



Annual State of the School of Medicine Address

Given by E. Albert Reece, MD, PhD, MBA,
vice president for Medical Affairs, Univer-
sity of Maryland, and John Z. and Akiko K.
Bowers Distinguished Professor and Dean,
University of Maryland School of Medicine

“Leading **Innovation**
Discovery,
Changing Lives”

Tuesday, September 27, 2011

3:30 pm

MSTF Auditorium

A light reception will immediately
follow in MSTF Atrium. All are welcome
and encouraged to attend!

DEAN'S MESSAGE: What's On My Mind



What's on my mind this month is the unique and transformative partnership between the University of Maryland School of Medicine (SOM) and the University of Maryland Medical System (UMMS)—a partnership that is receiving national recognition and expanding access to the highest quality patient-centered care throughout the state.

Once again, the University of Maryland Medical Center (UMMC) has been ranked among the top 50 hospitals nationwide in nine specialties by *U.S. News and World Report*. As the system's flagship hospital, UMMC has a special linkage with the School of Medicine because all of the physicians who practice at UMMC are SOM faculty. In addition to a great showing in the Best Hospital rankings, more than 40 School of Medicine faculty physicians were named to the *U.S. News and World Report's* Top Doctors list.

Thanks to the efforts of the School of Medicine's clinical faculty and exceptional leadership, as well as the outstanding nurses and staff of the University of Maryland Medical Center, **UMMC earned exceptional rankings in nine specialty areas:**

- Cancer—22nd
- Cardiology and Heart Surgery—31st
- Diabetes and Endocrinology—29th
- Ear, Nose and Throat—38th
- Geriatrics—47th



- Kidney Disorders—27th
- Orthopaedics—28th
- Pulmonology—20th
- Urology—44th

The largest specialty gains came in Cardiology and Heart Surgery, which moved up to 31st from 40th last year, and Diabetes & Endocrinology, which moved up to 29th this year from 38th last year.

The Best Hospital rankings are based on objective data—including death rates, patient safety and procedure volume. The ratings are also derived from a national survey in which physicians were asked to name hospitals they consider best in their specialty for the toughest cases. The Top Doctors list was compiled by an independent agency that sent surveys to thousands of doctors and health care professionals across the country asking them to identify excellent doctors in every specialty.

The recognition is extremely gratifying, but it is more than a “pat on the back.” It is an important measure of our growing reputation as a world class academic medical center, and demonstrates the value of the strong and vibrant partnership between the School of Medicine and the medical system. Our alignment with the medical system is unique and goes beyond UMMC. We are also aligned with system's 11 other hospitals and affiliated clinical practices. Together, we are taking steps to integrate the medical school into the fabric of the medical system and expand access to high quality patient-centered care in the community.

There are many concrete examples of how our alignment is improving patient care for the citizens of Maryland. Stephen Bartlett, MD, Peter Angelos Distinguished Professor in Surgery and chair of the Department Surgery, has been appointed surgeon-in-chief of the medical system. In this role, Dr. Bartlett is expanding surgical services throughout the system and strengthening relationships between the School of Medicine surgical faculty and community hospital surgeons. With the support of the medical system and the school, Brian Browne, MD, professor and chair of the Department of Emergency Medicine, played an instrumental role in bringing a free standing emergency center to the Eastern Shore. Staffed by School of Medicine physicians, the Queen Anne's County Emergency Center serves residents who previously had to travel more than 20 miles on congested roads to receive emergency care. We have opened two new satellite practices: a new pediatric specialty care site at Baltimore Washington Medical Center and a larger multi-specialty site at Upper Chesapeake Health.

