



SOM *news*

Point of PRIDE

Joseph McLaughlin, MD
UMSOM Class of 1956



PHOTO CREDIT: Medical Alumni Association

In 1961, Dr. McLaughlin was the first surgeon in the world to treat a traumatic rupture of a mitral valve by open heart surgery and plication of the valve.



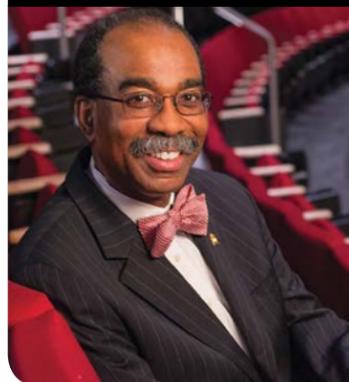
DEAN'S MESSAGE

It is hard to believe the holiday season is already upon us. Another year has flown by, and we have once again experienced exponential growth as a premier academic medical institution. I was extremely proud to highlight our many successes in this year's State of the School Address – from workforce and culture, education, and research and discovery, to clinical care and community impact. **If you missed the event, I would encourage you to view the video presentations online** (<https://www.medschool.umaryland.edu/about/State-of-the-School/2019-State-of-the-School-Address/>), **as they feature your colleagues, professors, students, and patients with whom you have worked alongside and supported.** We must express our deepest gratitude for our excellence, while recognizing the increasing responsibility our accumulating success delegates. As we learn and achieve more in medicine and science, we must do, give, and share more for the betterment of all.

We are fortunate to have many opportunities to demonstrate and share our institutional successes and research portfolio. This year's Festival of Science highlighted our **global health research** and included a keynote presentation from **Dr. Samba Sow**, Director General of the Center for Vaccine Development-Mali. Annual community-wide events such as these offer critical avenues through which we can share, collaborate, and re-invigorate our spirit of revolutionary discovery.

Our innovative research and educational activities significantly distinguish us from our peer institutions. The recent contract that our Center for Vaccine Development and Global Health received from the National Institutes of Health for influenza vaccine research is one of the largest ever awarded to the School of Medicine—up to more than \$200 million. While the choice of vaccination has become a controversial topic, it presents the idea of personal health responsibility. For the first time this year, our medical students have a new requirement to earn their medical degrees—culinary medicine. With our future physicians learning

What's on My Mind...



...is my gratitude for the distinctive excellence of our School of Medicine faculty, physicians, students, staff, and trainees.

how to integrate better nutrition and health into their medical education and patient care, they should also be empowered to improve their own health and wellness. This is extremely important, as an increasing amount of research demonstrate nutrition's critical role in chronic diseases. Lack of education about the topic has proven to be a major barrier.

Our feature video at the State of the School Address highlighted a gentleman who took responsibility of his health after Dr. Niederhaus facilitated his kidney transplant. He dramatically changed his diet after much of his own personal research, and he is now expected to outlive his new kidney. We achieve the best results when we, as the medical professionals, work in tandem with our patients. We rely on them to communicate their goals, desires, and backgrounds, and they rely on us for the latest, cutting-edge medical knowledge and skill that will save and improve their lives.

I hope our School of Medicine community enjoys a happy and healthy holiday season! May we practice gratitude all season long for any element of good health, by playing our personal part to the best of our abilities.

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

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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DRESS YOUR BEST!

All School of Medicine clinical faculty members, residents, fellows, and students are required to wear white coats in all clinical settings – hospital or outpatient practices.

We appreciate your cooperation.

"When we dress our best, we are more likely to perform our best." – Dean Reece

Taking the Ultimate Fight to the **FLU**

**UMSOM's
Center for
Vaccine
Development
and Global
Health Receives
NIH Contract
of up to \$200
Million+ for
Influenza
Research.**

Influenza — throughout history, this contagious respiratory illness has posed one of the greatest infectious disease threats to human health. But its impact may be on the verge of ending. On September 20, **Kathleen Neuzil, MD, MPH**, Professor of Medicine and Pediatrics and Director of the Center for Vaccine Development and Global Health (CVD) at the University of Maryland School of Medicine (UMSOM) and **Dean E. Albert Reece, MD, PhD, MBA**, announced that CVD has been awarded a contract from the National Institute of Allergy and Infectious Diseases (NIAID), with total funding up to more than \$200 million over seven years if all contract options are exercised.

