



Fall 2022

CAMPUS QUARTERLY

HMSOM NEWS

Hackensack Meridian School of Medicine Welcomes 2022 Matriculants with White Coat Ceremony

The Hackensack Meridian School of Medicine welcomed its newest class of 157 students with a White Coat ceremony on July 18, 2022 at the New Jersey Performing Arts Center in Newark. The School admitted its first class in 2018 with 60 students.

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

“The Hackensack Meridian School of Medicine continues to be a downpayment on a better future – for patients, for our health network, and beyond,” said Robert C. Garrett, FACHE, CEO of Hackensack Meridian Health. “This innovative approach to medical education will humanize healthcare, improve outcomes and create more equitable healthcare for all.”

“Medicine is a sacred calling,” said Jeffrey R. Boscamp, M.D., interim dean of the Hackensack Meridian School of Medicine and a professor



MESSAGE FROM THE DEAN

Our White Coat Ceremony in July welcomed the fifth cohort to the School, and we could not be prouder of what we know these students will do and how they represent the future of medicine. The new academic year promises to be the brightest one yet for our institution.

Interim Dean, Dr. Jeffrey Boscamp

of pediatrics. “Even in a sometimes-tumultuous world, doctors are the constant provider of wellness and care which is so crucial to humanity. We are proud to be a source of so much good being contributed to society.”

Nearly 6,000 students applied to join this year’s class. The cohort is made up of more than half New Jersey residents (53%), with another 11% from New York. Seventeen other states are represented among its members.

The group speaks 28 languages in addition to English, and 12 students already hold an advanced degree.

Continued on page 2

This year's incoming cohort boasts the highest-ever average MCAT score yet for the school equating to the top 12% in the nation.

Students have the opportunity to engage in a three-year path to residency, or to invest in a fourth year that offers one of a combined master's degree or graduate certificate program, intense clinical immersion, or focused research. Defining features of the curriculum include the Human Dimension, a longitudinal course which pairs students with families in the community to enhance real-world clinical skills outside a hospital or doctor's office.

Hackensack Meridian Health Announces NJBIZ Healthcare Heroes Recognitions



Hackensack Meridian School of Medicine was recognized as one of the 2022 NJBIZ Healthcare Heroes, in the Education category.

The honor focuses on the School's innovative curriculum - and especially the school's focus on the social determinants of health through community outreach like that through the distinctive Human Dimension course.

Also cited was the ongoing implementation of the legacy established by the late founding dean, Bonita Stanton, M.D., and particularly the vision, that: "Each person in New Jersey, and in the Unit-

ed States, regardless of race or socioeconomic status, will enjoy the highest levels of wellness in an economically and behaviorally sustainable fashion."

The Schools recognition comes amid other "Healthcare Heroes" honors for Hackensack Meridian Health: the neighboring Hackensack Meridian Center for Discovery and Innovation (CDI) was recognized in the Innovation category; Donald Parker, LCSW, president, Hackensack Meridian Carrier Clinic, and president, Behavioral Health Care Transformation Services, Hackensack Meridian Health, honored with a Lifetime Achievement Award; Nicole Harris-Hollingsworth, Ed.D., MCHES, vice president, Social Determinants of Health, honored in the Public Health category; Teri Wurmser, M.P.H., Ph.D., RN, vice president of nursing research, grants and academic affairs, Hackensack Meridian Health and dean of the Georgian Court University-Hackensack Meridian Health School of Nursing, honored in the Health Care Professional category; and Paula Riportella, a volunteer at the Hackensack Meridian John Theurer Cancer Center, honored in the Volunteer category.

"I want to congratulate our honorees, who are our everyday health care heroes," said Robert C. Garrett, FACHE, chief executive officer of Hackensack Meridian Health. "They embody and elevate our mission to transform health care and serve as leaders of positive change."

According to NJBIZ, the Healthcare Heroes program was created to recognize excellence, promote innovation, and honor the efforts of individuals and organizations making a significant impact on the quality of health care in New Jersey.

All honorees were celebrated at an awards ceremony on August 10. To learn more about the 2022 NJBIZ Healthcare Heroes program, [read more here](#).



