



UNIVERSITY *of* MARYLAND
MEDICAL SYSTEM *and* SCHOOL OF MEDICINE

The Power of Partnership

DELIVERING
High-Value
HEALTH *care* THROUGH
Innovation
AND
discovery





UNIVERSITY *of* MARYLAND
MEDICAL SYSTEM *and* SCHOOL OF MEDICINE

The Power of Partnership

For almost two centuries, our partnership has been dedicated to improving medicine and understanding the science behind it, reaching new heights across many disciplines to improve the lives of all Marylanders.

We are,
together,
developing and
implementing
bold strategies
to address
the nationwide
challenges in
health care.
The University
of Maryland
Medical System
and the University
of Maryland
School of Medicine
are pleased to present
these examples of
innovation and discovery
from the past year.

2014

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A shared VISION

From CEO Robert Chrencik and Dean E. Albert Reece

The University of Maryland School of Medicine and the University of Maryland Medical System are facing the challenges in health care, biomedical research and education with a shared belief that innovation is the surest path to delivering high-value health care.

Innovation allows us to do what might seem impossible at first.

The desire to deliver the best possible outcomes for our patients drives our faculty and staff, who work to meet the needs of Marylanders while developing a global model of an integrated health system and medical school, with innovative programs in clinical and academic medicine and biomedical research.

A CHANGING HEALTH CARE ENVIRONMENT

Nationwide, medical schools and health systems face increasing fiscal challenges. **The entire country — Maryland in particular — has embarked on a new approach to delivering and paying for health care.** This change is an important facet of national health care reform, meeting the needs of a community and finding the best way to pay for it.

Maryland's health care organizations have a unique arrangement with the federal and state government, in which hospitals have agreed to be paid a fixed annual rate based on population and to reach aggressive quality and hospital utilization reduction goals.

HIGH-VALUE HEALTH CARE

The partnership between our School of Medicine and Medical System plays a critical role in sustaining and improving the health and well-being of our communities in Maryland, as well as around the world in countries where our faculty extend their expertise.

We share a common mission to teach future health care practitioners, to conduct innovative biomedical and clinical research and to provide a full range of health care services to diverse patient populations across the state.

We know through research what steps we need to take to improve people's lives, but this cannot be accomplished by understanding the research alone. We must take this information and apply it.

MEDICAL SYSTEM GROWTH

In Fiscal 2014, Upper Chesapeake Health, which first began a partnership with us in 2009, formally merged with UMMS as a full member, proudly becoming University of Maryland Upper Chesapeake Health, including two hospitals: University of Maryland Upper Chesapeake Medical Center and University of Maryland Harford Memorial Hospital.

UMMS now leverages the fiscal stability and purchasing power of 12 member hospitals to deliver world-class services and technology to all of those we serve. UMMS member hospitals employ more

than 23,000 people. We have a combined total of 2,430 licensed beds and recorded 125,979 patient admissions in Fiscal 2014 — more than any other health care provider in Maryland.

A RESOURCE TO THE REGION

Physicians across the region referred more patients than ever to our flagship academic medical center, the University of Maryland Medical Center (UMMC). This year, Maryland ExpressCare recorded 11,884 physician referrals for urgent patient transfers from community hospitals, a figure that has more than doubled over the last 10 years.

UMMC is a hospital of choice throughout the Mid-Atlantic for its expertise in the delivery of time-sensitive critical care. In November, UMMC cut the ribbon on the new Shock Trauma Critical Care Tower, a \$160-million project to expand the hospital's capacity to accept the most critically ill and injured patients in the region.

As more health care is shifting to the outpatient setting, UMMS also is increasing the capacity and accessibility of non-hospital-based medical care in communities across Maryland. **Our faculty physicians provide compassionate, world-class care at more than 20 different locations throughout the state.**

A RICH HERITAGE

Founded in 1807, the UM School of Medicine is a preeminent biomedical research institution with nearly 3,000 faculty members dedicated to training the next generation of physicians, biomedical research scientists and allied health professionals. Additionally, our continuing medical education programs serve more than 5,000 physicians and other health professionals each year. The University of Maryland founding campus in Baltimore provides our faculty with interdisciplinary collaboration, particularly with the schools of Nursing, Pharmacy, Dentistry and Social Work.

In Fiscal 2014, research grants and contracts totaled more than \$400 million at the UM School of Medicine.

According to the Association of American Medical Colleges,* we ranked eighth among the 76 public medical schools and 22nd among all 141 public and private medical schools nationwide in research grant and contract expenditures.

Last fall saw two major developments: a long-awaited groundbreaking for the School of Medicine Research Building, Health Sciences Facility III, and the Accelerating Innovation and Discovery in Medicine (ACCEL-Med) initiative to increase the pace and scope of discovery, collaboration and innovation throughout the School of Medicine. ACCEL-Med is part of our "Shared Vision 2020" goal-oriented and strategic approach to maximizing our academic yield in all our mission areas: education, clinical care, research and philanthropy.

PATIENT SAFETY AND QUALITY OF CARE

The American Nurses Credentialing Center reaffirmed, for another four years, the prestigious Magnet status of UMMC and of University of Maryland Shore Regional Health. There are only six hospitals in the state that have achieved Magnet status.

Several UMMS hospitals have continuously earned national safety and quality awards from the Delmarva Foundation, The Joint Commission, the American Heart Association, the Maryland Patient Safety Center and other organizations.

Our systemwide safety initiatives are built on an advanced information technology platform that supports clinical decision-making and secure sharing of data.

CHALLENGES IN HEALTH CARE

Working together, **we can identify where physician and health care professional shortages exist** and work with the community and our hospital partners on solutions. Residents throughout Maryland now have **more access than ever to world-renowned transplant specialists, neurosurgeons, cardiologists and pediatricians.** UM-affiliated cancer and cardiac care services have enhanced existing programs at University of Maryland Upper Chesapeake Health and University of Maryland St. Joseph Medical Center.

UM School of Medicine faculty served on the **Maryland Health Disparities Workgroup, convened by Lt. Gov. Anthony Brown and chaired by the School of Medicine dean.** The Workgroup recommendations led to legislation and establishment of health enterprise zones (areas that will receive special incentives to reduce inequalities in health care) across the state. The Workgroup's innovative approaches were published in the July 17, 2013, issue of the *Journal of the American Medical Association*.

PERFORMANCE AND ECONOMIC IMPACT

Despite the fiscal challenges faced by the health care industry nationwide, the Medical System and School of Medicine continue to demonstrate strong financial performance through responsible stewardship across our organizations.



Leadership in INNOVATION AND Discovery-Based MEDICINE

In the pages ahead, we present examples of our partnership. These highlights demonstrate **our bold and strategic advancement of discovery-based medicine and high-value health care**, not just in Maryland, but across the region, the nation and throughout the world.

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

Robert A. Chrencik, MBA, CPA

President and Chief Executive Officer
University of Maryland Medical System

* AAMC: MSPS, LCME Part I-A data file, as of 8/22/2014.
LCME Part I-A data file, last updated 6/26/2014

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The Power of Partnership

"By using our collective resources to deliver the best and most compassionate care in the most appropriate setting, the University of Maryland Medical System is developing an innovative model for high-value health care. It starts with community health education and disease management, and extends to the most innovative lifesaving surgeries and intensive care. Our partnership with the world-class University of Maryland School of Medicine ensures that we can continue to enhance the lives of Marylanders and others who need us."

— **Stephen A. Burch, Esq.**, Chair, UMMS Board of Directors

"The theme of this year's Annual Report is most appropriate, as the University of Maryland School of Medicine continues to break new ground in accelerating innovation and discovery in medicine. With the construction of the new biomedical research facility now underway, and continuing growth of the School's research portfolio, the SOM is staking its claim as a leading global force in scientific research and discovery. That foundation of knowledge — combined with the quality of health care delivery at the University of Maryland Medical System — makes this partnership one of the most powerful in health care today, and a model for the future of discovery-based medicine."

— **Michael E. Cryor**, Chair, SOM Board of Visitors

UNIVERSITY of MARYLAND

SCHOOL OF MEDICINE

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*Alumnus - UM School of Law



A male scientist with dark hair and glasses, wearing a white lab coat, is looking through a black and white Olympus microscope. He is in a laboratory setting with shelves of various bottles and equipment in the background. The lab coat has a name tag that reads "Sanjay K. Agarwal, M.D. Cardiovascular Medicine" and a logo for the "UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE".

DELIVERING
High-Value
HEALTH *care* THROUGH
Innovation
AND *discovery*

MULTIDISCIPLINARY

Care and Research *in diabetes and endocrinology*

*a*n expanded University of Maryland Center for Diabetes and Endocrinology opened in March at University of Maryland Medical Center Midtown Campus.

The center's opening is the first major step to integrate patient services at the University and Midtown campuses of the University of Maryland Medical Center (UMMC), giving patients the best of both worlds: community-centered care coupled with expert faculty physicians and researchers.

UMMC's regional practice for adults and children with diabetes and other endocrine diseases was relocated from the University campus and other outpatient sites and merged with the existing services at UMMC Midtown Campus, one mile from the main UMMC University Campus in Baltimore. The new location includes a triage area, patient education area and 17 exam rooms.