This research contract is one of the largest ever awarded to UMSOM and includes an initial award of approximately \$2.5 million to conduct clinical testing of influenza vaccines.

CVD's research is aimed at testing improved seasonal influenza vaccines and conducting controlled human influenza challenge studies for NIAID's **Collaborative Influenza Vaccine Innovation Center (CIVICs)** program, which has the ultimate goal of developing a universal vaccine to protect against emerging influenza strains as well as improvements to current seasonal vaccines.

The seven-year contract will be led by CVD's Dr. Neuzil, who is one of the world's leading and preeminent research scientists and advocates in the area of vaccine development and policy. For more than four decades, CVD has worked domestically and internationally to develop, test, and deploy vaccines to prevent and protect against a range of diseases, such as influenza, cholera, typhoid fever, malaria, shigellosis (bacillary dysentery), and other infectious diseases. CVD has also taken global leadership roles in vaccines to protect against emerging pathogens such as Zika and Ebola virus.

The CIVICs program includes multidisciplinary research across a large network of institutions, supporting the development of vaccine candidates through testing in pre-clinical studies, clinical trials and human challenge studies. This new CVD funding will establish a CVD CIVIC Clinical Core, with the specific goal of evaluating improved seasonal influenza vaccines and ultimately developing a universal vaccine to protect against emerging influenza strains.

While current vaccines are our best tool to protect against influenza and its complications, the CVD CIVIC will address the urgent need for novel vaccines that provide broad and long-lasting protection. As Principal Investigator, Dr. Neuzil will serve as the primary liaison with NIH program officers, CIVIC's partners, and technical centers.

“The influenza virus is a common and serious infection that causes annual outbreaks in all age groups. While current influenza vaccines have been critical in reducing

disease, the virus is constantly changing. The CIVICs program will address the need to develop and test influenza vaccines that protect against new and emerging strains, and ultimately prevent more disease,” said Dr. Neuzil.

Under Dr. Neuzil's leadership, CVD has assembled an expert and accomplished team with extensive clinical research experience as well as virology, immunology, and influenza expertise. The research includes clinical trials and challenge studies in adults as well as in special populations, such as children, pregnant women, and the elderly.