Through these efforts, the School of Medicine and UMMS will continue to improve healthcare quality and access, while greatly advancing the practice of medicine. **Congratulations to the School of Medicine faculty and the excellent staff of the University of Maryland Medical Center for making UMMC one of the best hospitals in the nation. It is a tremendous accomplishment, which we achieved together by working collaboratively in a spirit of partnership.**

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

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



Scott Thompson APPOINTED INTERIM CHAIR OF THE DEPARTMENT OF PHYSIOLOGY

► BY KAREN ROBINSON

Dean E. Albert Reece, MD, PhD, MBA, has appointed Scott M. Thompson, PhD, as interim chair of the Department of Physiology. Dr. Thompson, a professor of physiology, has been a member of the department since 1998 and professor since 2004. He replaces Meredith Bond, PhD, who will become the next Dean of the College of Sciences and Health Professions at Cleveland State University.

“Dr. Thompson will bring strong leadership skills and tremendous energy to this role, and he will continue the outstanding work of our two previous chairs, Dr. Meredith Bond and Dr. Mordecai Blaustein,” said Dean Reece. “At the appropriate time, I will launch a search for a permanent chair.”

Dr. Thompson received a BS in Biological Sciences from Cornell University in 1979 and a PhD in Neuroscience from Stanford University in 1986. He then received a NATO Fellowship to study in Switzerland, where he worked first at the Biozentrum of the University of Basel from 1986 to 1987 and then the Brain

Research Institute of the University of Zurich from 1987 to 1988. Between 1988 and 1990 he completed his postdoctoral training in the Department of Neurology at Columbia University. In 1990, Dr. Thompson was recruited to become an assistant professor at the Brain Research Institute in Basel, Switzerland.

He is currently principal investigator on grants from the National Institute of Neurological Disorders and Stroke, the National Institute of Mental Health and the National Institute of General Medical Sciences, with total funding of \$3.3 million. Dr. Thompson has authored 75 articles, 15 of which he served as primary author. His articles have appeared in premier peer-reviewed journals including the *Journal of Neurophysiology*, the *Proceedings of the National Academy of Sciences, USA*, the *Journal of Neuroscience*, and *Nature*. He is an invited lecturer nationally and internationally, and he is actively involved in the training and mentoring of PhD candidates.

► BY KAREN ROBINSON

Study Finds Higher Mortality Among Hepatitis C Patients

Patients suffering from the hepatitis C virus are at an increased risk of non-liver-related deaths, according to a new study by Samer S. El-Kamary, MBChB, MS, MPH, assistant professor, Departments of Epidemiology & Public Health and Pediatrics. While prior studies have shown that hepatitis C patients die at higher rates from liver failure and liver cancer, this study was one of the first to find a higher risk of non-liver related death compared to those not infected with the virus. The research was just published in the Infectious Disease Society of America's journal, *Clinical Infectious Diseases*, which looked at all causes of mortality in hepatitis C patients.

The study found that such patients are more than twice as likely to die from all causes, not just liver disease. The most common non-liver related deaths seen in the study were due to HIV, cardiovascular disease and diabetes. The findings indicate that doctors should closely monitor hepatitis C patients even without obvious signs of liver disease, according to Dr. El-Kamary.

"We hope this study will reinforce the importance of preventive measures for at-risk patients and early diagnosis and improving access to care for those already infected, even in the absence of liver disease," said Dr. El-Kamary, who also is a research scientist at the Center for Vaccine Development.

"It would be advisable to consider earlier screening of patients if there is any suspicion of infection, and refer those who are infected for treatment as soon as possible. Hepatitis C infection is a marker for other lifestyle factors," explained Dr. El-Kamary.

People who engage in high-risk behaviors that can cause hepatitis C infection, such as injection drug use, are also at increased overall risk of dying from their high-risk behaviors, he says. HIV is another infectious disease that can be contracted from these behaviors and can sometimes be fatal. The study found that there was an association between hepatitis C infection and

increased deaths from cardiovascular disease or diabetes regardless of the presence of liver disease. "More research is needed to determine the exact causes, but we believe the findings may be directly related to hepatitis C infection itself," Dr. El-Kamary said.

"We know from other studies that there is an association between hepatitis C infection and increased risk of heart disease and diabetes, which is independent of liver disease."