"It is much more convenient for our diabetes and endocrinology patients to come to one location for all their needs. Our staff also has a greater opportunity to confer about complex cases and collaborate to provide patient-centered care," says **Stephen N. Davis**, MBBS, FRCP, FACP, Theodore E. Woodward Professor of Medicine and chairman of the Department of Medicine at the University of Maryland School of Medicine. "We needed additional space to carry out our mission as one of the region's major centers for diabetes and endocrinology."

Scientific research is an important part of that mission. School of Medicine researchers are breaking new ground, searching for genes that cause diabetes and other endocrine diseases, exploring ways to better diagnose and treat gestational diabetes, and developing new therapies. The UM Center for Diabetes and Endocrinology is a hub for this innovative research.



Kashif Munir, MD, assistant professor of medicine, treats patients who have diabetes and other endocrine disorders. Diabetes patients often have multiple medical issues requiring multidisciplinary care. **Verlinda Heffel**, of Annapolis, was successfully treated for thyroid cancer and is also being treated for diabetes.



Kristi D. Silver, MD, (above) associate professor of medicine, is the interim medical director of the UM Center for Diabetes and Endocrinology. Cutting the ribbon to celebrate the center's new home are (below, from left) **Alan Shuldiner, MD**; **Stephen N. Davis**, MBBS; **Dale Rose**, DHA, MS, RN, CENP, director of ambulatory nursing; and **Cathy DiBlasi**, BSN, RN, LDN, CDE, nurse manager.





Kashif Munir, MD, with patient
Verlinda Heffel

At the Forefront *in* DIABETES RESEARCH

Researchers are joining forces across disciplines to find better treatments for diabetes in all its forms, such as gestational diabetes, which is the focus of research by **E. Albert Reece, MD, PhD, MBA**, dean of the School of Medicine.



Toni Pollin, PhD, associate professor of medicine, and **Alan Shuldiner, MD**, the John L. Whitehurst Endowed Professor of Medicine, were awarded a four-year, \$3.7 million grant from the National Institutes of Health to develop a personalized medicine program to help doctors diagnose and treat monogenic diabetes — a form of diabetes caused by a mutation in a single gene.



Toni Pollin, PhD, and Alan Shuldiner, MD





Cheryl Holt, PhD,
Kevin Cullen, MD,
Joanne Dorgan, PhD, MPH,
and William Blattner, MD

Population Science *expands the scope* OF THE UM GREENEBAUM CANCER CENTER

*t*hrough its new Population Science Program, the University of Maryland Marlene and Stewart Greenebaum Cancer Center is leading worldwide research to gain insights into the causes of cancer and to improve the quality of life and survival of people with cancer.

The program brings together investigators from throughout the University System of Maryland, founded through the collaboration of Cancer Center Director **Kevin Cullen**, MD, who is the Marlene and Stewart Greenebaum Distinguished Professor of Oncology and professor of medicine at the UM School of Medicine; **William Blattner**, MD, professor of medicine and of epidemiology and public health, and associate director of the UM Institute of Human Virology at the UM School of Medicine; and **Mei-Ling Ting Lee**, PhD, professor and chair of epidemiology and biostatistics at the University of Maryland, College Park (UMCP), and director of the UM Biostatistics and Risk Assessment Center in College Park. Program leaders are **Joanne Dorgan**, PhD, MPH, professor of epidemiology and public health at the UM School of Medicine, and **Cheryl Holt**, PhD, associate professor in the School of Public Health at UMCP.

The program focuses on three research areas — cancer epidemiology and outcomes, early detection behaviors, and tobacco and nicotine use. Researchers are discovering biological indicators of cancer risk, detecting causes of treatment-related pain, identifying influences on smoking behavior, and characterizing exposures and health effects of e-cigarettes. With findings from this work, researchers are developing and testing interventions aimed at smoking prevention and cessation. In medically underserved communities, they are removing barriers to standard cancer screenings, such as mammography.

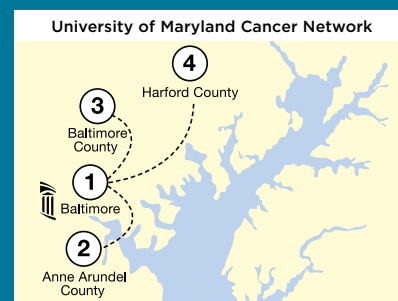
“Early detection and intervention are critical, so we’re identifying communities that offer no screening opportunities and pairing them with early-detection resources,” says Dr. Holt, who is leading such an effort with more than 40 faith-based organizations in Prince George’s County. **“Our goal is to reduce cancer disparities among communities of different socioeconomic status.”**

Complementing this local work is the program’s global health initiative, which provides unique opportunities to conduct cross-cultural research to reduce such disparities.

Introducing the UNIVERSITY of MARYLAND CANCER NETWORK

Three exceptional University of Maryland Medical System hospitals are now connected to the Greenebaum Cancer Center at the University of Maryland Medical Center. Patients who seek treatment in these community hospitals have access to its clinical expertise, latest treatments and expanded network of clinical trials.

As a National Cancer Institute-designated center, the UM Greenebaum Cancer Center is among a select group of care providers known for world-class laboratory and clinical research programs.



- 1 University of Maryland Medical Center
- 2 UM Baltimore Washington Medical Center
- 3 UM St. Joseph Medical Center
- 4 UM Upper Chesapeake Medical Center

A WORLDWIDE PERSPECTIVE



Clement Adebamowo, BM, ChB, ScD, FWACS, FACS, professor of epidemiology and public health at the UM School of Medicine, conducts research in West Africa exploring the

differences in cancer incidence between Africans and African-Americans.



SHOCK TRAUMA EXPANSION DEDICATED TO

Maryland's
most critically ill
and Injured

*b*y the time the new Shock Trauma Critical Care Tower at the University of Maryland Medical Center was dedicated on Nov. 8, 2013, more than three-fourths of the new space was already in use caring for critically ill and injured patients in the Mid-Atlantic.

The need for space at the world-renowned R Adams Cowley Shock Trauma Center at UMMC was so great that units were put into use as quickly as they could be built and outfitted, and are now serving **more than 8,000 patients a year.**

A new entrance and supportive waiting area greet family members who have received a call that their loved one has been transported to Shock Trauma. Emergency medical staff bringing patients to Shock Trauma — via ambulance or helicopter, from the field or from another hospital — now have larger ambulance bays and a second helicopter pad to help ease crowding.



Special guests who participated in the dedication included Maryland Gov. Martin O'Malley; US Sen. Ben Cardin; Baltimore Mayor Stephanie Rawlings-Blake; US Rep. C.A. "Dutch" Ruppersberger; Major General Mark Ediger, deputy surgeon general of the US Air Force; and Francis X. Kelly, chairman of the Shock Trauma Board of Visitors and former Maryland state senator.



Leaders at the Shock Trauma Center are, from left to right: **Jose J. Diaz, MD**, professor of surgery and chief of acute care surgery; **Thomas M. Scalea, MD, FACS**, physician-in-chief, R Adams Cowley Shock Trauma Center, and the Honorable **Francis X. Kelly** Distinguished Professor of Trauma Surgery; **Deborah Stein, MD, MPH**, associate professor of surgery and chief of trauma; and **James V. O'Connor, MD, FACS**, professor of surgery and chief of trauma critical care.

TRAUMA
LEADERS





How the System Works FROM INJURY *to* REHAB *to* COMING HOME

In fall 2012, Jennie Cao (below) was participating in a charity bike ride to support breast cancer patients when she **lost control of her bike and suffered a serious head injury.**

She was flown to the R Adams Cowley Shock Trauma Center at UMMC for treatment. Three days later, she went to the **University of Maryland Rehabilitation & Orthopaedic Institute** for focused inpatient care for 10 more days.

She continued with follow-up care near her home at **University of Maryland Upper Chesapeake Medical Center**, part of the University of Maryland Rehabilitation Network.



