is led by Lisa Asmar, RPh, MBA, who, within the first year that she joined, has already made tremendous progress in unifying the different research pharmacy sites, so that they are all following harmonized procedures and policies. She has also launched a new [intranet page](#) specifically for research pharmacy and has supported individual sites to ensure that they have the tools and education needed to be successful in research. Asmar sat down with us to share more information about the world of pharmacy at Hackensack Meridian Health.

In your own words, what does your workday look like on a day-to-day basis?

Each day is often different, depending on the focus and priorities of the organization during that time. Leading research within the pharmacy space is a dynamic role; it requires adapting to changing needs and priorities. The common thread is the patient-centric focus, especially regarding safety with investigational products, and the leadership aspect of managing research portfolios within the organization.

How did you decide to become a pharmacist?

It's an interesting, but sweet story. I knew I always wanted to help others, and medicine was intriguing to me. In high school, it was getting to the point where I needed to make a decision about colleges and major choices. One day, my dad and I were in the kitchen and he asked what I wanted to do and where I wanted to go for college. I let him know that I was interested in becoming a surgeon. He looked at me and smiled with a gentle concern. He let me know that he thought I would be great no matter what I decided, but that he worried that it could be a very time-consuming role and that I might not have enough family time. That summer, I had been working a side job at the neighborhood drug store as a pharmacy technician and was able to see firsthand what pharmacists provide to patients on a daily basis. Not only were they well-versed on the medications themselves, but they also played a role in comforting and advising patients. So, with that experience in mind, I asked my dad what he thought about me becoming a pharmacist. He loved the idea, so I went to Northeastern University in Boston to study pharmacy and have never regretted my decision.

How did you become involved in the research end of pharmacy?

Believe it or not, it was completely accidental. At Northeastern University, there is a cooperative program in which you are able to take a break from academics and go to work within your major, in my case, as a pharmacy student. I spent my "co-op" at the University of Massachusetts Medical Center, where I worked in the main pharmacy. At some point, the technician who supported the research pharmacy was on leave, and they asked if I could help cover. Of course, I was thrilled to be part of that space and actually was not even aware pharmacists were part of research in any way. After I graduated, the director of Research Pharmacy called me to ask if I was looking for a job. I was anxious to pay off my student loans and was absolutely looking for a job, but I couldn't help asking her why she would want to hire me when I had no experience in research. The director responded that she was not fazed by my paucity of experience and that she liked the fact that I could be molded into the position. This director is still in my life and one of my original mentors.

What role does pharmacy play in research at Hackensack Meridian Health?

We have a specific group of research pharmacists at Hackensack Meridian Health who are an integral part of the Hackensack Meridian Health Research Institute. Our team also includes research pharmacy technicians who support pharmacy research. This team of pharmacists and technicians has worked to establish their roles as essential partners in clinical research by creating opportunities for education for teams, patients and family members on a range of topics related to investigational products. The general focus of the educational programming is the safe management of investigational medications.

As part of the comprehensive care, research pharmacists are involved in clinical trials at Hackensack Meridian Health from the beginning (start-up) to the end (close out), not to mention what happens in the middle. Some of these duties include building order sets in Beacon or Paper, verification of patient orders, drug preparation, drug dispensing and importantly, determining study feasibility. In the case of the latter, the pharmacy team must determine whether there are any barriers to Hackensack Meridian Health participating in certain types of trials, and if so, whether or not they can be overcome. They also need to ensure Hackensack Meridian Health has the right freezers and the right protocols in place to keep the drugs safe and within the required temperature range and storage conditions.

What are some tips for clinical research teams from a pharmacy perspective?

Here at Hackensack Meridian Health, we are fortunate to partner with many strong clinical research teams. The key items our team requires to assess feasibility fully are the documents to support a clinical trial. To facilitate start-up efficiently and conduct a comprehensive feasibility, we require the protocol, Investigator Brochure, Pharmacy Manual and other supporting documents. The sooner we receive these, the better. Additionally, the final version of these documents is required for final approval. Any amendments taking place would require the same information, preferably as two versions: the “red lined” and the final copy.