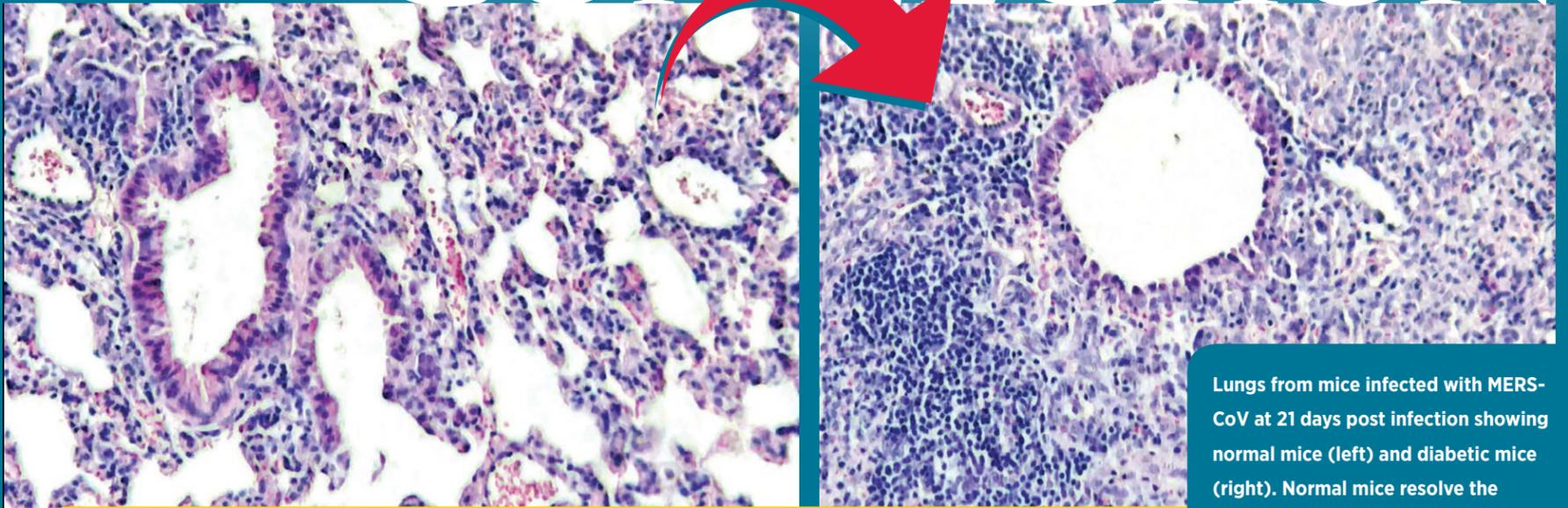
Throughout her career, Dr. Neuzil has conducted clinical and epidemiologic studies on vaccine-preventable diseases, yielding high profile publications that inform policy decision and public health actions. At the global non-profit PATH enterprise, Dr. Neuzil was instrumental in the global introduction of vaccines against rotavirus, HPV, and Japanese encephalitis. At CVD, she leads a large international consortium funded by the Bill and Melinda Gates Foundation to accelerate the introduction of a typhoid vaccines into low resource settings worldwide. In addition, Dr. Neuzil has a robust influenza research program. She is dedicated to training and directs a NIAID T32 Training Grant in Vaccinology, where she mentors and supports scientists around the globe.

“This contract brings together a broad cross-section of researchers at UMSOM, who are experts in virology, vaccinology, and immunology. For decades, CVD has been a leader in researching and developing interventions for the most challenging diseases that impact the world's most vulnerable populations. With this generous funding, and Dr. Neuzil's expertise and leadership, CVD will be able to make pathbreaking discoveries, and test new vaccines against this persistent infection that affects millions of people around the world,” said Dean Reece. The CIVICs program was jointly developed by NIAID's Division of Allergy, Immunology, and Transplantation and the Division of Microbiology and Infectious Diseases to advance development and clinical testing of improved seasonal and universal influenza vaccines that provide durable, broadly cross-protective immunity. 

Dr. Neuzil visits with local children in Burkina Faso, West Africa. The country is a study site for the Typhoid Vaccine Acceleration Consortium (TyVAC), a study Dr. Neuzil leads.



CRITICAL CONNECTION



Lungs from mice infected with MERS-CoV at 21 days post infection showing normal mice (left) and diabetic mice (right). Normal mice resolve the inflammation faster than diabetic mice, leading to prolonged weight loss and disease in the diabetic mice.

UMSOM Study Finds Diabetes Worsens Respiratory Illness Due to Abnormal Immune Response

Since the Middle East respiratory syndrome coronavirus (MERS-CoV) first emerged in Saudi Arabia in 2012, more than 2,400 confirmed cases of the infection have emerged, resulting in 800+ deaths, an alarming fatality rate of 35 percent. For this reason, researchers have been eager to identify any risk factors that contribute to the development of severe or lethal disease. Current clinical evidence points to diabetes as a major risk factor in addition to other comorbidities including kidney disease, heart disease, and lung disease.