\$ 160 MILLION

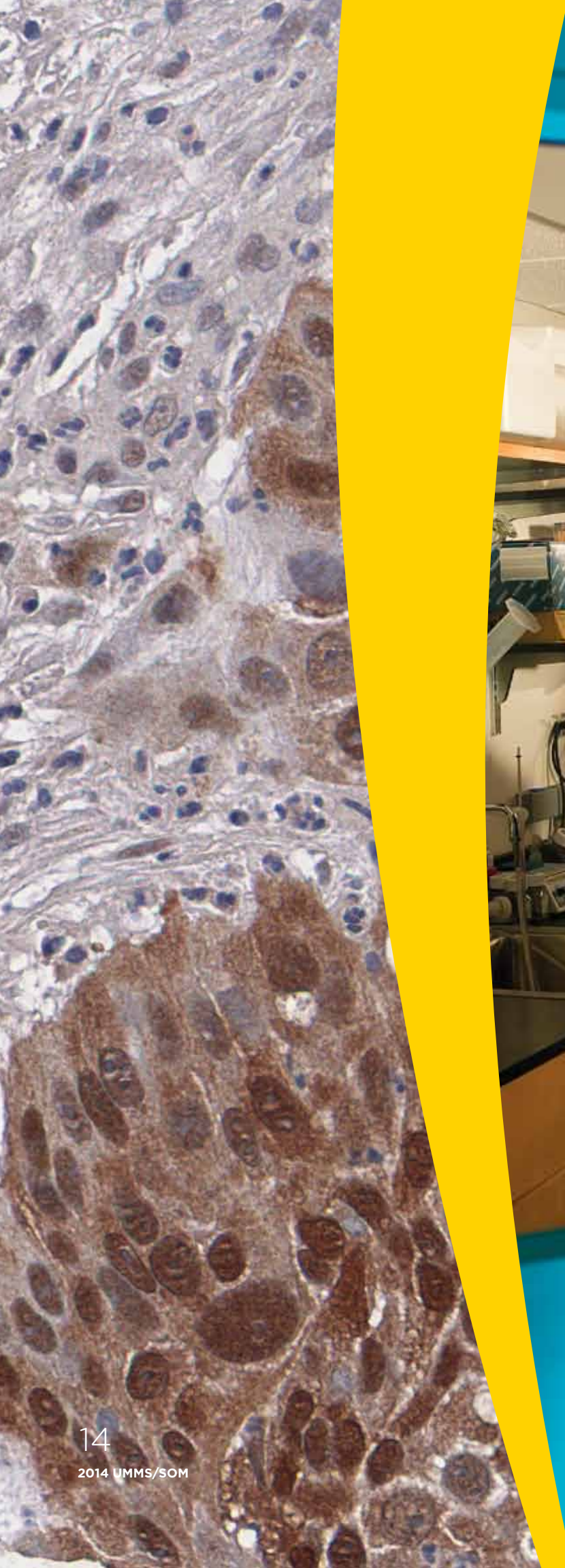
The total cost of the new tower was \$160 million, with reinvested earnings from UMMC operations being the largest contributor.

Other sources were:

\$35 million from private philanthropic donations

\$50 million from the State of Maryland

\$2 million from the federal government



Richard Eckert, PhD, and
Michal Zalzman, PhD

Research Partnership *across disciplines*

*d*iscovery-based medicine is a tremendous innovation engine, with much of the fuel coming from research at the University of Maryland School of Medicine. Cuts in federal funding threaten this progress. However, UMSOM investigators have turned this time of fiscal constraint into an opportunity to work across disciplines to tackle the most difficult medical issues from multiple angles. Basic-science researchers teamed with a School of Medicine faculty surgeon at the University of Maryland Marlene and Stewart Greenebaum Cancer Center to wage an all-out attack on cancer cells, which — unlike normal cells — do not age.

Richard Eckert, PhD, the John F.B. Weaver Professor and chair of the Department of Biochemistry and Molecular Biology and associate director for basic science at the Greenebaum Cancer Center,



Scott Strome, MD

and **Scott Strome**, MD, professor and chair of the Department of Otorhinolaryngology-Head and Neck Surgery, jointly recruited an expert in stem-cell research to advance their work on head, neck, skin and mouth cancers: **Michal Zalzman**, PhD, assistant professor of otorhinolaryngology and of biochemistry and molecular biology. She holds a worldwide patent and studies the fundamental mechanisms controlling

cellular immortality and telomere repair. **Joint faculty appointments in the School of Medicine will further strengthen interdisciplinary research, and will be a focal point for new recruitment.**

E. Albert Reece, MD, PhD, MBA, dean of the School of Medicine, firmly believes that faculty teams of investigators from both basic science and clinical research are optimally positioned to solve the conundrums of vascular science, metabolic disease, pharmacogenomics, brain science, cancer biology and other areas.

In late 2013, Dr. Reece announced his Dean's Challenge Award, a program to encourage new collaborations between senior investigators across disciplines. The awards provide between \$100,000 and \$200,000 for ambitious research projects. Faculty who receive the awards are expected to generate enough pilot data to successfully acquire a large federal funding base.

ROBOTIC REHABILITATION

The “anklebot” is a robotic-assisted device under investigation as a therapy for people to regain mobility after a stroke. Originally tested at the Department of Veterans Affairs (VA) Maryland Health Care System, this **collaboration between experts in engineering, rehabilitation science and neurology** now extends to the University of Maryland Rehabilitation & Orthopaedic Institute.

The research team includes (below, from left to right): **Larry Forrester**, PhD, associate professor of physical therapy and rehabilitation science; **Richard Macko**, MD, professor of neurology, associate director of research for the Geriatric Research Education and Clinical Core, and director of the VA Rehabilitation Research and Development Center of Excellence in Exercise and Robotics; **Amanda Krywonis**, PT, DScPT, NCS, senior physical therapist in the stroke unit at University of Maryland Rehabilitation & Orthopaedic Institute and **Anindo Roy**, PhD, assistant professor of neurology and chief robotics engineer at the VA Maryland Health Care System.



ACCEPTING THE CHALLENGE

to Provide *better care, better quality,* at Lower Costs

*t*he national spotlight on health care quality, cost and access shines especially strong in Maryland, which has a hospital rate-setting model unlike any other state. Maryland hospitals have accepted more responsibility to raise the quality of care each year — or risk losing money if the data do not demonstrate this improvement.

The University of Maryland Medical System (UMMS), in partnership with the University of Maryland School of Medicine, is rising to the challenge to serve Maryland while further developing a national model for the innovative delivery of high-value health care — better care, better quality, at lower cost.

UMMS hospitals are employing new strategic initiatives to better partner with physicians across the region, improve clinical performance, maximize operational efficiency and better utilize data to help guide decision-making. The Medical System and School of Medicine are reshaping and forming new partnerships to meet the health care needs of the population — including prevention and chronic disease management — both inside and, increasingly, outside of hospitals.

For the 12-hospital Medical System, the faculty physicians at the School of Medicine, and community physician partners, there is strength in numbers and in geographic coverage. **This partnership can offer a well-coordinated network where patients receive the best care — when they need it — in the most appropriate setting.**

The Medical System and School of Medicine are leading the nation in looking at ways to remove access-to-care barriers due to geography, income or race — looking holistically at the social and economic realities in the community. For example, transitional care programs at both campuses of the University of Maryland Medical Center match a nurse case manager with selected patients before they are discharged from the hospital. A pharmacist and a social worker collaborate with the nurse to address any barriers the patient might face in managing health needs, such as obtaining prescriptions or transportation to follow-up appointments.

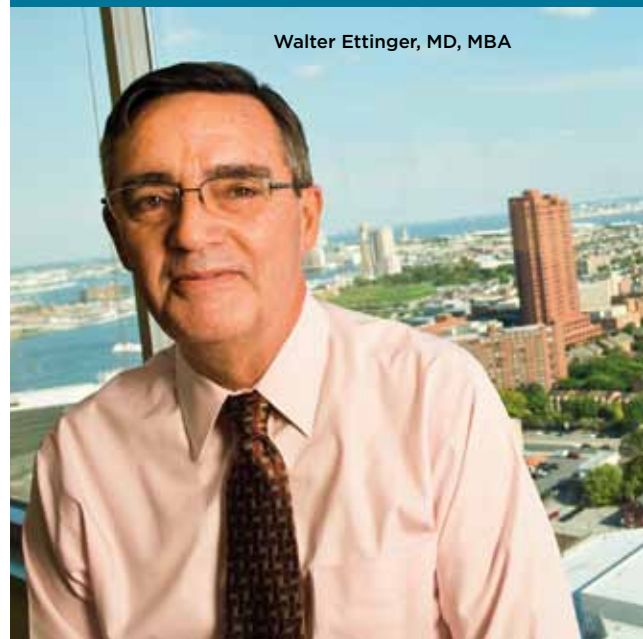
Taking a Closer Look TOP FIVE SYSTEMWIDE PRIORITIES *for* FISCAL 2015

- 1 Population Health
- 2 UM Physician Network
- 3 Clinical Performance Improvement
- 4 Operational Performance Improvement
- 5 Data-Driven Organization



Stephen Bartlett, MD

Walter H. Ettinger, MD, MBA, is senior vice president and chief medical officer for UMMS. **Stephen Bartlett, MD**, is senior vice president and system surgeon-in-chief and the Peter Angelos Distinguished Professor and Chair of Surgery. Dr Ettinger and Dr. Bartlett co-chair a collaborative group of physician leaders from across the system who are responsible for safety, quality and cost-effective clinical innovation.



Walter Ettinger, MD, MBA



David L. Stewart, MD

LEADERS *in* PRIMARY CARE

David L. Stewart, MD, MPH, is associate professor and chairman of the Department of Family and Community Medicine at the UM School of Medicine, which is a leader in the movement to train more physicians to provide excellent primary care and coordinate the additional specialty care patients may need.





A Coordinated System of
CARDIAC CARE
for MARYLANDERS

David Fisher, a retired anatomy and physiology teacher, was experiencing chest pain at his home in Denton, Md. He went to his local hospital, **University of Maryland Shore Medical Center at Easton (UM SMC at Easton)**, where doctors determined he was having a heart attack and arranged for him to be flown to **University of Maryland Medical Center**, where he underwent bypass surgery. Back on the Eastern Shore, Mr. Fisher thrived in cardiac rehab therapy at UM SMC at Easton's Center for Cardio-Pulmonary Fitness & Wellness. His local cardiologist cleared him to return to his own workout routine of running and weightlifting just 14 weeks after surgery.