When we review a protocol, we consider the clinical content, which is essentially the collaboration that would take place between research pharmacists and clinical research nurses and physicians, and the medication component. We review the dose, the route, the frequency of administration and the length of the study. If it is in the clinic, we check to see if PKs [blood draws to determine how the body interacts with administered substances for the entire duration of exposure] will be drawn or if premedication is needed. If there is another supportive medication from another pharmacy or an emergency medication that might be needed, our team will build those into the plan, as well.

How did you end up at Hackensack Meridian Health, and what has been unique about working here?

In 2020, I moved to California to pursue a new opportunity in clinical trials. This was right at the beginning of the COVID-19 pandemic. Because of COVID, my job went from on-site to virtual. My daughter was attending Parsons School of Design in NYC in 2022 to pursue a Master's in photography. Since my role was virtual, I decided to move back east with my daughter. However, the time zone difference ended up being a bit challenging. I came across an opportunity at Hackensack Meridian Health and ended up meeting Will Carroll, my current leader. He offered me a network director position for pharmacy research, which I gladly accepted, and the rest is history.

There are so many unique aspects of Hackensack Meridian Health, from the unique matrix we have to the group of talented individuals that make up this organization. Mainly, what stands out is the dedication of teams that come together to care for patients.

What do you love most about what you do?

First, I love having the opportunity to try to make a difference in patients' care and lives. Being able to be part of a patient's care is a humbling experience. Research offers options for our patients who may otherwise not have alternatives. It offers potentially life-saving treatments and can lead to improvement or prolongment of precious lives. Second, I love working with the incredible teams at Hackensack Meridian Health; collaborating with the different groups here has been very rewarding!

Do you have any extra-professional interests or hobbies?

On the weekends, I am a fitness instructor for the Pure Barre Corporation in NYC. Pure Barre is a fitness method that combines elements of ballet, Pilates, and yoga. I really enjoy living in NYC and try to take advantage of all of the interesting things there are to do here. I am also working on obtaining my helicopter pilot license, and I play the violin and spend time with my family and friends.



ACADEMICS BULLETIN

WINTER 2025

Hackensack Meridian School of Medicine Authors Chapter in AMA Textbook

Building a medical education curriculum that can not only train doctors but also make a difference in the community is not only a possibility — it's a necessity, according to a new chapter authored by faculty from the Hackensack Meridian School of Medicine (HMSOM), just published in a major medical education textbook.

The chapter, "Social Responsibility as the North Star to Transform Medical Education," is in the textbook, *Reimagining Medical Education: The Future of Health Equity and Social Justice*, part of the American Medical Association's "MedEd Innovation Series."

The chapter outlines what the medical school, which admitted its first students in 2018, has done with a "blank slate" to tailor its curriculum as relevant and impactful on the communities of New Jersey. The authors argue that the mission of a medical school should systematically drive the content of the curriculum, the teaching methods and the school's structures. Illustrating how this is done at HMSOM, they describe the foundational philosophy and principles of the school that call for all aspects of the learning to account for not just the biologic determinants of health, but also the social and other determinants of health.

The authors share a number of examples from the HMSOM program showing how to do this. These include the weekly patient presentation that frames everything students learn, and pushes them to cognitively integrate all of the determinants of health into their thinking and learning. Another example shared is the innovative 3+1 structure of the curriculum, enabling students to achieve advanced goals and use curricular time flexibly — ensuring all students develop their target competencies and are well-prepared for residency.

Another example shared is the integration of Health Systems Science with the Human Dimension course, which puts the students right into homes and communities of New Jersey, where their growing expertise is most needed. One example of the impact made by a student included in the chapter was the case study of "Andy," a medical student.

From his first week at the school, the student had visited a historically underserved community, and immediately noted the traffic congestion and travel problems, considering the lack of easily accessible mass transit. Following visits to the local food bank and the long-running work with a family from the same community, the student came up with an idea for a capstone project: to advocate for another bus stop to help the family he was working with, as well as the community at-large.

Andy created awareness about the lack of bus routes, met with the transit bus company, collected data and proposed a new bus route and continued his advocacy project up through the end of his years at the school.

