



# SOM *news*

## Point of PRIDE



In 1994, Willarda V. Edwards, MD, MBA '77, a Baltimore internist, became the first African-American woman president of the Maryland State Medical Society (the AMA local chapter). She later served as the assistant dean of UMSOM's Office of Minority Affairs and Faculty Development.



SOMnews is your source for all news and information regarding the University of Maryland School of Medicine, including Clinical Care, Research, Education, Community Outreach, and its Culture Transformation Initiative.

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### DEAN'S MESSAGE

At the beginning of June, I sent a special letter to the University of Maryland School of Medicine community in collective grief for the tragic death of **George Floyd**. I want to take this opportunity to also acknowledge the untimely deaths of **Breonna Taylor, Ahmaud Arbery, Rayshard Brooks**, and too many others before them. These lost lives reflect deep pain and misery filtered through generations of people, some of whom had little choice in the outcomes of their lives. We at the University of Maryland School of Medicine know something about pain, suffering, and fear for life. We interact with members of the Baltimore, Maryland, and extended communities who wrestle with these challenges on a daily basis. Our patients come to us seeking solutions and hope for their physical and mental battles. As the oldest public medical school in the U.S., we have learned very well how to provide some of the answers they need.

Our duty as members of this academic medical community includes healing our patients from the deadly COVID-19 pandemic, among many other conditions. Our responsibility as human beings and residents of this great nation includes healing the hearts of our friends and neighbors. To the blind eye, the condition of the anatomical heart and that of the emotional core of the individual may seem unrelated. I am confident that everyone who claims the School of Medicine as their academic or career home, knows otherwise.

The physical and emotional wellbeing of an individual are interconnected. What does that mean for us? It means that if we prescribe to the mission of improving the health of the citizens of Maryland and beyond, then we recognize the boundaries of health to be expansive, and we recognize our skillsets of healing to be malleable. Believing in our mission commits us to treating all persons fairly, regardless of their race, gender, sexual orientation, socioeconomic status, etc. To practice fairness, we must answer the call to learn what that looks like. We are an academic institution, after all. We represent education, growth, and the betterment of our citizens. The civil unrest in our nation is completely relevant to us as a community and institution, and we are completely equipped to participate in the solution.

Under normal circumstances, summer's respite would provide a natural opportunity to engage in new activities. The pandemic undoubtedly brings a very different summer this year, but that should not "let us off the hook." **I encourage us to submerge ourselves in either gaining a better understanding of the complex racial issues with which we are confronted or taking steps — no matter how small — toward resolving them, or both.** We are all

### What's on My Mind...



...is the relativity of the School of Medicine's mission to the unrest in our country.

in different places considering our levels of awareness and action. I hope that we will practice self-awareness, to be conscious of **where we are**, and practice some of our core values like **leadership, diversity, and respect** to become the best of **who we are**. Over this next month, please be safe, be healthy, be productive, and be informed.

With my very best wishes and highest regards to all within our greater University of Maryland School of Medicine academic community.

In the relentless pursuit of excellence,  
I am Sincerely Yours,

E. Albert Reece, MD, PhD, MBA  
Executive Vice President for Medical Affairs, UM Baltimore  
John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine



On June 5, the UMSOM and UMMC community took an 8 minute 46 second moment of silence in reflection and as a commitment to improve the health and safety of people of color — for our patients, colleagues, family, friends, and entire community.



# Shaping the Future



Thanks to a Gift from the Brody Foundation, 3D Printing Is the Latest Innovative Tool for UMSOM Physicians

A 3D-printed model of a child's heart, scaled up in size so that the abnormalities of its interior are clearly revealed.

The old phrase, “the doctor can see you now,” has taken on a new meaning at the University of Maryland School of Medicine, with the introduction of a novel 3D printing lab on campus, where physicians can produce high-fidelity anatomical models of patient organs and skeletal features, based on data from computerized tomography (CT) scans.

Acquisition of the advanced commercial 3D printer, software, and modeling supplies was made possible through an initial generous gift in 2018 by the locally based **Norman and Florence Brody Family Foundation**. As use of the printer has grown dramatically in subsequent months, the Foundation, run by Bill Brody, his wife Susan Brody, and her daughter Deidre Lipsicas, have stepped forward recently to make an even more substantial gift that will underwrite the ongoing operations and upkeep of the new Brody 3D Printing Lab, currently located on the fourth floor of the school's Bressler Research Building.