AROUND THE SCHOOL

SOM Researcher Finds Airway, Ear Differences Separating Humans from Forebears

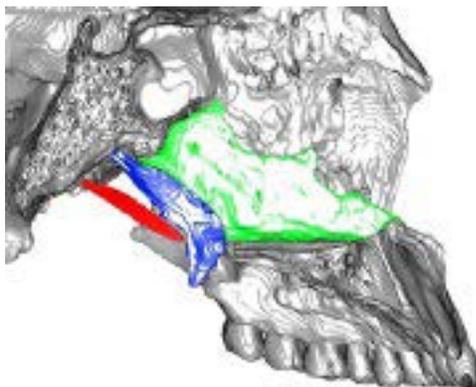
The middle part of the Pleistocene Era spans the time between late *Homo erectus* (the first hominid species to reach brain sizes overlapping the lower end of human variation) and the appearance of early modern humans in Africa and Neanderthals in Western Eurasia. So few fossils arise from those intervening 630,000 years that anthropologists have come to call this period the “muddle in the middle” with much controversy still surrounding their species attributions.

But some inroads are being made – particularly via the most recent paper by Anthony Pagano, PhD., an assistant professor at the Hackensack Meridian School of Medicine.

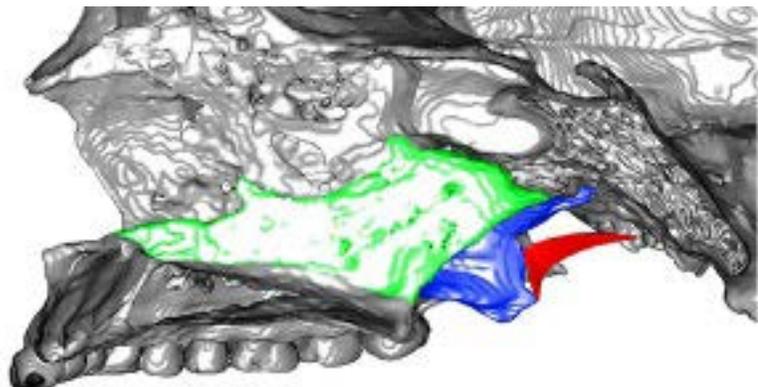
The nasopharynx or postnasal airway exhibited evolutionary changes among hominids over the last million years, leaving *Homo sapiens* and *Homo neanderthalensis* (our cousins, the Neanderthals) with shorter, broader passages, according to the paper in a special issue of *The Anatomical Record*, a Wiley journal.

This space is of great functional importance and evolutionary change in its anatomy impacts breathing, speech and ventilation of the middle ear cavity. The presence of some modern human and Neanderthal traits among older specimens may also reveal clues on the origins of these groups, according to the paper.

“This is the first study to utilize the nasopharynx as a source of traits in creating an evolutionary history of modern humans and Neanderthals through the murky mid-Pleistocene fossil record,” said Pagano.



Homo sapiens



Homo neanderthalensis

The scientists looked at fossils from the Pleistocene and compared them to modern humans. The species from prehistory included *H. sapiens* and *H. neanderthalensis* being the youngest, *H. erectus* representing the oldest, and other fossils of intermediate age whose species attribution remains controversial.

Shape differences among the fossils were assessed using coordinate-based morphometric methods. These involved both univariate measures such as distances and angles and multivariate statistical analysis of the coordinate data. Fossil specimens were assessed alongside a modern human growth series of crania ranging from neonates to adults in age.

The findings became noteworthy because they confirm humans and Neanderthals are different species – while also showing that the latter evolved because of a long period of isolation. The presence of some Neanderthal traits in the nasopharynges of half-million-year-old specimens from Western Europe supports this hypothesis.

Pagano's other recent publications have also focused on these passages of the ear, nose, and throat.

A 2019 paper in the same journal hypothesized that more horizontal Eustachian tubes (which connect the middle ear to the postnasal airway) allowed for more ear infections among Neanderthal children who do not experience a vertical reorientation of the tube in childhood that is associated with reduced incidence in modern humans. This may have compromised evolutionary fitness among the Neanderthals relative to invasive modern human populations, and ultimately contributed to their extinction. Another publication last year connected a developmental mismatch in the timing of growth of the Eustachian tube and dilator tubae muscle (the muscle that opens it during swallowing) to the timing of peak middle ear disease incidence around one year of age among contemporary human infants.

Pagano said the cumulative work points the way toward understanding where we've come from – and exactly what's changing within our skulls.

"My hypothesis is that the common ancestor of modern humans and Neanderthals deviated from the ancestral condition of *Homo erectus* (characterized by primitively tall-narrow upper airway shape) by expressing shorter, broader postnasal airways," he said. "Humans and Neanderthals began diverging in the Middle Pleistocene as evidenced from nasopharyngeal morphology."