Hepatitis C is an infectious disease of the liver caused by the blood borne hepatitis C virus. It affects almost 130 million people worldwide. Hepatitis C is not routinely tested for in the general population in the United States, and most people infected can go undetected for years. Anywhere from 55 percent to 85 percent of newly infected patients will eventually go on to have chronic viral infection. Of those, 20 percent will develop liver disease, which is complicated by fibrosis, cirrhosis, liver failure and even occasionally liver cancer. In the United States, according to the Third National Health and Nutritional Examination Survey (NHANES III) conducted by the National Center for Health Statistics from 1988 to 1994, about four million people tested positive for hepatitis C. NHANES III is a representative survey of adults living in the United States, for which follow-up mortality data was collected through 2006.

This is attributed in part to the data used by Dr. El-Kamary and his team. Senior author Michelle D. Shardell, PhD, assistant professor, Department of Epidemiology & Public Health, noted that by using the NHANES III mortality data, "Unlike results from previous studies that focused on a narrow patient population, our findings are representative of non-institutionalized adults in the United States." This study is one of the first to examine mortality data from this large, representative survey of United States adults who had no prior knowledge of their infection. 🏛️

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Samer S. El-Kamary, MBChB, MS, MPH

► BY KAREN ROBINSON

Institute for Genome Sciences Cracks Genomic Code of German *E. Coli* Outbreak

A team led by University of Maryland Institute for Genome Sciences researchers has unraveled the genomic code of the *E. coli* bacteria that caused the deadly outbreak in Germany that began in May 2011. More than 50 people died in the outbreak that sickened thousands in Germany, Sweden and the U.S. The paper, published in the *New England Journal of Medicine* (NEJM), describes how researchers around the globe worked together to use cutting edge technology to sequence and analyze the genomics of *E. coli* samples from the outbreak as well as closely related strains in a matter of days. They combined those findings with their knowledge of the biology and evolution of the bacteria to learn more about the outbreak. The analysis occurred rapidly enough to inform the physicians treating people who were infected, and assisted epidemiologists as they raced to trace the source of the pathogen.

The research may be the first time that such a comprehensive scientific analysis of an emerging pathogen took place in the first days and weeks of an outbreak, according to the study's lead author, David A. Rasko, PhD, assistant professor, Department of Microbiology & Immunology, and a research scientist at the Institute for Genome Sciences.

"It took years and millions of dollars to sequence the first *E. coli* genome more than a decade ago," said Dr. Rasko. "Here we are, just months from the start of the German *E. coli* outbreak, and we've published a paper on it. This paper and the research it describes represent the new paradigm of outbreak investigations."

The researchers collaborated with Pacific Biosciences of California, Inc., a Menlo Park-based company that used its new Single Molecule Real Time technology to sequence the genome of the *E. coli* strain from the German outbreak. The collaboration also included scientists from the Statens Serum Institute, the World Health Organization Collaborating Centre for Reference and Research on *Escherichia coli* and *Klebsiella* in Denmark, as well as Harvard and the University of Virginia.

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Dr. Rasko and colleagues at the Institute for Genome Sciences analyzed the genomic data using computational tools, some of which were developed at the Institute. The Institute for Genome Sciences team included postdoctoral researchers Jason Sahl, PhD, and Susan Steyert, PhD, and lab manager Julia Redman. Dr. Rasko's expertise is in the molecular pathogenesis and evolution of *E. coli*, which helped his team to interpret the massive amount of genomic data involved and learn more about the microbe and how it fits into the overall picture of *E. coli*.

Scientists found that the genome of the German outbreak *E. coli* strain was mostly enteroaggregative *E. coli*, a subtype of the bacteria. In carefully examining its genome, they found that the outbreak strain was actually an unusual combination of enteroaggregative *E. coli* and another subtype, known as enterohemorrhagic *E. coli*. Researchers also noted that the strain carried a unique set of virulence and antibiotic resistant factors, making it distinct from other strains of the bacteria.