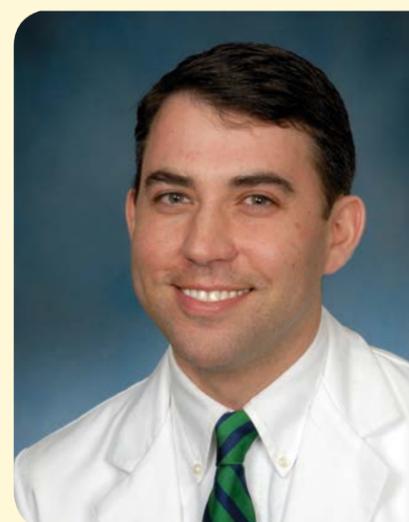
Now, researchers from the University of Maryland School of Medicine (UMSOM) and the Johns Hopkins University School of Medicine have demonstrated in a new study, published October 17 in the *Journal of Clinical Investigation Insights*, how diabetes contributes to mortality from MERS-CoV infections. The finding could shed light on why other respiratory illnesses like the flu or pneumonia might strike those with diabetes more severely. The study was partially funded by Regeneron Pharmaceuticals.

They investigated the connection between diabetes and MERS-CoV in a mouse model and discovered that although the virus did not replicate more readily in the diabetic mice as compared to the healthy controls, the diabetic mice exhibited a delayed and prolonged inflammatory response in the lung. Diabetic mice had lower levels of inflammatory cytokines and fewer inflammatory macrophages and T cells. This indicates that the increased severity of MERS-CoV infection in patients with diabetes was likely due to a malfunction in the body's response to infection.

“Understanding how diabetes contributes to disease severity following MERS-CoV infection in this context is critical,” said **Matthew Frieman, PhD**, Associate Professor of Microbiology and Immunology, who is the corresponding author of the study. ***“Our next step is to determine what drives the altered immune response in diabetics and how to reverse those effects with therapeutics for treatment of patients.”***

Follow-up research also could explore whether healthcare providers should double their efforts to manage and stabilize glucose levels in patients with diabetes experiencing a dangerous respiratory infection, and whether better management would help to mitigate the effects of these infections.

“This is an important finding for patients with diabetes and physicians who treat them,” said UMSOM **Dean E. Albert Reece, MD, PhD, MBA**. ***“We have long known that diabetic patients have worse outcomes when they get a serious infectious disease, but this new insight on immune function could pave the way for better treatments.”*** 



Dr. Matthew Frieman

HONG INVESTITURE

Theme of ‘Courage, Hope, and Faith’ Highlights Hong Investiture



In a moving address to an audience of family members, UMSOM faculty and staff, and distinguished invited guests, **Charles Hong, MD, PhD**, echoed a theme that was heard throughout the ceremony of his investiture as the Melvin Sharoky, MD, Professor of Medicine: “Courage, Hope and Faith.”

“My parents always taught me to have courage, hope and faith,” he said. **“When they decided to come to the United States from Korea when they were in their 40s, that took a lot of courage. They had hope that life in the U.S. would be better, and with faith in God, their new country would treat them and their young son with fairness.”** Those early years growing up in Detroit were not always easy, but he learned about “courage, hope and faith” first-hand from his parents.

Hong went on to graduate first from MIT, and later earned his MD-PhD from Yale Medical School where he was the top graduating student in the program. He then completed his internal medicine residency at Yale and went on to complete his cardiology fellowship at Mass General Hospital, before teaching at Harvard Medical School. He was later recruited to Vanderbilt and co-Directed the Center for Inherited Heart Disease and chaired the Accelerating Drug Re-Purposing Incubator before coming to the UMSOM. He has received numerous awards during his career for his unique research at the intersection of developmental biology, chemical biology stem cell biology human genetics and cardiovascular medicine.

“We are so fortunate to have brought someone of Dr. Hong’s stature as one of the leading physician/scientist/entrepreneurs in the nation—to the UMSOM,” said **Dean E. Albert Reece** in introducing Dr. Hong. “We are also fortunate to have an alumnus and board member, Dr. Mel Sharoky, to make this generous endowment.”

Dr. Sharoky, a 1976 graduate of the UMSOM and current member of the UMSOM Board of Visitors, has been a successful entrepreneur and leader in the pharmaceutical industry for more than 25 years.