Such 3D-printed anatomical models, while novel, are rapidly gaining wider usage by today's physicians and surgeons for the purposes of analysis, patient education, and even practice in advance of complex procedures. Invented in 1984, 3D printing involves taking a digital model of an object and rendering an exact copy in a

series of successive layers of material, usually a durable plastic. By the early 1990s, 3D printing was first used in medical applications such as dental implants and custom-made prosthetics. Today, this technology is being employed in a variety of ways, including the creation of patient-specific surgical models, custom surgical tools, and even bio-printed artificial tissue and organs. At the UMSOM, this endeavor has been spearheaded by **Jeffrey D. Hirsch, MD**, Assistant Professor of Diagnostic Radiology and Nuclear Medicine.



Stacy Fisher, MD

The conception of UMSOM's Brody 3D Printing Lab goes back to 2013, when Mrs. Brody was referred to the UMSOM's **Stacy Fisher, MD**, Associate Professor of Medicine, who leads her department's Adult Congenital Heart Disease Program. After diagnosing Mrs. Brody with a rare cardiac condition called hypertrophic cardiomyopathy, Dr. Fisher and cardiac surgeon **James Gammie, MD**, Professor of Surgery, guided her through a successful surgery and recovery. “Once she regained her health, Mrs. Brody told me that she wanted to make a gift that would improve the diagnosis of cardiac disease,” recalls Dr. Fisher. “One thing I thought we were lacking was a novel approach to improving cardiac surgeries, namely a 3D

printer that would help to clearly define a patient's anatomy and improve surgical and device choices and placement decisions in advance of surgery.

*This capability would be especially important to the congenital heart population, where everybody's cardiac anatomy is different.”*

UMSOM's Office of Development has worked closely with the Brody Foundation to develop a program that has led to the opening of the 3D printing lab. “The program has really taken off,” notes Pamela V. Lambert, Senior Director of Development. “Physicians are seeing that it's a more efficient means of accurately planning procedures in terms of determining a surgical approach and sizing implants. One surgeon commented that with a 3D anatomical model, he can start to do his surgery before he even gets into the OR.”

Dr. Fisher agrees. “As we've started to make this technology available to other physicians, they immediately realize how invaluable this tool can be for their own practice and patient population,” she says. “We hope to set up training videos and direct training for physicians, fellows, and residents, so that they can use it more independently as well.”

As for Susan Brody, she couldn't be more pleased with the results of her philanthropy. “We wanted to make a real difference in a tangible way,” she says. “As I see it, our gifts have done just that, by giving surgeons the insight to better plan their procedures in advance.”

# JANE KROH SATTERFIELD, PT '64 1942-2020



Jane Kroh Satterfield, PT

## *PTRS Alumna Was Longtime UMSOM Benefactor and Leader in the Field of Pediatric Physical Therapy*

The University of Maryland School of Medicine (UMSOM) and the Department of Physical Therapy and Rehabilitation Science (PTRS) are mourning the death of **Jane Kroh Satterfield, PT '64**, who passed away on May 10, 2020 at the age of 78. Mrs. Satterfield, a native Baltimorean who received her BS in Physical Therapy from the UMSOM in 1964, was a lifelong advocate for the field of pediatric physical therapy, especially in the care for children with special needs.

After the passage of the federal Individuals with Disabilities Education Act in 1975, Mrs. Satterfield served on the Maryland Governor's Task Force to devise a plan to integrate school-age children into special education programs within the state's public school systems. For these and other efforts, she received the Kendall Award in 1981 from the American Physical Therapy Association for outstanding service to the profession. In 1984, she founded Care Resources, which focuses on providing a range of quality physical and speech therapy services for children. Under her leadership, the company grew to become one of the nation's premier rehabilitation companies.

*"One of the joys of serving in my position as Chair for UMSOM PTRS was getting to know Jane Satterfield,"* said **Victoria Marchese, PhD, PT**, associate professor and chair of the Department of Physical Therapy and Rehabilitation Science. *"I vividly remember*

*the many conversations Jane and I had about our love for pediatric physical therapy and her wonderful words of wisdom about positive leadership. Jane shared her passion for the profession of physical therapy abundantly as a clinician, educator, and philanthropist."*

Jane's record of generous gifts to the UMSOM has been remarkable. Her professional and personal impact will endure through the **Pediatric Physical Therapy Award**, which honors PTRS students who will pursue careers in pediatric physical therapy. Her challenge match to establish the **PTRS Endowment Fund** ensures a future of financial security through unrestricted support, while the **Jane Kroh Satterfield Endowed Professorship in Physical Therapy and Rehabilitation Science** will reward and encourage faculty leaders in their academic pursuits to inspire future visionaries and innovators in physical therapy. In addition, Jane supported the Physical Therapy Annual Fund and several scholarships, capital projects, and operational initiatives within PTRS, including the Class of 1964 PTRS Scholarship Endowment and the Physical Therapy General Scholarship Fund.