MINDS Program Cultivates Curiosity of Youth from Diverse Backgrounds



The hands pulled on the gloves, and then filled the syringes, flicking them several times to jostle the air bubbles out. Filled to 1 mL, the needle points sought out the perfect angle – and then penetrated the flesh just far enough to administer the solution with the perfect press of the plungers.

The solution was saline. The flesh was half an orange. And the hands were those of underrepresented curious high schoolers from New Jersey, already thinking of medical careers.

"It was kind of scary at first – but I'm glad I got to know how to do it," said Narissa Heslop, a rising

11th grader at the Frank J. Cicarell Academy in Elizabeth. “I want to be a psychiatrist. But I find all of it interesting. I feel like I can do anything.”



It’s just another day in the M.I.N.D.S. Program at the Hackensack Meridian School of Medicine, which seeks out promising high-school candidates who are historically underrepresented in medicine: those who identify as African American, Latinos/Hispanic American, and Native American (American Indian, Alaska Native, or Native Hawaiian), who are first-generation, or those who are financially disadvantaged.

M.I.N.D.S. (Medical Internship Navigating Diversity and Science) is a six-week paid internship for high school juniors and seniors interested in pursuing a career in medicine. Interns learn about different medical professions, health disparities in New Jersey, and the social determinants of health (e.g., the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health and quality-of-life outcomes and risks).

“This kind of program is so critical for the future of medicine not just at our School, but across the educational landscape,” said David S. Kountz, M.D., M.B.A., M.A.C.P., Senior Associate Dean, Diversity, Equity, and Inclusion at the school. “Having better representation from all groups is essential to optimizing the quality of care and lowering health

care costs in the US, and the healthcare industry will never achieve its full potential without full representation from all of the socio-demographic groups in the country.”

This summer’s schedule includes discussing brain dissections, public speaking, medical research, social determinants of health, internal medicine, radiology, and a list of other topics, all taught by experts from the medical school and the Hackensack Meridian *Health* network. The students also work on research projects over the length of the course – and they even receive all-important SAT preparation classes to prepare them for their futures. The students also get: a \$1,200 stipend; CPR/BLS and Narcan Certification; and various field trips to community organizations and universities, among other benefits.



On this Thursday morning in mid-July, the 15 students not only practiced their orange injections, but also a blood draw on a synthetic I.V. arm carried in a long case by Christine Fernandez, M.D., a physician who works in the emergency department at Hackensack University Medical Center.

Fernandez not only showed the high schoolers how to appropriately perform these procedures, she also spoke about her own upbringing in the Bronx, recounting that she became a nurse to follow in her mother’s footsteps – and then committed to become the doctor making decisions in the health care setting.

"I always wanted more," said Fernandez. "I wanted to be the one who got called."

"This is something I wish I had in high school," added Mojisola Adesanya, the co-director of the MINDS program. It's a great opportunity for high-schoolers to get a taste of what they can do with their careers."

"We need better education for all our doctors – and we need doctors from all different backgrounds," said Tade Ayeni, Ed.D., the director of the school's Office of Equity, Diversity and Inclusion.

Jaden Barker, a rising 11th grader at the Academy of Allied Health Sciences in Plainfield, said he already has plans to pursue interventional cardiology as a career. He is inspired to take the path because some family members have heart conditions, and also because he is "hands-on" and likes to get directly involved in fixing problems.

The early training through the MINDS program, he said, is just what the doctor ordered.

"It's very interactive; it's very didactic," Barker said. "It's very different from other kinds of learning – and that's a great thing."

To find out more about the program and how to apply, [visit the MINDS webpage here](#).

Battle of the Books Health Project at the Boys and Girls Club

On June 8th, a group of medical students admitted to the school last year held a Battle of the Books event at the Boys & Girls Club of Clifton. This Community Health Project is part of an initiative to increase participation in literacy by having groups of children compete in activities based on the content of the books they received. It was just one of many Community Health Projects led by students.



Others projects included: a vaccine drive at Garfield School School; a Clifton Community Baby Shower in partnership with the Clifton Health Department; a team-building after-school program at Hackensack Middle School; a Community Oncology Nutrition Program working series for oncology patients; a series of interactive lectures for 11th graders at the Passaic Arts and Science Charter School; and a presentation for families via the Union City School District.





FEATURED FACES

A Familiar Face as New Assistant Dean of Student Affairs and Wellbeing

Welcome to Dr. Naomi Ambalu, in a New Role

Dr. Ambalu is a board-certified adult, child, and adolescent psychiatrist. She obtained her medical degree from New York College of Osteopathic Medicine in Old Westbury, NY, and completed her psychiatry residency and child and adolescent psychiatry fellowship at Rutgers-Robert Wood Johnson Medical School in Piscataway, NJ. Most recently, Dr. Ambalu served as the Psychiatry Clerkship Director and Neuroscience and Behavior Course Co-Director at Hackensack Meridian School of Medicine.