When the outbreak began in May, scientists around the world began examining the *E. coli* strain as soon as samples were available. Many groups were releasing their findings to the public for free—the data in the current study are also publicly available—which resulted in a type of "crowd-sourcing." That is, research was being conducted through the collaboration of a large, disparate group around the globe. "Usually, science takes place in relative isolation," said Dr. Rasko. "This is the first time we've seen true 'open source' analysis of a microbial genome." 🏛️



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David A. Rasko, PhD

► BY LARRY ROBERTS

Drs. Henry, Fiskum and Njoku Most Recent Endowed Professors

The School of Medicine has awarded three endowed professorships during two special investiture ceremonies. The endowed chair or professorship is one of the highest honors that can be bestowed upon a faculty member and recognizes exceptional performance, reputation and prestige of the faculty member who occupies the position. Endowed chairs or professorships also recognize the visionary donors who make such endowments possible. During the investiture ceremonies, faculty members receive a special medal to uniquely recognize their accomplishment. The medal features the image of founder and first dean, Dr. John Beale Davidge, and historic Davidge Hall.

Most recently, on June 6, 2011, Sharon M. Henry, MD, FACS, was awarded the Anne Scalea Professorship in Trauma. The professorship was established in honor of Anne Scalea, mother of Thomas M. Scalea, MD, the Francis X. Kelly Professor of Trauma Surgery and director of the Program in Trauma, as a living legacy to honor her guidance and inspiration.

In a first of its kind of investiture ceremony on November 30, 2010, the School of Medicine awarded two endowed professorships funded by one donor—the late M. Jane Matjasko, MD, who chaired the Department of Anesthesiology from 1986 to 2005. Gary Fiskum, PhD, was invested as the Matjasko Professor for Research in Anesthesiology, and Mary Njoku, MD, was named the Matjasko Professor for Education in Anesthesiology.

Thus far, the School of Medicine has awarded 52 endowed chairs and professorships. 



Above and below: Peter Rock, MD, and Dean Reece celebrate with Gary Fiskum, PhD, and Mary Njoku, MD, at their endowment ceremony.



Above: Stephen Bartlett, MD, with Sharon Henry, MD, and Dean Reece.

Below: Tom Scalea, MD, with his mother Anne, for whom the professorship is named.

THE ENDOWED CHAIR OR PROFESSORSHIP IS ONE OF THE HIGHEST HONORS THAT CAN BE BESTOWED UPON A FACULTY MEMBER AND RECOGNIZES EXCEPTIONAL PERFORMANCE, REPUTATION AND PRESTIGE OF THE FACULTY MEMBER WHO OCCUPIES THE POSITION.

► BY KAREN ROBINSON

Jonathan Bromberg APPOINTED NEW HEAD OF THE DIVISION OF TRANSPLANTATION

Jonathan S. Bromberg, MD, PhD, professor, Departments of Surgery and Microbiology & Immunology, has been appointed head of the Division of Transplantation within the Department of Surgery.

“Dr. Bromberg is a world class physician-scientist with an impressive education and an equally impressive track record of cutting edge transplantation research,” said Dean E. Albert Reece, MD, PhD, MBA. “I have confidence he will lead the Division of Transplantation into a bright future of top-tier research, education and patient care, further strengthening our robust Multi-Organ Transplant Program.”

The Division of Transplantation, which focuses on kidney, pancreas and liver transplantation, includes 10 faculty members, who are clinicians and basic scientists. Dr. Bromberg will lead the division in significantly expanding its research program, in part by solidifying collaborations with the Departments of Medicine and Microbiology & Immunology as well as the Institute for Genome Sciences, according to Stephen T. Bartlett, MD, the Peter Angelos Distinguished Professor in Surgery and chair of the Department of Surgery. Genomics is a key area of interest in transplant science.

“It is clear that a strong, multidisciplinary approach is the future of transplantation research, and we want to capitalize on the fantastic resources we have here among the many departments of the School of Medicine,” said Dr. Bartlett. “Dr. Bromberg is a versatile clinician and an outstanding investigator with very high quality research. He is the ideal person to strengthen and expand our cutting edge transplantation research, education and clinical efforts.”