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EISENBERG PROFESSORSHIP

UMSOM ESTABLISHES ENDOWED EISENBERG PROFESSORSHIP IN NEUROSURGERY

Thanks to the private donation from an anonymous donor matched by funds from the Maryland E-Innovation Initiative Fund (MEIF), administered by the Maryland Department of Commerce, the University of Maryland School of Medicine (UMSOM) has acquired the \$2.3 million needed to establish the Howard M. Eisenberg, MD, Distinguished Professorship in Neurosurgery.

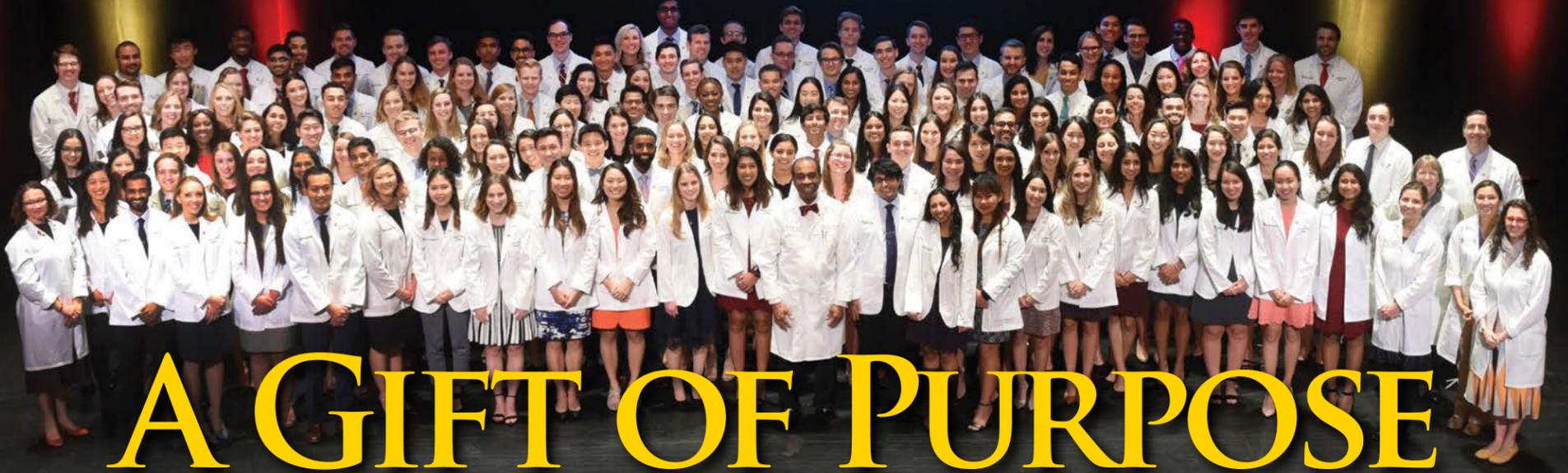
As part of its goal to attract and retain top faculty and foster the development of new technologies and therapies, the School will employ the new endowed professorship to recruit a high-level neurosurgeon-scientist who will continue the legacy of **Howard M. Eisenberg, MD**, UMSOM Professor of Neurosurgery.

Dr. Eisenberg is recognized as one of the nation’s top neurosurgeons and pre-eminent experts on traumatic brain injury before recently stepping down as Chair of the UMSOM Department of Neurosurgery after more than 25 years of service. The new recruit will foster innovation and discovery in the field of neurosurgical and translational neuroscience research with a focus on applications towards clinical use and potential commercialization to bring new intellectual capital to the state of Maryland.

“Endowed professorships provide our outstanding faculty members with the critical resources they need to sustain and expand the promising research they endeavor to carry out, while at the same time enabling them to launch new initiatives to educate and train future physicians,” said UMSOM **Dean E. Albert Reece, MD, PhD, MBA**. **“We are so proud to be able to do this in the name of one of our most distinguished faculty members – Howard Eisenberg.”** 



At a recent surprise event celebrating his career and the establishment of the Eisenberg Professorship, Dr. Eisenberg (center) is joined by longtime UMSOM colleagues J Marc Simard, MD, PhD (left) and E. Francois Aldrich, MB, ChB (right).