Dr. Ambalu has a passion for medical education, medical student well-being, and professional development. In her new role at HMSOM, she will work with Dr. Laurie Sullivan, the Senior Associate Dean for Student Affairs and Wellbeing, providing support to students.



Welcome New Senior Advisor, Dwayne Kelly

Dwayne has been in the field of academic advising for almost a decade. He began his career in the non-profit sector where he developed summer and afterschool tutoring programs for faith-based organizations in underserved communities. He transitioned to higher education while completing his Master's Degree and has since worked in advising at both the public and private university levels. His most recent role was at New York University where he supported pre-medical students in gaining entry to medical school. As the spouse of a now surgical resident, Dwayne is also intricately familiar with the rigors and demands placed on medical students and is excited to support their retention and persistence at HMSOM.

When he is not supporting students through advising, Dwayne loves to travel, cook, read and spend time with family. At the HMSOM, Dwayne will be working with Lindsey Dedow, providing individual academic support and workshops to students.

"Dwayne's significant advising experience, and personal insight into medical school and residen-



cy (and his very zen office vibe) will be such a great asset to our students and the advising team!" said Dedow.

New Senior Advisor Natalie Aloyets Artel

Natalie Aloyets Artel has worked in student support services for most of her career. She began working in admissions and student services at the Rutgers School of Public Health. She then transitioned to the Office of Student Affairs



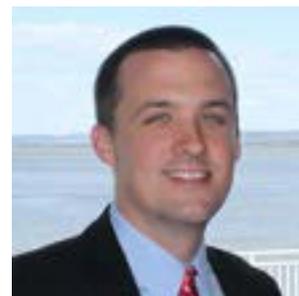
at Rutgers School of Dental Medicine. She oversaw student support services, student programming, and admissions. While working at the dental school, Natalie completed her Master's in Social Work at Rutgers School of Social Work. She was then offered a role at the Rutgers School of Social Work working in the professional credit program. She worked with a wide variety of students to support their transition into the Master's program. Natalie has been with the Rutgers School of Social Work for fourteen years working on a variety of student-focused programs.

Natalie also volunteered her time to work for the Rutgers School of Arts and Sciences annual orientation program and advised students on academic probation. She taught the Students in Transition seminar to transfer students and supported them in their transition to the university. At HMSOM, Natalie will be a Senior Academic Advisor providing individual academic support and workshops to students.

"Natalie has a wealth of experience with health-care-related advising and educational program development, so we are very excited about the contributions she is going to make to the advising department and our students!" said Lindsey Dedow.

Asiah Jordan rejoined the Hackensack Meridian School of Medicine and the Office of Faculty as its new Administrative Coordinator. She was greatly missed by her peers during her three-year hiatus where she worked at the HMM Corporate offices and with the Institutional Review Board at Rutgers University.

J. Patrick Bardill joined the Medical Sciences faculty as an assistant professor in July. He serves as a course director of the Immunity, Infection and Cancer course. Prior to joining HMSOM, he



was an assistant professor at Michigan State University's College of Human Medicine serving as a microbiology content expert. Previously he taught introductory microbiology and microbiology labs at MSU and was director of introductory biology labs at the Georgia Institute of Technology in Atlanta. Dr. Bardill received his Ph.D. in molecular microbiology and microbial pathogenesis from Washington University in St. Louis for work on prion regulation in the yeast *Saccharomyces cerevisiae* and performed his post-doctoral research on quorum sensing in *Vibrio cholerae*.



HMSOM UPDATES

New Cohort Welcomed with Start of HDIO



167 new students joined the HMSOM community on Monday, July 11th with the start of their HDIO. During HDIO, they had the opportunity to connect with each other, staff, and faculty in several events like bike building, a boat cruise around Manhattan, the departmental and office meet-and-greet, and an HMSOM carnival.

HMH's Inaugural Juneteenth Event included Words, Art, Music



HMH held an inaugural Juneteenth Event, presented virtually on June 20th. Robert C. Garrett, FACHE, CEO of Hackensack Meridian Health kicked off the event and welcomed special guests Edward T. Cotham Jr. and John E. Harmon, Sr. The celebration also included a special Juneteenth spoken word performance by ShadWroteThat and Bri Blvck; a mini Jazz Concert by Alex Parchment Jazz Band; and a virtual art experience which featured artist Kyle Olani.