"At the time of Andy's graduation, the transit company added a bus route to the area, increasing the community's access to an abundance of resources," write the authors.



Carin & Roger Ehrenberg Continue Foundational Support for the Human Dimension Program at Hackensack Meridian School of Medicine with \$3 Million Gift

Hackensack Meridian Health Foundation is pleased to announce a \$3 million leadership gift from Carin and Roger Ehrenberg to support the Human Dimension program at the Hackensack Meridian School of Medicine. The Human Dimension program is foundational to the curriculum and connects students with people in the community to understand the social determinants of health (SDOH) that greatly impact health outcomes. practice: maximizing benefit, minimizing harm, being transparent, delivering patient-centered care, being truthful and maintaining confidentiality.

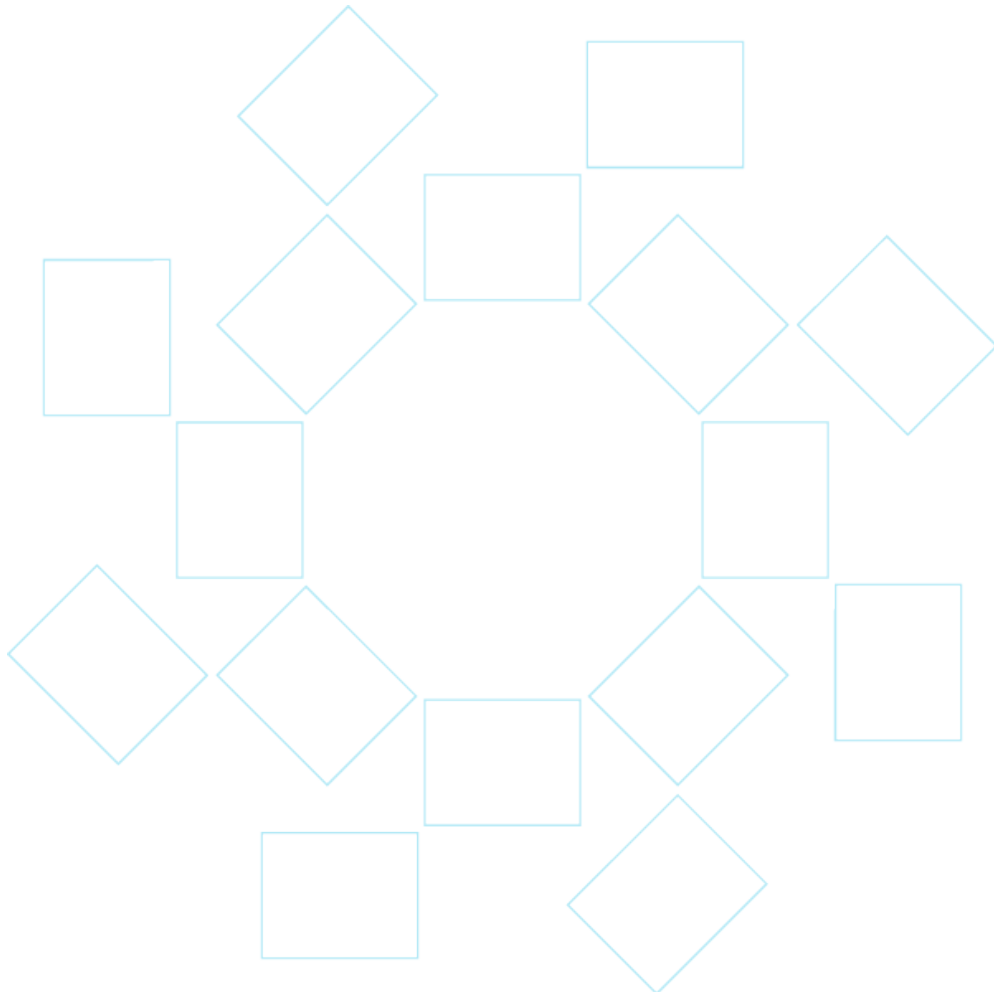
“The Human Dimension program is the cornerstone of the Hackensack Meridian School of Medicine’s innovative curriculum and prepares the next generation of physicians to excel in a new state of health care,” said Robert C. Garrett, FACHE, CEO of Hackensack Meridian Health. “We are deeply grateful for the continued support of Roger and Carin Ehrenberg which helps us reach our goals to expand access to care and build healthier communities.”