UM COMPREHENSIVE

Heart Center *tackles complex* Conditions

*t*he resounding theme within the University of Maryland Comprehensive Heart Center in Fiscal 2014 was collaboration — **collaboration across teams and specialties, between leaders and institutions.**

James Gammie, MD, professor of surgery at the University of Maryland School of Medicine and head of the Division of Cardiac Surgery, partnered closely with **Sanjay Rajagopalan**, MBBS, FACC, FAHA, the Melvin Sharoky, MD, Endowed Professor in Cardiovascular Medicine and head of the Division of Cardiovascular Medicine, to shape the vision of the Comprehensive Heart Center. Under their leadership, cardiologists, cardiac surgeons and researchers are tackling complex heart conditions through discoveries and advancements in the laboratory, clinic and operating rooms.

The other divisions that make up the Comprehensive Heart Center are Pediatric Cardiology, headed by **Geoffrey Rosenthal**, MD, PhD, professor of pediatrics; Pediatric Cardiac Surgery, headed by **Sunjay Kaushal**, MD, PhD, associate professor of surgery; and Vascular Surgery, headed by **Rajabrata Sarkar**, MD, PhD, the Barbara Baur Dunlap Professor of Surgery.

“The **University of Maryland Comprehensive Heart Center** is growing because leaders here share the strong belief that the future of cardiac care lies in collaboration across specialties, both in the research environment and in clinical settings,” says Dr. Rajagopalan.



Clinical trials such as Cardiovascular Outcomes Assessment of the MitraClip Percutaneous Therapy (COAPT) bring together multidisciplinary teams to treat patients with mitral valve regurgitation who are too high-risk to undergo traditional mitral valve replacement. The new standard in the Comprehensive Heart Center is for teams with various specialists — imaging experts, nurses, cardiac surgeons, cardiologists — to evaluate patients at practice locations prior to determining the appropriate course of treatment.

“**Patients appreciate being seen by all their cardiac experts at one time**, as opposed to scheduling multiple visits,” says Dr. Gammie. “Multidisciplinary teams ensure the patient gets the best care by drawing on skills from many experts.”



Sanjay Rajagopalan, MBBS, FACC, FAHA

Newly Recruited CARDIAC SURGEONS at UM SJMC

Locations for surgical treatments expanded from the University of Maryland Medical Center (UMMC) to include the University of Maryland St. Joseph Medical Center (UM



SJMC) as part of the UM School of Medicine Division of Cardiac Surgery. Newly recruited surgeons at UM SJMC include **Stewart Finney**, MD, clinical associ-

ate professor of surgery at the UM School of Medicine and chief of cardiac surgery at UM SJMC, and **Rawn Salenger**, MD, clinical assistant professor of surgery.



Transplant *exceeds expectations* IN RESEARCH AND PATIENT CARE

*t*he abdominal and thoracic transplant program at the University of Maryland Medical Center (UMMC) has grown to be one of the busiest in the country, performing more than 400 transplants last year and attracting patients from throughout the US and overseas.

The **University of Maryland Liver Center**, a multidisciplinary program designed to treat patients with every type and stage of liver and hepatobiliary disease, launched this year as an extension of UMMC's ongoing commitment to patients with diseases of the liver, gallbladder and bile duct. Together, hepatologists, surgeons, oncologists, radiation experts and skilled nurses review patient cases to determine appropriate, effective treatments.

The liver transplant team, led by **Rolf Barth, MD**, associate professor of surgery, performed more liver transplants in calendar year 2013 than any other transplant program in the state for the fourth year in a row and is set to exceed those volumes this year. The team's patient outcomes have remained consistently strong, even while performing some of the most complex surgeries — including living donor liver transplants.



William R. Hutson, MD, professor of medicine and medical director of liver transplantation, and **Darryn R. Potosky, MD**, assistant professor of medicine and director of hepatology at UMMC, are among the hepatologists who collaborate with surgeons and others on the liver transplant team.

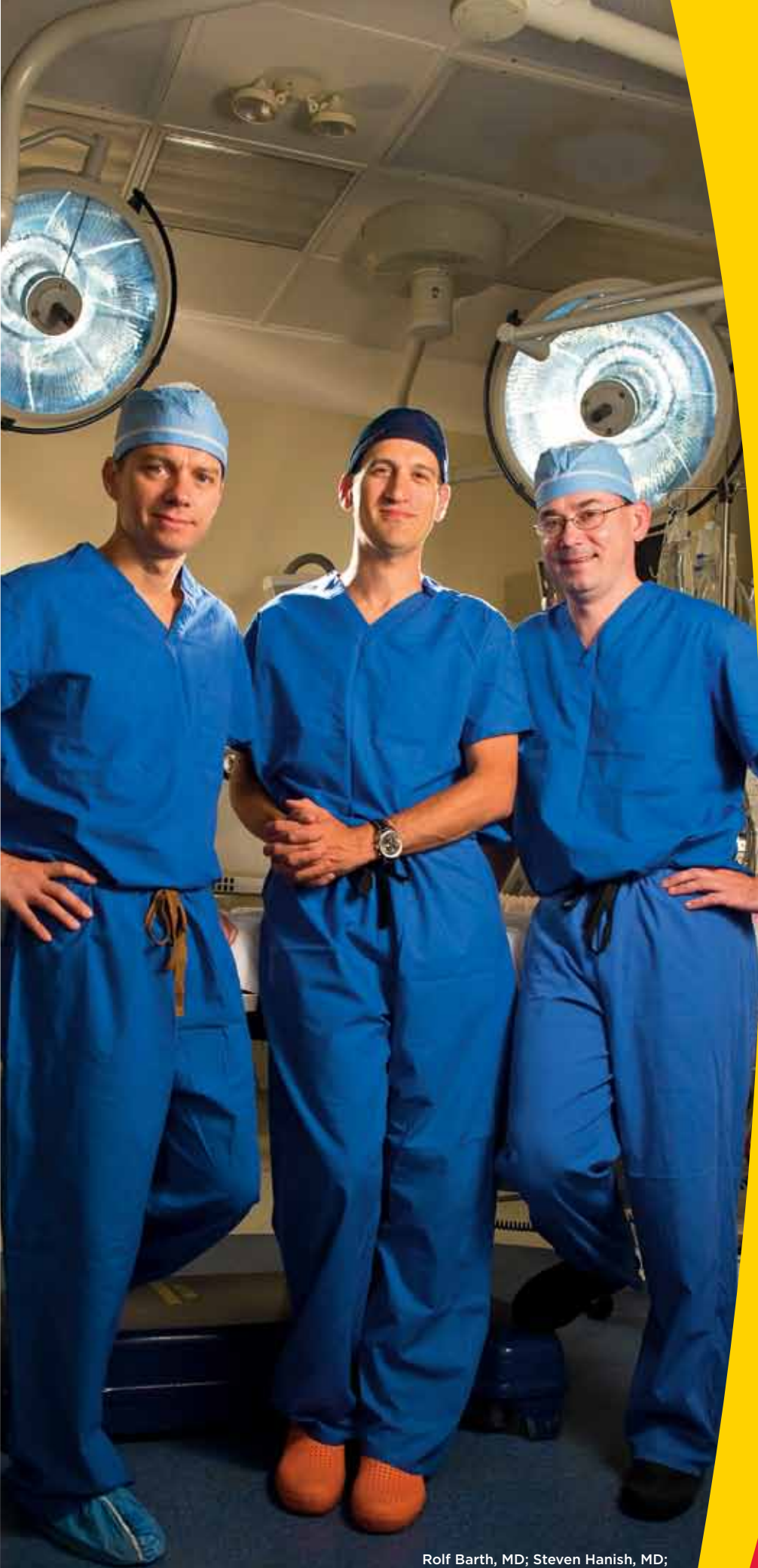


Taking Transplant Evaluations TO *the* EASTERN SHORE

Transplant surgeons travel monthly to Maryland's Eastern Shore to evaluate record numbers of pre-kidney and pre-pancreas transplant patients at a practice established in partnership with the University of Maryland Shore Medical Center at Easton.

The transplant and dialysis access efforts, led by **David Leeser, MD**, associate professor of surgery, have helped more than 100 patients from the Delmarva Peninsula get transplants at UMMC. **Trish Rosenberry, MSN, RN**, manager of outpatient resources at UM Shore Medical Center at Easton, coordinates the process for patients.





Rolf Barth, MD; Steven Hanish, MD;
and John LaMattina, MD



A decellularized liver
in Dr. LaMattina's lab.

Faculty Physician Researchers SHAPING *the* FUTURE

John LaMattina, MD, assistant professor of surgery, is looking to the future by stripping native cells from pig livers, leaving the translucent scaffolding and re-populating the liver with stem cells from a human recipient. This procedure could reduce the number of deaths caused by the shortage of livers.