*"Through Jane's incredible generosity to our department, students will become our future physical therapists, and professors will continue to provide excellence in teaching, scholarship, and service,"* said Dr. Marchese. *"When we teach in our classrooms at UMSOM PTRS and develop new innovative research to improve*

*function and quality of life through physical rehabilitation, we will always think of Jane Satterfield."*

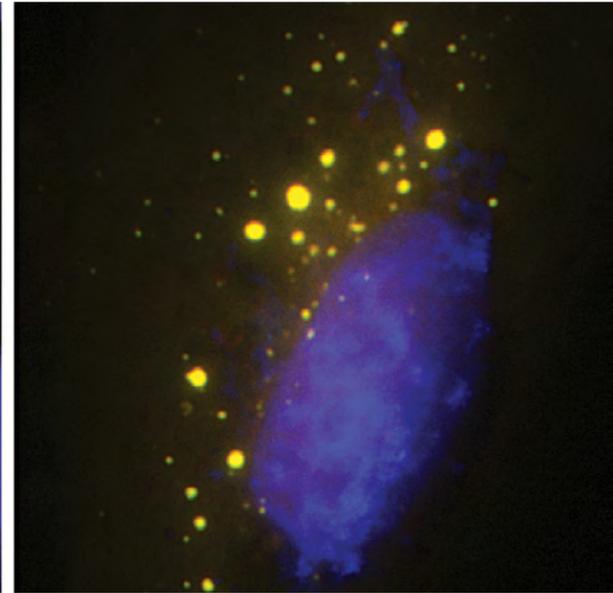
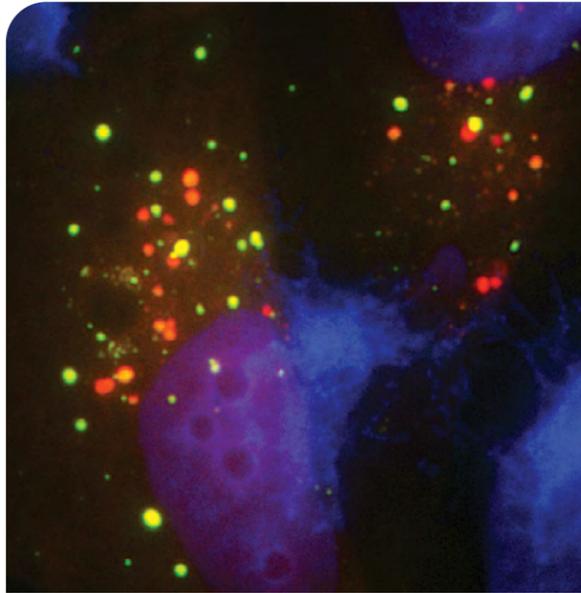
In 2008, Mrs. Satterfield was presented with the Alumna of the Year Award by the Department of PTRS for her outstanding contributions to the profession of physical therapy. And, on May 18, 2012, she received the Dean's Distinguished Gold Medal for Public Service Award.

*"All of us within the UMSOM community are profoundly saddened by the loss of Jane Satterfield,"* said **Dean E. Albert Reece, MD, PhD, MBA**. *"Her leadership in the field of pediatric physical therapy is nationally renowned, while her impact as a major benefactor to her alma mater and the Department of Physical Therapy and Rehabilitation Science have been extraordinary. Without a doubt, her generosity of spirit and commitment to excellence have set the bar high for all who follow."*

Learn more about Jane Satterfield's life and career by visiting her *Baltimore Sun* [obituary](#). 

If you are interested in making a gift to honor the legacy of Jane Satterfield, please visit [pt.umaryland.edu/Satterfield](http://pt.umaryland.edu/Satterfield).

# NEW GENETIC DEFECT LINKED TO ALS IDENTIFIED



Cells on the left have the normal UBQLN2 gene and the red dots show the cell “garbage removal” process in action. The cells on the right have gene mutations that disrupt this process allowing toxic matter to build up in cells.

## *Finding Provides UMSOM Researchers with New Potential Approaches to Treating Fatal Disease*

**R**esearchers at the University of Maryland School of Medicine (UMSOM) have identified how certain gene mutations cause amyotrophic lateral sclerosis (ALS), also known as Lou Gehrig’s disease. The pathway identified by the researchers may also be responsible for a certain form of dementia related to ALS. The finding could offer potential new approaches for treating this devastating condition, which causes progressive, fatal paralysis and sometimes mental deterioration similar to Alzheimer’s disease. Their discovery was published this week in the *Proceedings of the National Academy of Sciences* (PNAS) and included collaborators from Harvard University, University of Auckland, King’s College London, and Northwestern University.