Benjamin Philosophie, MD, PhD, associate professor, Department of Surgery, led the division since 2004. He has moved on to become the head of the Section of Liver Transplantation and Hepatobiliary Surgery. “We are fortunate to have an already strong Division of Transplantation, thanks to the outstanding leadership of Ben Philosophie,” said Dr. Bartlett. “I want to express my gratitude for his exceptional work as division head and I know he will continue to excel in his expanded role in the division.”

Dr. Bromberg already is working on research that fosters collaboration between clinicians and basic scientists from various disciplines within the School of Medicine.

Dr. Bromberg already is working on research that fosters collaboration between clinicians and basic scientists from various disciplines within the School of Medicine. One area of interest is the microbiota—the microorganisms that live on and inside of the human body. Dr. Bromberg is working with the Institute for Genome Sciences to examine the microbiota of transplant patients and how those change with different immune responses. He is also collaborating with scientists in the School of Medicine and other research institutions to study gene expression in kidney transplant biopsies.

“The University of Maryland School of Medicine is unique in that it is such a large institution with established programs in a wide array of disciplines,” said Dr. Bromberg. “These are the kinds of great resources that create a fantastic atmosphere for growing and moving, changing and accomplishing.

I plan to take advantage of that atmosphere in strengthening the division’s clinical, research and educational components.”

Dr. Bromberg received his MD degree from Harvard Medical School in 1983, and a PhD in immunology the same year from the Harvard Graduate School of Arts and Sciences. He conducted postgraduate research at University College in London before becoming chief resident at the University of Washington Affiliated Hospitals in Seattle. He then completed a fellowship in the Division of Transplantation of the Department of Surgery at the University of Pennsylvania. His research focuses on cellular and molecular immunology in transplantation. Specifically, he studies the details of how T-cells migrate from the lymph node to the transplanted organ. Dr. Bromberg examines how the intricacies of that travel affect the final immune response, determining whether the organ is tolerated or rejected. Dr. Bromberg has published nearly 200 peer-reviewed articles, and has more than \$6.35 million in extramural research funding. 



11th Annual Mini-Med School Schedule

Date: Wednesdays, September 7th through October 5th
Time: 6:00–8:00 pm
Location: University of Maryland School of Medicine
MSTF Auditorium

Date	Topic & Speaker
Wednesday, 9/7	Welcome —Dr. E. Albert Reece, <i>Dean</i> Smoking Cessation —Dr. Kevin Ferentz, <i>Associate Professor of Family & Community Medicine</i> Stroke —Dr. Barney Stern, <i>Professor of Neurology</i>
Wednesday, 9/14	Low Back Pain —Dr. Dan Gelb, <i>Associate Professor of Orthopedics</i> Disorders of the Thyroid —Dr. Richard Horenstein, <i>Assistant Professor of Medicine</i>
Wednesday, 9/21	Osteoporosis —Dr. Marc Hochberg, <i>Professor of Medicine</i> Optimizing Heart Health —Dr. Mike Miller, <i>Professor of Medicine</i>
Wednesday, 9/28	Pancreatic and Colon Cancers —Dr. Peter Darwin, <i>Associate Professor of Medicine</i> Glaucoma & Macular Degeneration —Dr. Lily Im and Dr. Amir Guerami, <i>Assistant Professors of Ophthalmology & Visual Sciences</i>
Wednesday, 10/5	Traumatic Brain Injury: From the Ballfield to the Battlefield —Dr. Alan Faden, <i>Professor of Anesthesiology and David S. Brown Professor in Trauma</i> Graduation —Dr. E. Albert Reece, <i>Dean</i>

For more information, visit <http://medschool.umaryland.edu/minimed/>.

PHOTO OF THE MONTH



Farewell Summer, Cocoa Beach, Florida, Summer 2011
Photo by: **Yimei Wu**, manager, Faculty Affairs and Special Projects, Department of Epidemiology & Public Health

Call for Photos!

Send in photos of your favorite fall activity for the next Call for Photos.
To participate, submit your photograph(s) to photos@som.umaryland.edu by October 1, 2011.

somnews

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