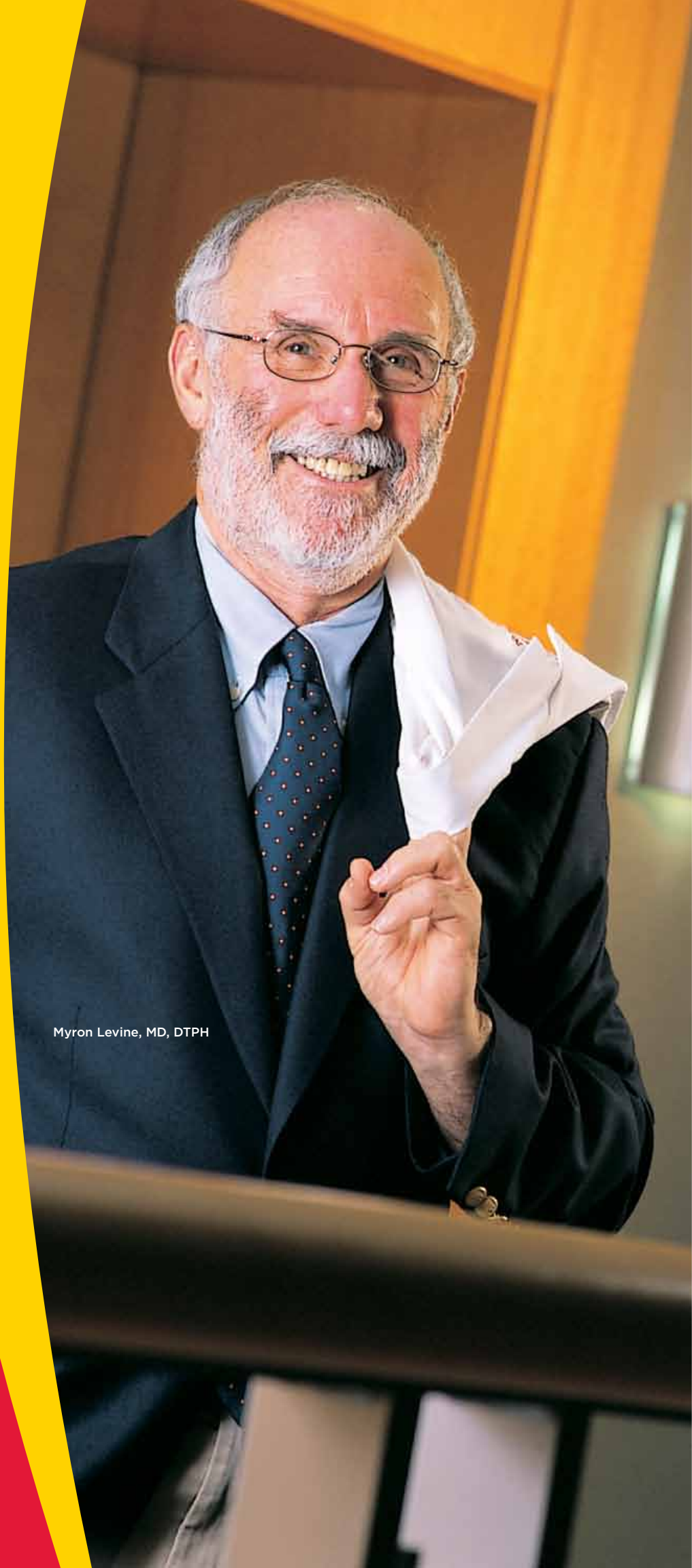
Robin Pierson, MD, professor of surgery, is advancing transplant immunology by using pre-clinical models to develop test systems for evaluating hearts and lungs that have been genetically modified to prevent immune injury and, eventually, eradicate transplant rejection.

A clinical trial led by **Bartley Griffith, MD**, the Thomas E. and Alice Marie Hales Distinguished Professor in Transplant Surgery, and **Pablo Sanchez, MD**, post-doctoral fellow, enabled dozens of patients to receive transplants using rehabilitated lungs that would previously have been passed over for transplantation. The ex vivo lung perfusion (EVLP) trial could increase the donor pool significantly for patients awaiting new lungs.

Si Pham, MD, professor of surgery, is one of the first surgeons in the country to use a minimally invasive technique to implant a device to support a patient's heart while awaiting a transplant. Early results indicate that this patient-friendly approach provides results similar to the traditional chest-splitting surgery, with less scar tissue formation.



On a Mission
TO ERADICATE MALARIA
Christopher Plowe, MD, MPH,
professor of medicine and Howard
Hughes Medical Institute Investigator,
leads the Malaria Group in the Center
for Vaccine Development. This group
focuses on the treatment, prevention
and pathogenesis of malaria in
countries where the disease is endemic.



Myron Levine, MD, DTPH



A Global Impact *on human health*

*t*he University of Maryland School of Medicine this year celebrated two major milestones in its rich history of global health. In 2014, the Center for Vaccine Development (CVD) celebrated its 40th anniversary, still led by its founding director, **Myron “Mike” Levine, MD, DTPH**, the Simon and Bessie Grollman Distinguished Professor and head of the Division of Geographic Medicine. **The center’s team has discovered, tested, promoted and distributed vaccines to children across the globe, helping stave off endemic and epidemic infectious diseases that mainly affect young children, saving thousands of lives in the process.**

In the **Department of Emergency Medicine**, the Section of Global Emergency Health has partnerships with hospitals, health ministries and regional professional societies in South Africa, China, Saudi Arabia, Egypt, the United Arab Emirates, Tanzania, Liberia and the Netherlands for the development of educational programs for health care providers in those countries.



Faculty members in the Department of Emergency Medicine’s Section of Global Emergency Health include (left to right) **Jon Mark Hirshon, MD, MPH, PhD**; **Veronica Pei, MD, MPH, MEd**; **Andrea Tenner, MD, MPH**; **Walid Hammad, MBChB**; and **Terry Mulligan, DO, MPH**.

The Global Health Interest Group (GHIG) is a student-run program that serves as a forum for medical students to connect with mentors working internationally, to increase awareness of global health issues. Through this program, UM medical students have had the chance to pursue their interests in global medicine in cities in Latin America, Southeast Asia and rural districts in Africa, among other places.

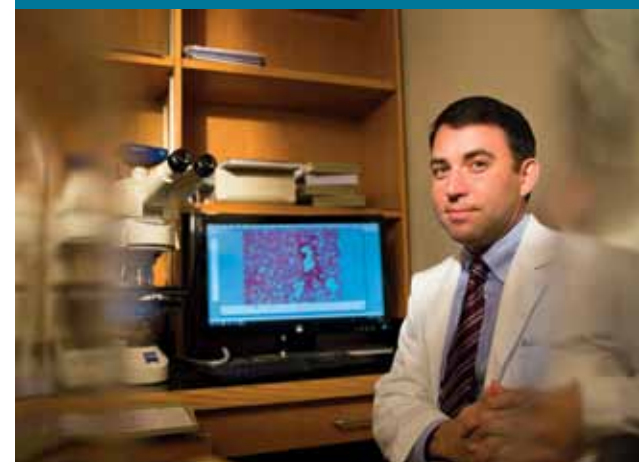
AIDS TURNS 30

This year marked the 30th anniversary of the co-discovery of the AIDS virus by **Robert Gallo, MD**, the Homer and Martha Gudelsky Distinguished Professor of Medicine. He directs the Institute of Human Virology (IHV), which has a strong clinical and educational presence around the world. Since 1999, IHV’s AIDS International Training Program has provided research training to academic and research institutions and increased the capacity of research investigators in more than a dozen countries, including Haiti, Jamaica, the Bahamas, Trinidad & Tobago, Brazil, Ethiopia, Kenya, Mali and Nigeria. IHV addresses issues of scientific relevance to the national priorities of the host countries.



The Cutting Edge of VIRUS RESEARCH

The School of Medicine continues to be at the cutting edge of virus research on a global level. After Middle East respiratory syndrome emerged as a growing threat this year, **Matthew B. Frieman, PhD**, assistant professor of microbiology and immunology, an expert who investigates Coronavirus and host interaction during infection, is among scientists worldwide identifying treatment and vaccine options.



Champions for Maryland's *children*

*t*he University of Maryland Children's Hospital (UMCH) is known for providing compassionate, specialized care to the Mid-Atlantic's youngest patients and their families. This year's opening of the new and improved Pediatric Intensive Care Unit (PICU) sent a clear message to families that the environment matters when helping children heal. **The 19-bed PICU features private rooms with sleeping accommodations for a family member** to spend the night, gaming systems for patients, round-the-clock critical care physicians and pet therapy for children well enough for visits.

"The PICU team has always provided extraordinary care to our patients, but now they do it in an environment that is conducive to making the family part of the child's recovery," said **Jason Custer, MD**, assistant professor of pediatrics at the University of Maryland School of Medicine and medical director of the PICU at the University of Maryland Medical Center.

Young patients who are critically ill or undergoing complex surgery receive the highest level care in the PICU from physicians who specialize in pediatric intensive care. **Adnan Bhutta, MBBS, FAAP**, associate professor of pediatrics, is head of Pediatric Critical Care, a division of the Department of Pediatrics. **Mary Jo Simke, MS, RN**, nurse manager for pediatrics, heads the team of nurses who provide round-the-clock care.

Madisyn Betterson, 11, experienced the PICU firsthand when she was referred from the University of Maryland St. Joseph Medical Center. At UMMC, **Neil Porter, MD**, assistant professor of neurology and pediatrics, diagnosed a rare form of autoimmune encephalitis, inflammation caused by her body attacking itself. Madisyn was given a treatment similar to chemotherapy, which targeted her white blood cells for eight weeks, finally setting her back on course before she was discharged from the PICU for rehabilitation at Mt. Washington Pediatric Hospital, also part of the University of Maryland Medical System.