A GIFT OF PURPOSE

The University of Maryland School of Medicine (UMSOM) held its annual White Coat Ceremony on November 1 at the Hippodrome Theatre in downtown Baltimore. During the event, first-year medical students are presented with their first white coats, which have long been the symbol of physicians' and scientists' induction into the medical profession.

"Today marks a major milestone in what will surely be a momentous and lifelong journey," said Dean E. Albert Reece, MD, PhD, MBA. *"One hundred and fifty of you sit here today. Each one of you has earned your place in this class, and indeed in today's ceremony."*

The White Coat Ceremony has been an annual tradition at the School of Medicine since 1997. The event, which was sponsored by the Whiting-Turner Contracting Company, is also intended to serve as an opportunity for families of first-year medical students to gain a glimpse of what medical school is really like.

During the ceremony, coats were put on first-year medical students by School of Medicine house leadership faculty to welcome their junior colleagues to the profession of medicine. After being "coated," students recited a Code of Honor acknowledging their acceptance of the obligations of the medical profession.

Among the students receiving their white coats was **Margo Huffman**.

"My future in medicine was sparked around the age of 13 when I began volunteering for a non-profit in Baltimore," said Margo, who as a young adult spent many summers assisting critically ill children and their families. *"Although I loved supporting patients and helping them cope with treatment, I wondered how I could play a direct role in their journey to recovery."* Margo's desire to become a physician was

later solidified after shadowing a psychiatrist. *"I started noticing all of the complex and interconnected social and biological factors involved in the delivery of patient care."*

A first-generation college graduate, Margo received her Bachelor of Science degree in Physiology & Neurobiology at the University of Maryland College Park (UMCP). Although she is currently unsure of what specialty she would like to pursue, Margo looks forward to the exposure medical school will offer. *"The future is still very up in the air for me!"* she said. *"While this path will be challenging,*

I'm excited to be entering into a profession in which I will constantly learn and grow into a better person and better physician."

Like Margo, **Cameran Burt's** interest in medicine began at a very young age. *"Around that time, I discovered my passion for service and scientific problem solving, and how medicine would allow me to combine the two,"* he said. Also a graduate of UMCP, Cameran spent a year conducting research in the lab of **Frank Henn, MD**, Associate Professor of Orthopaedics, after completing his degree in Neurobiology and Physiology. He looks forward to a career in academic medicine and hopes to inspire future physicians of color. *"One of my passions is increasing the number of underrepresented minorities in medicine so that physicians reflect the diverse patient population we serve,"* he said. *"I look forward to being involved in these efforts not only as a medical student, but throughout my career."*

A New York native, **Suneet Waghmarae** discovered his passion in medicine as an undergraduate student at the University of Rochester. *"Medicine was intriguing at the time because I saw how it incorporated the natural sciences, social sciences, and humanities,"* he said. Prior to arriving at UMSOM, Suneet spent two years working as a medical assistant at a private dermatology practice in Massachusetts. *"Those years were instrumental in my decision to apply to medical school,"* he explained. *"It taught me the skills sets physicians needed to have in order to deliver effective and compassionate care."* Suneet also looks forward to career in academic medicine and hopes to share his knowledge and experiences with the next generation of physicians.

At the ceremony, **Kimberly Lumpkins, MD**, Associate Professor of Surgery, encouraged the class to realize their promise. *"By becoming a physician, you have been given an incredible gift,"* she said. *"You all have been given a gift of purpose. Never lose sight of that."* 



Margo Huffman



Cameran Burt



Suneet Waghmarae

Educating Our Community

UMSOM Offers Free Health Education through Mini-Med School

Since 2001, the University of Maryland School of Medicine (UMSOM) has provided free health screenings and medical education to nearly 8,000 Marylanders of all ages, from elementary school students to their grandparents, through its Mini-Medical (“Mini-Med”) School programs.