More than 5,000 Americans are diagnosed with ALS every year, a condition that is usually fatal and has no cure. Patients with ALS slowly lose the ability to move their muscles, leading to problems with basic functions such as breathing and swallowing. About half of ALS patients also develop dementia. Genetic studies of families with a predisposition to develop ALS have shown that the condition can be associated with certain gene mutations. Some of these mutations involve the gene UBQLN2 which regulates the disposal of misfolded “garbage” from the body’s cells. Until now, researchers did not fully understand how UBQLN2

mutations interfere with this pathway and cause ALS.

**“We mapped out the process by which ubiquilin-2 (UBQLN2) gene mutations disrupt an important recycling pathway that cells use to get rid of their trash,”** said **Mervyn Monteiro, PhD**, Professor of Anatomy and Neurobiology, who is affiliated with the UMSOM’s Center for Biomedical Engineering and Technology (BioMET) at UMSOM. **“Without this recycling, misfolded proteins build up in the nerve cell and become toxic, eventually**

**destroying the cell. This destruction could lead to neurodegenerative disorders like ALS.”**

To investigate how UBQLN2 mutations cause ALS, Dr. Monteiro’s group used both human cells and UBQLN2-mutant mouse models for their investigations. The mouse models, which they described in a 2016 PNAS publication, mimic the progression of the disease in people who inherit these gene mutations.

Dr. Monteiro’s group first removed the UBQLN2 gene from human cells and found it completely stalled the recycling pathway. They then reintroduced either the normal gene or one of five gene mutations into the cells. They found that reintroduction of normal UBQLN2 restored the recycling pathway while all five of the gene mutations failed to restart the pathway.

Using the mouse model, Dr. Monteiro and his colleagues outlined the reason for the pathway disruption in the presence of gene mutations. They found that the mice with the gene mutations had reduced levels of a certain protein called ATP6v1g1, which is an essential part of a pump that acidifies the cell’s trash container in order to initiate the breakdown and recycling process.

**“Our new findings are exciting because similar acidification defects have been found in Alzheimer’s, Parkinson’s and Down syndrome,”** Dr. Monteiro said. **“This suggests that restoration of the defect could have broad implications for not only treating ALS, but possibly other neurodegenerative diseases as well.”**

The research study was supported by grants from the Packard Center for ALS Research at Johns Hopkins, the ALS Association, and the National Institutes of Health (grant number: R01-NS100008).

**“The BioMET research team led by Dr. Monteiro continues to make important advances in understanding the mechanisms that give rise to ALS,”** said **Dean E. Albert Reece, MD, PhD, MBA**. **“Future treatments and preventive measures for this devastating disease would not be possible without this foundational work.”** 



Mervyn Monteiro, PhD

# No Benefit Found for Treatment Used to Avoid Surgery for Abdominal Aortic Aneurysm

**Findings by UMSOM Researchers Could Lead to Changes in Practice for Life-Threatening Vascular Condition**

**A** new landmark study by researchers at the University of Maryland School of Medicine (UMSOM) found that patients with a vascular condition, called abdominal aortic aneurysm, received no benefits from taking a common antibiotic drug to reduce inflammation. Patients who took the antibiotic doxycycline experienced no reduction in the growth of their aneurysm over two years compared to those who took a placebo, according to the study published today in the *Journal of the American Medical Association (JAMA)*. The finding could lead doctors to stop prescribing the drug as a way to prevent small aneurysms from growing larger and bursting.

***“This study provides strong evidence that doxycycline is of no benefit for patients with small abdominal aortic aneurysms in terms of preventing their growth. Health care providers should take note of the finding and stop using this as a prophylactic treatment,”*** said corresponding author **Michael Terrin, MDCM, MPH**, Professor of Epidemiology and Public Health at UMSOM. Researchers from the University of Nebraska Medical Center, the University of Wisconsin School of Medicine and Public Health, and Vanderbilt University School of Medicine also had leadership roles in the study.

Abdominal aortic aneurysm is a swelling or ballooning that occurs in the major blood vessel (aorta) that supplies



Michael Terrin, MDCM, MPH

blood from the heart to the lower half of the body. It affects about 3 percent of older Americans, most commonly men and smokers. The condition can cause fatal internal bleeding if the aneurysm grows large enough to burst. Small aneurysms frequently cause no symptoms and are often detected when an abdominal ultrasound or CT scan is performed for other reasons. Doctors usually monitor the growth of the aneurysm and sometimes opt to prescribe doxycycline in an effort to forestall surgery in higher-risk patients. This practice was based on earlier research suggesting that certain antibiotics reduce inflammation that contributes to aneurysm growth.

The *JAMA* study involved 254 patients with small aneurysms who were randomly assigned to take either 100 milligrams of doxycycline twice daily or a placebo for two years; CT scans performed at the beginning of the study and on follow-up found no differences in aneurysm growth between those who took the drug and those who took the placebo. Study participants were mostly white and male with an average age of 71 years.