Shown above in the PICU are **Steven J. Czinn, MD**, professor and chairman of the Department of Pediatrics, with **Mary Jo Simke, MS, RN**; **Jason Custer, MD**; and **Adnan Bhutta, MBBS, FAAP**.



Neil Porter, MD,
with **Madisyn**





THE HEART *of a* CHAMPION

Jordyn Ray, a competitive teenage gymnast, benefited from the critical care team and Children's Heart Program when she was diagnosed with a congenital heart defect and required corrective surgery to repair a hole in her heart.

Sunjay Kaushal, MD, PhD, associate professor of surgery and director of pediatric heart surgery at UMMC, performed a six-hour, open heart surgery that enabled Jordyn to keep competing in the sport she loves. Jordyn's repaired heart recently enabled her to compete in the Level 8 Maryland state championships and advance to the regional competition.



Jordyn with her mother, Denise Ray (left), and her coach, Dana Appleby.

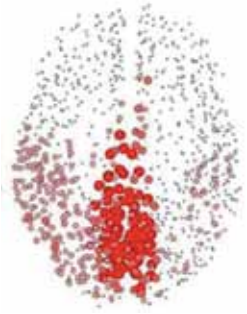




FOCUSED ULTRASOUND

Howard Eisenberg, MD, the Raymond K. Thompson, MD, Chair in Neurosurgery, and other faculty are conducting clinical trials using focused ultrasound guided by magnetic resonance imaging (MRI) to treat essential tremor, a common movement disorder. Unlike surgical options, focused ultrasound treatment involves no scalpel, no bleeding, and little to no risk of infection. The focused ultrasound reduces overactivity in the thalamus, which serves as a hub for impulses traveling to and from the spinal cord and other parts of the brain.





Leading the Way *in brain science*

brain dysfunctions, such as Alzheimer's disease and depression, are among the most complex diseases and disorders challenging researchers today. **The importance of studying the brain was underscored by President Barack Obama's 2013 announcement of the BRAIN (Brain Research through Advancing Innovative Neurotechnologies) Initiative, a research investment of approximately \$100 million dedicated to the development of new tools and approaches to understanding the human body's most complex organ.**

Researchers at the University of Maryland School of Medicine work at the forefront of brain research, and individual faculty members possess strong expertise across a broad array of neuroscience fields. **E. Albert Reece, MD, PhD, MBA, dean of the School of Medicine, recognized that bringing together these various basic and clinical researchers to work collaboratively on joint projects would result in a multidisciplinary team that is optimally positioned to respond successfully to President Obama's call to action. In February 2014, Dr. Reece established the Brain Science Research Consortium Unit (BSRCU) to capitalize on the School of Medicine's existing strengths to produce transdisciplinary and translational brain research that resonates at a clinical level.**

The director of the consortium is **Bankole A. Johnson, DSc, MD, MBChB, MPhil, FRCPsych, DFAPA, FACFEI**, the Dr. Irving J. Taylor Professor and Chair in the Department of Psychiatry and professor of pharmacology and of anatomy and neurobiology. The eight executive members appointed by Dr. Reece are leaders in their departments, with expertise in neurobiology, neurology, trauma, anesthesiology, neurosurgery, pharmacology, psychiatry and physiology. Coordinating the work is project manager **Annabelle (Mimi) Belcher, PhD**, assistant professor of psychiatry.

BRAIN SCIENCE RESEARCH CONSORTIUM UNIT (BSRCU)

This distinguished cadre of faculty investigators is tackling the most vexing neurological conditions, laying the groundwork to accomplish the manifesto of the BSRCU: to conduct large-scale, multidisciplinary studies on brain function (and dysfunction).

The members of the consortium are:

- **Bankole Johnson, DSc, MD, MBChB, MPhil, FRCPsych, DFAPA, FACFEI**
The Dr. Irving J. Taylor Professor and Chair in the Department of Psychiatry and professor of pharmacology and of anatomy and neurobiology
- **Annabelle (Mimi) Belcher, PhD**
Assistant professor in the Department of Psychiatry
- **Robert W. Buchanan, MD**
Professor of psychiatry and interim director of the Maryland Psychiatric Research Center
- **Alan I. Faden, MD**
The David S. Brown Professor of Trauma and director of the Center for Shock, Trauma and Anesthesiology Research and National Study Center for Trauma and EMS
- **James B. Kaper, PhD**
Professor and chair of the Department of Microbiology and Immunology and senior associate dean of academic affairs
- **Margaret M. McCarthy, PhD**
Professor and chair of the Department of Pharmacology
- **Elias R. Melhem, MD**
Professor and the Dean John M. Dennis Chair in Diagnostic Radiology and Nuclear Medicine
- **Michael T. Shipley, PhD**
The Donald E. Wilson, MD, MACP, Distinguished Professor and chair of the Department of Anatomy and Neurobiology
- **Scott M. Thompson, PhD**
Professor and chair of the Department of Physiology



Annabelle Belcher, PhD, Alan Faden, MD, Bankole Johnson, DSc, MD, MBChB, MPhil, and Margaret McCarthy, PhD



UNIVERSITY *of* MARYLAND
SCHOOL OF MEDICINE

highlights

The University of Maryland School of Medicine — **the nation's first public medical school** — has grown to achieve **top-tier status** as a national leader in clinical and academic medicine and biomedical research.

Our mission is to teach future health care practitioners, conduct **innovative** biomedical research, increase the pace of **discovery** and provide the gamut of health care services to a diverse patient population.

The following pages highlight our work this year in Maryland and locations throughout the world.

Research

ACCELERATING INNOVATION AND DISCOVERY IN MEDICINE (ACCEL-MED)

In November 2013, the **School of Medicine launched Accelerating Innovation and Discovery in Medicine (ACCEL-Med)**, a bold initiative to advance biomedical research across all disciplines. The ACCEL-Med Initiative is a key component of Vision 2020 for UM Medicine, the shared vision statement developed by the UM School of Medicine and the University of Maryland Medical System in 2013.

Vision 2020 provides a blueprint for thriving in challenging times. The strategies put in place under the ACCEL-Med Initiative will measurably and dramatically increase the pace and scope of clinical and basic science research, with the ultimate goal of improving human health and well-being. The ACCEL-Med Initiative was launched at the inaugural Festival of Science, an annual, full-day symposium highlighting groundbreaking research being done by School of Medicine faculty members.

EXISTING DRUGS PRODUCE IMMUNE RESPONSE AGAINST MIDDLE EAST RESPIRATORY SYNDROME

Matthew Frieman, PhD, assistant professor of microbiology and immunology, was part of a team of National Institutes of Health (NIH) grantees who identified a number of existing drugs that could be “repurposed” to **fight outbreaks of Middle East respiratory syndrome coronavirus (MERS-CoV) and severe acute respiratory syndrome coronavirus (SARS-CoV)**. Dr. Frieman and

Novavax, Inc. also announced in the April 13 issue of *Vaccine* that an investigational vaccine candidate developed by Novavax against MERS-CoV blocked infection in laboratory studies.

TWO SIZES TOO SMALL “GRINCH” EFFECT HAMPER HEART TRANSPLANTATION SUCCESS

Current protocols for matching donor hearts to recipients foster sex mismatching and heart-size disparities, according to a first-of-its kind analysis by physicians at the School of Medicine. The study’s principal author, **Robert Reed**, MD, assistant professor of medicine, and study co-author **Keshava Rajagopal**, MD, PhD, assistant professor of surgery, found **matching by donor heart size may provide better outcomes for recipients**, who already face a scarcity of donor organs as they await a transplant.

IS KIDNEY DISEASE MORE DEADLY FOR AFRICAN-AMERICANS?

Afshin Parsa, MD, MPH, associate professor of medicine and member of the Program in Personalized and Genomic Medicine, found that **genetic variations in some African-Americans with chronic kidney disease** contribute to a more rapid decline in kidney function compared with white Americans.

This may help explain, in part, why even after accounting for differences in socioeconomic background, end-stage kidney disease is twice as prevalent among blacks as whites. Results were published online in the *New England Journal of Medicine* on November 9, 2013.



The ACCEL-Med Guide for 2014



Matthew Frieman, PhD



Robert Reed, MD



Keshava Rajagopal, MD



Afshin Parsa, MD, MPH



Bankole Johnson, DSc, MD,
MBChB, MPhil



Coleen Damcott, PhD



> Women faculty from the Department of Surgery honored **Kristin Stueber, MD, '69**, (front, left) after her named lecture in plastic surgery. Dr. Stueber is also a School of Medicine graduate, former faculty member and one-time resident in surgery. She practices in Springfield, Mass., and is a board member of the Medical Alumni Association. Dr. Stueber has, for years, provided generous financial support to the School of Medicine to help support research efforts within the Division of Plastic and Reconstructive Surgery.

Research

TREATING ADDICTION WITH SCIENCE

Bankole A. Johnson, DSc, MD, MBChB, MPhil, FRCPsych, DFAPA, FAcFEI, the Dr. Irving J. Taylor Professor and Chair in the Department of Psychiatry and professor of pharmacology and of anatomy and neurobiology, published results of a study in *JAMA Psychiatry* in October 2013.