More than 200 individuals from the surrounding community registered for 2019’s fall Mini-Med School, now in its nineteenth year. The program included a collection of educational sessions on the topics of diabetes, heart health, cancer prevention and detection, Hepatitis C, and even a special presentation on the effects of adverse childhood experiences (ACEs).

A recent study found that 42 percent of Baltimore City adults had experienced at least three traumatic events such as extreme poverty, incarceration, domestic violence, discrimination, and substance abuse while as children. ACEs are often associated with an increased risk for physical, mental, and behavioral problems later in life.

“Experiences that cause stress chemicals to be continuously produced have a big impact on the development of brain cells and the connections among cells,” says **Kathleen Connors, MSW, LCSW-C**, who is an Instructor in the Department of Psychiatry and Co-Director of the Center of Excellence in Infant and Early Childhood Mental Health at UMSOM. *“Toxic stress can effect brain interaction with body systems and lead*

to disease, disability, and social problems throughout the course of life.”

Ms. Connors was among nine UMSOM faculty presenters involved in this year’s program, including

Michael Miller, MD, FACC, FAHA, Professor of Medicine; **Kristi Silver, MD**, Associate Professor of Medicine; **Rodney Taylor, MD, MSPH**, Professor and Chair, Department of Otorhinolaryngology-Head & Neck Surgery; **Sandra Quezada, MD, MS**, Associate Professor of Medicine, Associate Dean for Medical School Admissions, and Assistant Dean for Academic and Multicultural Affairs; **Zaineb Makhzoumi, MD, MPH**, Assistant Professor of Dermatology; **Kyle Yost, DO**, Assistant Professor of Family & Community Medicine; **Shana Ntiri, MD**, Assistant Professor of Family & Community Medicine; and **Paula Rosenblatt, MD**, Assistant Professor of Medicine.

The fall program concluded with a special graduation ceremony in which each “student” was presented with a certificate of completion by **Dean E. Albert Reece, MD, PhD, MBA**. 



Dr. Rodney Taylor



Continued from page 5

The ceremony was hosted by Dean Reece, along with **Stephen N. Davis, MBBS**, the Dr. Theodore E. Woodward Chair of Medicine. Dr. Davis described Dr. Hong as the classic “triple threat” faculty member who excels in research, teaching and service. **“He truly understands both the art and science of medicine,”** Dr. Davis said. He noted that Dr. Hong had mentored dozens of students during his career.

Among the speakers at the ceremony were two distinguished faculty members who were mentors to Dr. Hong: **Myron L. Weisfeldt, MD**, Professor of Medicine and Past Chair of Medicine and Director of Cardiology at Johns Hopkins School of Medicine; and **Carl Hashimoto, PhD**, Senior Advisor for Faculty Development at the National Institutes of Health and Professor of Emeritus of Cell Biology, Yale University. The third speaker, **T.K. Feaster, PhD**, Principal Investigator at the U.S. Food and Drug Administration, was Dr. Hong’s first graduate student.

All of the speakers spoke emphatically about Dr. Hong’s tremendous mentoring ability. **“When you look up the word ‘mentor’ in the dictionary, you see a picture of Dr. Hong!”** Dr. Davis exclaimed.

For Dr. Hong’s part, he talked about mentoring using his familiar theme: **“When a mentor has faith in you, it gives you both hope and courage. That is what my mentors did for me and that is what I always try to do for those I am mentoring.”** 🏛️



Dr. Charles Hong is joined by his family at his October 15 investiture ceremony.



VISIONARY VANGUARDS

Transforming Our Culture While Shaping the Future

Watch the 2019 State of the School Address at:

medschool.umaryland.edu/about/State-of-the-School/2019-State-of-the-School-Address

SOMnews is produced by the University of Maryland School of Medicine Office of Public Affairs

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