***“Randomized clinical trials are essential when it comes to answering important clinical questions,”*** said **Dean E. Albert Reece, MD, PhD, MBA**. ***“This finding will help guide doctors to avoid an unnecessary treatment for a common condition associated with aging.”*** 

## DR. KERRI THOM Named New Associate Dean for Student Affairs

*New Appointment Will Help Further “Enhance and Strengthen Education Mission” of UM School of Medicine during Pandemic*

**U**MSOM Senior Associate Dean for Undergraduate Medical Education, **Donna Parker, MD, FACP**, along with UMSOM Dean **E. Albert Reece, MD, PhD, MBA**, announced on July 2 the promotion of **Kerri Thom, MD, MS**, Professor of Epidemiology and Public Health, as the Associate Dean for Student Affairs. Dr. Thom previously served as the Assistant Dean for Student Research and Education in the UMSOM Office of Student Affairs.

***“We are thrilled that Dr. Thom has assumed this important role,”*** said Dr. Parker. ***“She is an outstanding clinician, educator, and researcher. Beyond that, her commitment to humanism, professionalism, social justice and the Baltimore community is unparalleled. I cannot***

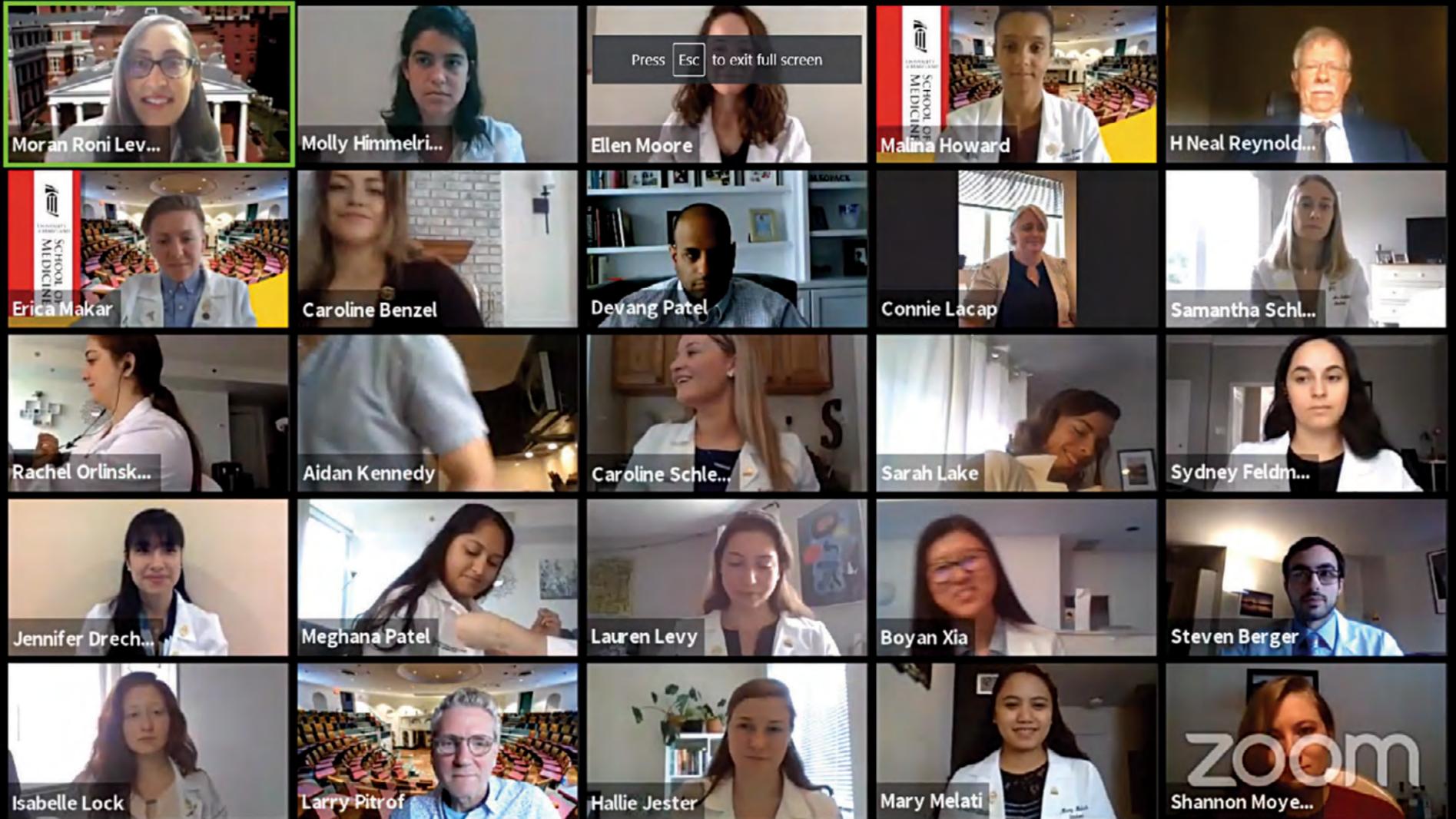
***imagine a more qualified person to mentor the next generation of medical students at the University of Maryland.”***

In her new role, Dr. Thom will be responsible of the day-to-day management of the Office of Student Affairs in meeting its primary mission of supporting and providing mentoring guidance to the School’s MD Degree students. Dr. Thom also will oversee the writing of all Medical Student Performance Evaluations (MSPEs), a key component of a medical student’s application to residency programs.