By interacting with underserved people throughout the entirety of their education, medical students gain a greater understanding of financial and housing instability and other socioeconomic challenges that greatly impact health.

Since the launch of the school in 2018, 590 students have cared for nearly 600 families in nine communities across five counties. Students have partnered with more than 200 community organizations, have nearly 100 community health projects and have completed 278 individual capstone projects focused on creating health care solutions.

“The Human Dimension program is the heart of the Hackensack Meridian School of Medicine’s mission and ensures that our students embody humanism, cultural humility, leadership and a strong commitment to equity in their patient care,” said Jeffrey Boscamp, M.D., president and dean of Hackensack Meridian School of Medicine. “This program significantly impacts patient outcomes, and we thank the Ehrenbergs for their generous commitment. It will be instrumental in advancing our efforts to shape the next generation of esteemed physicians who bring excellence, empathy and advocacy into their practice while expanding access to care to those who need it most.”

[Read more](#)





ACADEMIC AFFAIRS ROUNDUP

WINTER 2025

Network

Fall Leadership Chief Resident Summit held on Monday, November 4, 2024, in Edison, NJ.

New structured Residency Research Rotation at Center for Discovery and Innovation.

Jennifer Coppola, Director of Academic Affairs accepted into the 2025 GROW Leadership Program.

North Region

HUMC Neurology Residency accreditation site visit occurred on November 19; pending decision (April 2025).

HUMC Radiology in process of contracting with Radiology Residency Program Director.

PMC Podiatry notification of accreditation status maintained after Summer 2024 site visit.

Central Region

JFKUMC Neurology Residency applying to convert the program to a four-year program vs. three-year.

Newly Fellowship Council-accredited Advanced Thoracic Fellowship at JFKUMC matches first fellow mid-November.

JFKUMC PM&R residents presented multiple posters at the American Academy of Physical Medicine and Rehabilitation 2024 Annual Assembly, including: Ferber, Ally, M.D., Olko, Bart, M.D., Patel, Esha, D.O., Lee, Robert, D.O., Abbott-Korumi, Aimee, D.O., Greenwald, Brian, M.D., "A Brain Bleed That Breaks the Heart: Subarachnoid Hemorrhage Induced Takotsubo Cardiomyopathy."

Patel, Esha, D.O., Markos, Steven, M.D., Ferber, Ally, M.D., Joki, Jaclyn, M.D., Jou, Stacey, M.D., "Statin' the Obvious: Statin Necrotizing Autoimmune Myopathy."

Abbott-Korumi, Aimee, D.O., Ferber, Ally, M.D., Patel, Esha, M.D., Olko, Bart, M.D., Lee, Robert, D.O., Jafri, Iqbal, M.D., "Sphenopalatine Ganglion Block for Central Pain after Thalmic Ischemic Stroke." Anniversary on September 17, 2024.

South Region

JSUMC Gynecologic Oncology Fellowship pending accreditation site visit on December 6, 2024.

JSUMC Gastroenterology Fellowship accreditation application submitted; pending decision (January 2025).

JSUMC Interventional Cardiology Fellowship accreditation application submitted; pending decision (January 2025).

Additional items of note:

1. Our application for a General Surgery Residency Program at JFKUMC was approved by the ACGME in January. The first residents will join the program in June 2026.
2. HMH/HMSOM was chosen as a host site for an ACGME Development Conference to take place in February 2025. MaryGrace Zetkolic, M.D, Internal Medicine Program director at HUMC and vice chair for Education in the Department of Medicine, is the course director.



QUARTERLY QUESTION

WINTER 2025

Which of the following is **NOT** a component of a research protocol?

- a. Ethical considerations
- b. Background
- c. Principal investigator credentials
- d. Study procedures

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

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