The study found that **topiramate, a drug approved by the US Food and Drug Administration (FDA) to treat epilepsy and migraine headaches, also might be the first reliable medication to help treat cocaine dependence.**

AMISH HELP RESEARCHERS FIND GENE MUTATION THAT MIGHT INCREASE TYPE 2 DIABETES RISK

Coleen Damcott, PhD, assistant professor of medicine, was senior author on a study that found that a **mutation in a fat-storage gene appears to increase the risk for type 2 diabetes and other metabolic disorders.**

The researchers discovered the mutation in the hormone-sensitive lipase (HSL) gene by studying the DNA of more than 2,700 people in the Old Order Amish community in Pennsylvania's Lancaster County.

Clinical Care

CYCLOTRON ARRIVAL IS LATEST MILESTONE IN PROTON CENTER CONSTRUCTION

The Maryland Proton Treatment Center moved another step closer to completion with the June 2014 arrival of the cyclotron at the construction site, at the University of Maryland BioPark in West Baltimore.

Made of iron, **the cyclotron is a 90-ton particle accelerator that will produce a beam of protons used to treat cancer patients by precisely targeting tumors** while dramatically reducing radiation exposure to surrounding tissue. The Maryland Proton Treatment Center is scheduled to open in 2015.



Workers install the cyclotron at the Maryland Proton Treatment Center.



Education

UMB AND UMCP TO OFFER JOINT DEGREES IN MEDICINE AND ENGINEERING

The University of Maryland School of Medicine and the University of Maryland Clark School of Engineering have initiated a **combined Doctor of Medicine/Doctor of Philosophy in Bioengineering degree** program to meet the demand for both medical and bioengineering expertise among health professionals early in their careers.

SOM TOPS LIST OF WINNERS FOR PRESTIGIOUS TROPICAL MEDICINE TRAVEL FELLOWSHIPS

In September 2013, the American Society of Tropical Medicine and Hygiene (ASTMH) announced the **recipients of its highly competitive Benjamin H. Kean Travel Fellowships in Tropical Medicine.**

Four of the 20 nationwide honorees were from the University of Maryland School of Medicine — more than any other medical school. They did their fellowships in Egypt, Malawi, Brazil and Myanmar.

SOM AWARDED ACCREDITATION WITH COMMENDATION FROM ACCME

The School of Medicine was awarded **Accreditation with Commendation** in January 2014 by the Accreditation

Council for Continuing Medical Education (ACCME).

The review, which recognizes SOM as a provider of continuing medical education (CME) for physicians, was based on the School of Medicine's self-study report, evidence of performance-in-practice, and an accreditation interview. The Accreditation with Commendation is good for a **six-year term**, through November 2019.

MATCH DAY IS A TRUE PRODUCTION

For the first time, the Match Day ceremony for the University of Maryland School of Medicine was not held in historic Davidge Hall. The ceremony moved this year to the Hippodrome Theatre, fitting for an event that includes laughter, tears and even musical interludes and dancing. Matching students were interviewed by numerous local television stations and newspapers, generating extensive press coverage for this event. **The members of the Class of 2014 are now residents at 73 different hospitals in 28 states.**

The 90-ton
cyclotron





Robert Schwarcz, PhD



Toni Pollin, PhD



Alan Shuldiner, MD



> Institute for Genome Sciences staff, from left to right, back row: **Joana Silva**, PhD; **Owen White**, PhD; **Lisa Sadzewicz**, PhD; **Luke Tallon**; **Anup Mahurkar**; **Julie Dunning Hotopp**, PhD. Front row: **Vincent Bruno**, PhD; **Claire Fraser**, PhD; and **David Rasko**, PhD

Milestones and Transitions

INSTITUTE FOR GENOME SCIENCES WILL STUDY PATHOGENS OF INFECTIOUS DISEASE

The Institute for Genome Sciences (IGS) received a grant award of **\$15.2 million** over five years in June 2014. Funded by the National Institute of Allergy and Infectious Diseases, the grant will be used to **create a research center to apply genomic techniques to the study of pathogens and their hosts**, and to expand understanding of the ways that pathogens can cause harm.

IGS AWARDED FDA CONTRACT

The IGS has also been awarded a **contract to assist the FDA in the expansion and curation of a public database of microbial genome sequences and associated metadata**. This will serve as a valuable reference to evaluate and assess sequencing-based diagnostic devices.

In addition to all publicly available microbial genome sequences, the database will include more than 550 newly sequenced, assembled and annotated genomes from under-represented branches of the phylogenetic tree.

NEW CENTER WILL STUDY CAUSES OF SCHIZOPHRENIA

The Department of Psychiatry's **Maryland Psychiatric Research Center**

(MPRC) was awarded a **\$10.7 million** grant from the National Institutes of Health (NIH) to establish the **Silvio O. Conte Neuroscience Research Center**, which will examine the causes of schizophrenia and search for possible new treatments.

Robert Schwarcz, PhD, professor of psychiatry, pharmacology and pediatrics, is the principal investigator on the NIH grant and will head the center.

NIH GRANT WILL FUND STUDY ON PERSONALIZED MEDICINE AND DIABETES

Toni Pollin, PhD, associate professor of medicine, and **Alan Shuldiner**, MD, the John L. Whitehurst Endowed Professor of Medicine, were awarded a four-year, **\$3.7 million grant** from NIH to develop a personalized medicine program to help doctors **diagnose and treat monogenic diabetes — a form of diabetes caused by a mutation in a single gene**.

The study will evaluate methods to implement this program in various health care settings, with the objective of developing a model that could also be applied to caring for patients with genetic variations of other common diseases.



**SOM DESIGNATED A
VACCINE TREATMENT AND
EVALUATION UNIT**

Karen Kotloff, MD, professor of pediatrics, and the Center for Vaccine Development, received a 10-year contract from NIAID designating the University of Maryland and eight other research centers throughout the US as **Vaccine Treatment and Evaluation Units (VTEUs)**. The contract provides up to \$135 million annually to these VTEUs to conduct clinical trials, as well as studies of vaccines, diagnostics and therapeutics to combat existing and emerging infectious diseases.

**NOBEL LAUREATE SPEAKS AT
THE SCHOOL OF MEDICINE**

As part of the Nobel Prize Inspiration Initiative, **Nobel Laureate Craig Mello, PhD**, presented “A Worm’s Tale: Secrets of Inheritance and Immortality” at the University of Maryland School of Medicine on November 4, 2013. The Inspiration Initiative is a global program designed to help Nobel Laureates share their inspirational stories and insights.

**GENEROUS DONORS HONOR
OUTSTANDING FACULTY**

On September 26, 2013, **Philip Mackowiak, MD, MBA**, was named the inaugural **Carolyn Frenkil and**

Selvin Passen Endowed History of Medicine Scholar, which was established to preserve and promote the rich heritage of the University of Maryland.

Christopher Harman, MD, was named the **Sylvan Frieman, MD, Endowed Professor** in Obstetrics, Gynecology and Reproductive Sciences on November 18, 2013. Dr. Harman is also chair of the Department of Obstetrics, Gynecology and Reproductive Sciences.

Robert Gallo, MD, was named the **first Homer and Martha Gudelsky Distinguished Professor in Medicine** at the University of Maryland School of Medicine during a ceremony on November 7, 2013. The ceremony also honored the Gudelsky Family Foundation for its extraordinary generosity in supporting the School of Medicine.

Jeffrey Hasday, MD, was named the **Dr. Herbert Berger Professor in Medicine** on March 6, 2014.

Sanjay Rajagopalan, MBBS, FACC, FAHA, was named the **Melvin Sharoky, MD, Endowed Professor** in Cardiovascular Medicine on April 8, 2014.

Aldo Iacono, MD, was named the **Hamish S. and Christine C. Osborne Endowed Professor** in Advanced Pulmonary Care on May 19, 2014.



Curt I. Civin, MD, with
Craig Mello, PhD



Karen Kotloff, MD



Philip Mackowiak,
MD, MBA



Christopher Harman,
MD



Robert Gallo, MD



Jeffrey Hasday, MD



Sanjay Rajagopalan,
MBBS



Aldo Iacono, MD



Richard Eckert, PhD



Diana Fishbein, PhD



James Kaper, PhD



Jonathan Lederer, MD, PhD



Myron Levine, MD, DTPH



Nancy Lowitt, MD, EdM



Steven Ludwig, MD

New Leadership Roles

Richard Eckert, PhD, the John E.B. Weaver Professor and Chair of the Department of Biochemistry & Molecular Biology, is now also **associate director for basic science at the University of Maryland Marlene and Stewart Greenebaum Cancer Center**.

He replaced Amy Fulton, PhD, professor of pathology, who had served in an interim role since 2011.

Diana Fishbein, PhD, professor of psychiatry, was recruited from Research Triangle Institute International in North Carolina to become **director of the new Center for Translational Research on Adversity, Neurodevelopment and Substance**

Abuse (C-TRANS) within the Department of Psychiatry.

As C-TRANS director, Dr. Fishbein will lead a group of clinicians and basic scientists who share a common interest in translational neuroscience research to improve the lives of those who suffer from sleep disorders, drug abuse and other diseases.