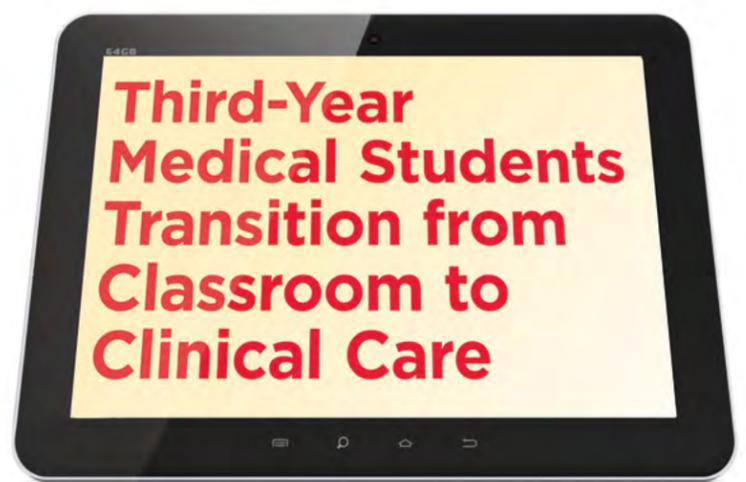
Kerri Thom, MD, MS

*Continued on page 8*



# From Tradition to Virtual Reality: Online Student Clinician Ceremony Celebrates Next Chapter of Medical Training

The Class of 2022, along with family and friends, logged on from their computers to celebrate this year’s Student Clinician Ceremony, held on Friday, June 19. Now in its 18<sup>th</sup> year, the University of Maryland School of Medicine (UMSOM) Annual Student Clinician Ceremony marks the third year of medical education as students transition into clinical clerkships.

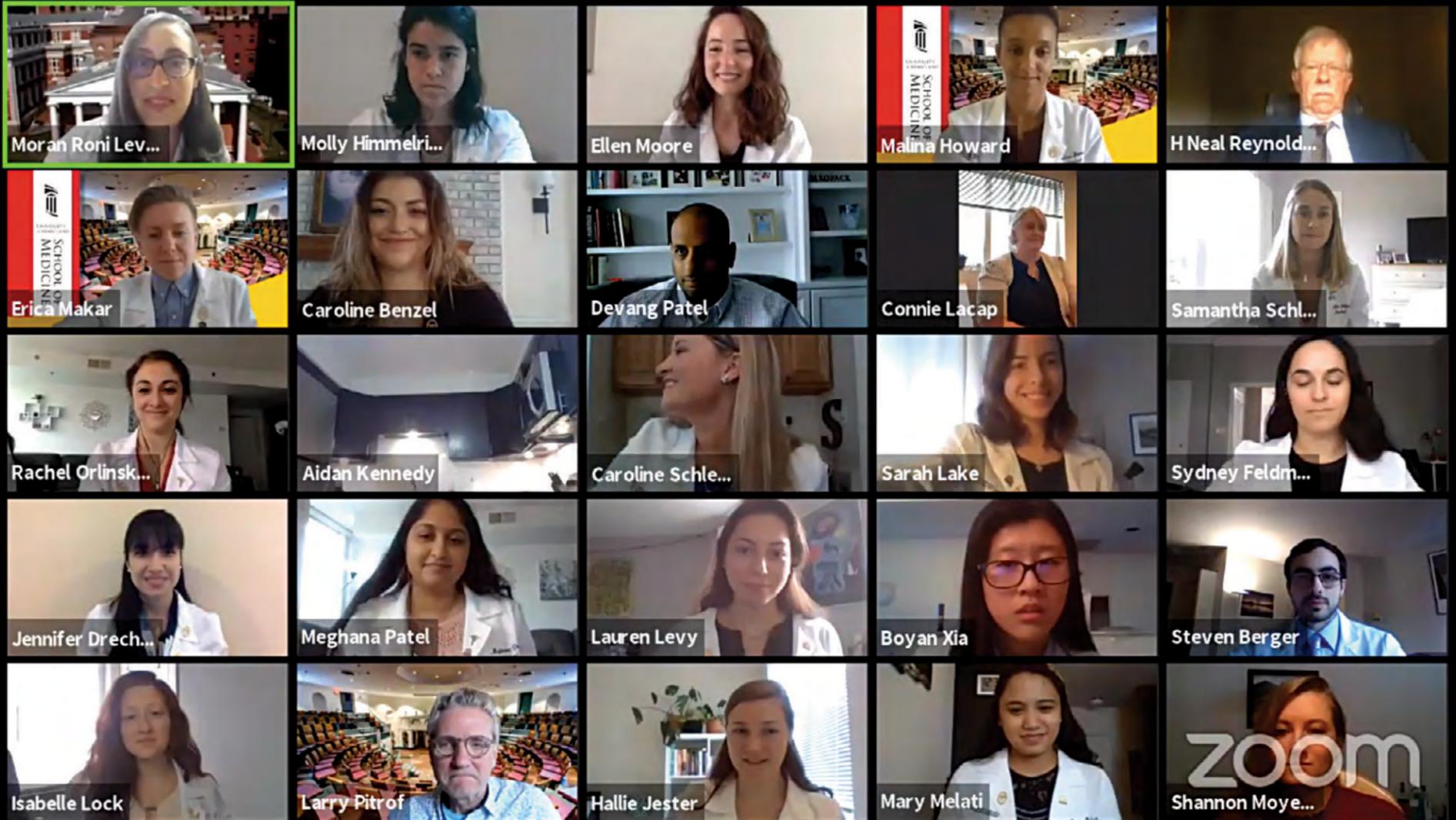


Dean E. Albert Reece, MD, PhD, MBA

***“It’s unfortunate that we cannot conduct this special ceremony in person,”*** said **Dean E. Albert Reece, MD, PhD, MBA**, during his address. ***“Let this virtual format serve as a roadmap reminder of the value that you bring to the clinical setting and that which you could not be entering at a more critical time.”***

As health care systems and medical schools across the nation adjust to the ‘new normal’ of COVID-19, the wake of protests against police brutality and racial injustice have also illuminated the state of health disparities.

***“It is perhaps a happy, hopeful coincidence that today’s ceremony — honoring the profession of medicine and your transition to clerkships — would coincide with such a historic holiday,”*** said **Kerri Thom, MD, MS**, Associate Dean of Medical Education and Professor of Epidemiology and Public Health, who was referencing Juneteenth, the nickname for June 19, 1865, which marked the effective end of slavery in the United States.

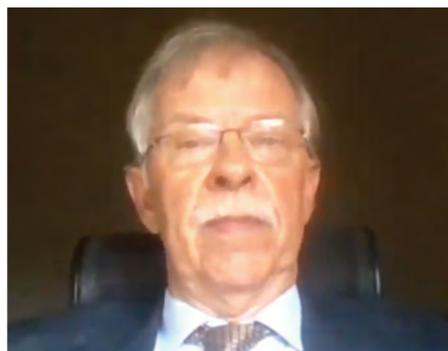


During the ceremony, third-year medical students **Erica Makar**, **Nita Gombako**, and **Malina Howard** recited a poem by Arthur Knoll in recognition and celebration of Juneteenth.



Kerri Thom, MD, MS

**“Recent events have served as an intense reminder of the humanity of medicine,”** said Erica. **“And it is from this lens that I hope to specifically care for LGBTQ youth and communities of color in clinical practice, through advocacy and by teaching others.”**



Neal Reynolds, MD

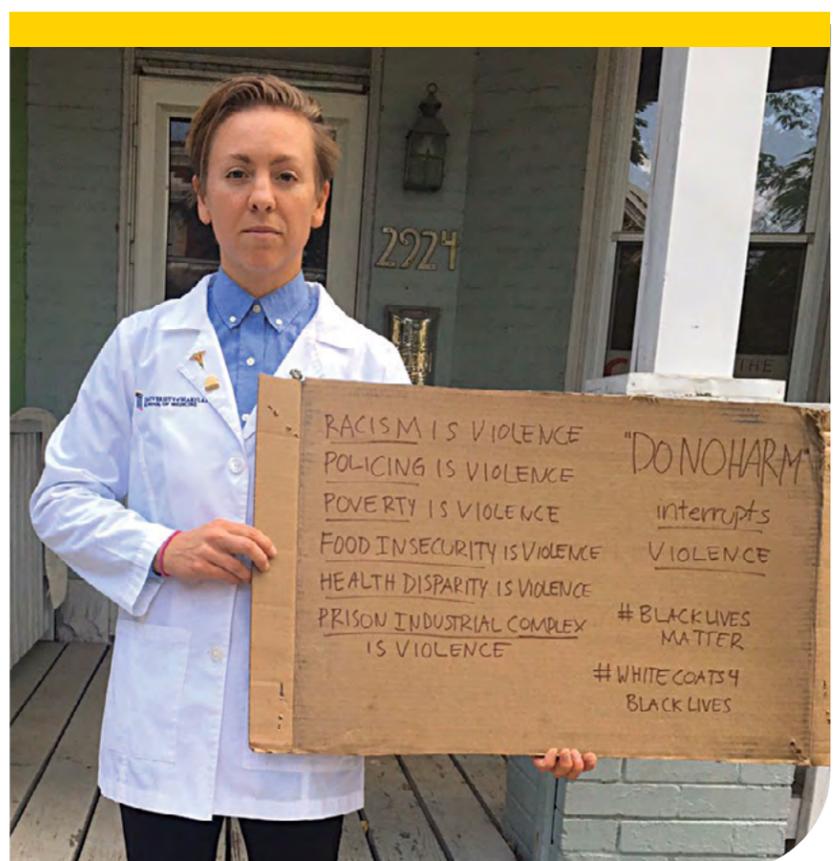
**Neal Reynolds, MD**, Associate Professor of Medicine and Co-Director of the Multi-Trauma Intensive Care Unit at the R Adams Cowley Shock Trauma Center, also emphasized the power in humanism in his keynote address.

**“A lot has been changing; however, humanism is one of the things that will never change,”** said Dr. Reynolds. **“Develop special ways to help your patients and you will, in fact, be that best doctor.”**

The ceremony concluded with the Class reciting the Student Clinician Oath and asking their family members and friends to pin their white coats — a tradition which signifies students’ commitment to their patients and the profession.

This ceremony followed two days of practical skills sessions, small group discussions, and panel presentations pertaining to professional and ethical issues in patient care. 

**Watch the Student Clinician Ceremony [here](#).**



Erica Makar, Class of 2022

## Thom Promotion

Continued from page 5

Dr. Thom acknowledges that an immediate challenge facing her, and her staff, are the academic disruptions caused by the coronavirus pandemic, and the call to action for medical schools to address systemic racism and health disparities in medicine that have been highlighted throughout the pandemic. **“I think our biggest challenge has shifted to advocating for each one of our students across all four classes by understanding how these recent events has impacted each of them uniquely,”** she said. **“We intend to ensure that every student is able to complete the curriculum, and in doing so, that they graduate as all excellent physicians who demonstrate the core UMSOM values of humanism, professionalism, leadership, scholarship, and attention to social justice and diversity. With our awesome team in the Office of Student Affairs and Office of Medical Education, we are in this together with our students and ready to tackle anything that comes our way.”**

Dr. Thom’s promotion has been greeted with wide approval throughout the school’s leadership. **“Dr. Thom assumes this position at an unprecedented time of upheaval due to the Covid-19 pandemic, where every student has experienced major disruption to their education,”** said James B. Kaper, PhD, Vice Dean for Academic Affairs and James and Carolyn Frenkil Distinguished Dean’s Professor and Chair of the Department of Microbiology & Immunology. **“We are extremely fortunate to have someone with her great experience, professionalism, and personal qualities to lead the Office of Student Affairs.”**

Dr. Thom received her MD from the University of Florida College of Medicine. She then completed her internal medicine residency and infectious disease fellowship at the University of Maryland Medical Center and the Baltimore VA Medical Center. She received her MS in Epidemiology and Clinical Research from the Department of Epidemiology and Public Health at the University of Maryland School of Medicine. An infectious disease physician and a faculty member in the school’s Departments of Epidemiology & Public Health and Medicine, she additionally serves as Assistant Dean for Student Education and Research as well as a Physician Advisor for Quality at the University of Maryland Medical System.

**“In light of the current challenges posed by the pandemic to all medical schools, including our own, the promotion of Dr. Thom to her new role underscores the fact that we have the very best professionals in place to enhance and strengthen the quality of our educational mission here at the UMSOM,”** said Dean Reece. 🏛️

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## Please Give to the UM School of Medicine COVID-19 Response Fund

The University of Maryland School of Medicine is committed to combating the unprecedented health challenges brought on by the Coronavirus (COVID-19) pandemic.

As the COVID-19 outbreak continues to impact our state and the world, UMSOM physicians, scientists, and public health professionals are mobilizing to provide high-quality medical care to affected patients while pursuing advanced research to discover new treatments and potential cures.

Your donation of *any* amount will support the innovative care and research that is needed **right now** to confront this global pandemic — and will ensure that UMSOM has the critical resources to remain at the forefront of our nation’s COVID-19 response.

**Please give today - visit**

<https://medschool-umaryland.givecorps.com/projects/52811-school-of-medicine-special-projects-covid-19-response-fund>

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