James Kaper, PhD, professor and chair of the Department of Microbiology and Immunology, was **appointed senior associate dean for academic affairs** in April 2014. He replaced Richard Pierson III, MD, who had been the senior associate dean for academic affairs and the interim director of research affairs since 2012.

Jonathan Lederer, MD, PhD, professor of physiology, was appointed the **permanent director of the Center for Biomedical Engineering and Technology (BioMET)** in March 2014.

BioMET is an organized research center that is a joint effort between the University of Maryland School of Medicine and the Fischell Department of Bioengineering in the Clark School of Engineering at the University of Maryland, College Park. The center brings together basic biomedical researchers with engineers to develop new strategies and new devices to treat diseases.

Myron “Mike” Levine, MD, DTPH, founder and director of the Center for Vaccine Development for the last 40 years, will step down from that position in **January 2015 to become associate dean for global health, vaccinology and infectious diseases**.

Nancy Lowitt, MD, EdM, was appointed **School of Medicine chief conflict-of-interest (COI) officer** in May 2014, to help researchers and clinicians understand and comply with state and federal regulations, and School of Medicine and university policy regarding the identification, disclosure and management of financial and scientific conflicts of interest and conflicts of commitment.

Steven Ludwig, MD, professor of orthopaedics, was **appointed head of the newly established Division of Spine Surgery** in the Department of Orthopaedics.

Glenn Ostir, PhD, professor of epidemiology and public health, will be the **director of the Program on Aging, Trauma and Emergency Care (PATEC)**, a joint venture with more than 40 participating faculty members from every school on the University of Maryland, Baltimore campus, as well as faculty from the University of Maryland, College Park and the University of Maryland, Baltimore County.

Sanjay Rajagopalan, MBBS, FACC, FAHA, the Melvin Sharoky, MD, Endowed Professor in Cardiovascular Medicine, was recruited from the Wexner Medical Center at the Ohio State University College of Medicine in Columbus, OH, to **lead the newly named Division of Cardiovascular Medicine** within the Department of Medicine.

Terry Rogers, PhD, professor of biochemistry and molecular biology, is the **new executive director of the Office of Research Affairs (ORA)**. Dr. Rogers replaced Thomas Hooven, executive director of research administration, who retired in June 2014.



Terry Rogers, PhD



Glenn Ostir, PhD



Sanjay Rajagopalan, MBBS

Community Engagement

PARTNERSHIP WITH EASTERN SHORE AREA HEALTH EDUCATION CENTER HELPS ADDRESS CANCER AND HEALTH DISPARITY ISSUES



Claudia Baquet, MD, MPH, is associate dean for policy and planning, professor of medicine and the director of the Bioethics and Health Disparities Research Center at the School of Medicine. She has studied how robust partnerships between rural community health education centers and academic health care institutions can make substantial strides toward addressing race-, income- and geographically-based health disparities in underserved communities by empowering both the community and leading university institutions. Her research was published in *Progress in Community Health Partnerships: Research, Education and Action*.



UNIVERSITY of MARYLAND
MEDICAL SYSTEM

highlights





In December 2013, the Medical System and Upper Chesapeake Health completed a permanent merger, after a successful four-year strategic affiliation agreement. Now called **University of Maryland Upper Chesapeake Health**, this newest UMMS organization consists of two not-for-profit acute care hospitals: University of Maryland Harford Memorial Hospital and University of Maryland Upper Chesapeake Medical Center.

UMMS Hospitals

**UNIVERSITY OF MARYLAND
MEDICAL CENTER**
22 SOUTH GREENE STREET
BALTIMORE, MD 21201
410-328-8667
www.umm.edu

**UNIVERSITY OF MARYLAND
MEDICAL CENTER MIDTOWN CAMPUS**
827 LINDEN AVENUE
BALTIMORE, MD 21201
410-225-8000
www.ummidtown.org

**UNIVERSITY OF MARYLAND REHABILITATION
& ORTHOPAEDIC INSTITUTE**
2200 KERNAN DRIVE
BALTIMORE, MD 21207
410-448-2500
www.umrehabortho.org

**UNIVERSITY OF MARYLAND BALTIMORE
WASHINGTON MEDICAL CENTER**
301 HOSPITAL DRIVE
GLEN BURNIE, MD 21061
410-787-4000
www.mybwmc.org

**UNIVERSITY OF MARYLAND
ST. JOSEPH MEDICAL CENTER**
7601 OSLER DRIVE
TOWSON, MD 21204
410-337-1000
www.stjosephtowson.com

**UNIVERSITY OF MARYLAND SHORE
MEDICAL CENTER AT EASTON**
219 SOUTH WASHINGTON STREET
EASTON, MD 21601
410-822-1000
www.shoreregional.org

**UNIVERSITY OF MARYLAND SHORE
MEDICAL CENTER AT DORCHESTER**
300 BYRN STREET
CAMBRIDGE, MD 21613
410-228-5511
www.shoreregional.org

**UNIVERSITY OF MARYLAND SHORE
MEDICAL CENTER AT CHESTERTOWN**
100 BROWN STREET
CHESTERTOWN, MD 21620
410-778-3300
www.shoreregional.org

**UNIVERSITY OF MARYLAND CHARLES
REGIONAL MEDICAL CENTER**
5 GARRETT AVENUE
LA PLATA, MD 20646
301-609-4000
www.charlesregional.org

**UNIVERSITY OF MARYLAND
HARFORD MEMORIAL HOSPITAL**
501 SOUTH UNION AVENUE
HAVRE DE GRACE, MD 21078
443-843-5000
www.umuch.org

**UNIVERSITY OF MARYLAND UPPER
CHESAPEAKE MEDICAL CENTER**
500 UPPER CHESAPEAKE DRIVE
BEL AIR, MD 21014
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www.umuch.org

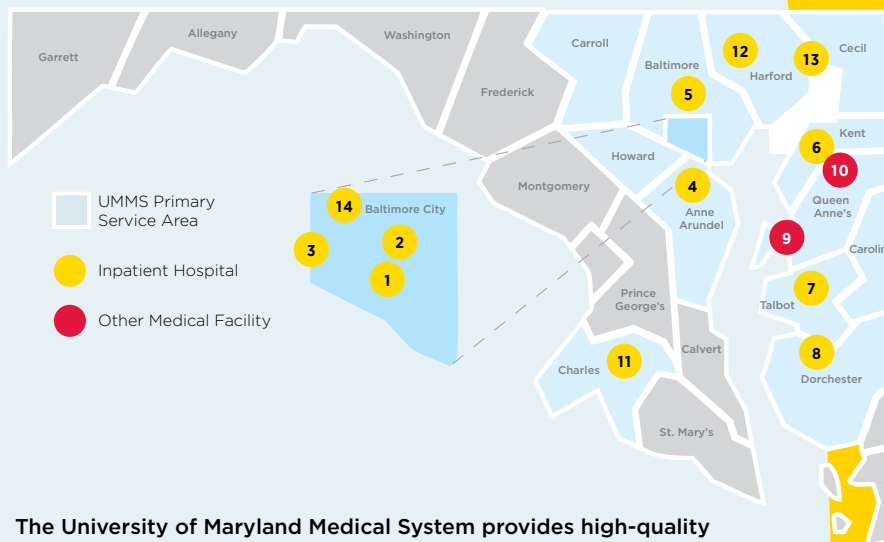
MT. WASHINGTON PEDIATRIC HOSPITAL
1708 WEST ROGERS AVENUE
BALTIMORE, MD 21209
410-578-8600
www.mwph.org

UNIVERSITY
OF MARYLAND
MEDICAL
SYSTEM

UNIVERSITY
of MARYLAND
MEDICAL CENTER

22 S. GREENE STREET

UMMS Statewide Hospital Network



The University of Maryland Medical System provides high-quality care through a world-class academic medical center and premier community and specialty hospitals, in partnership with the University of Maryland School of Medicine.

- 1 UNIVERSITY of MARYLAND MEDICAL CENTER
- 2 UNIVERSITY of MARYLAND MEDICAL CENTER MIDTOWN CAMPUS
- 3 UNIVERSITY of MARYLAND REHABILITATION & ORTHOPAEDIC INSTITUTE
- 4 UNIVERSITY of MARYLAND BALTIMORE WASHINGTON MEDICAL CENTER
- 5 UNIVERSITY of MARYLAND ST. JOSEPH MEDICAL CENTER
- 6 UNIVERSITY of MARYLAND SHORE MEDICAL CENTER AT CHESTERTOWN
- 7 UNIVERSITY of MARYLAND SHORE MEDICAL CENTER AT EASTON
- 8 UNIVERSITY of MARYLAND SHORE MEDICAL CENTER AT DORCHESTER
- 9 UNIVERSITY of MARYLAND SHORE EMERGENCY CENTER AT QUEENSTOWN
- 10 UNIVERSITY of MARYLAND SHORE NURSING & REHABILITATION CENTER AT CHESTERTOWN
- 11 UNIVERSITY of MARYLAND CHARLES REGIONAL MEDICAL CENTER
- 12 UNIVERSITY of MARYLAND UPPER CHESAPEAKE MEDICAL CENTER
- 13 UNIVERSITY of MARYLAND HARFORD MEMORIAL HOSPITAL
- 14 Mt. Washington Pediatric Hospital
(joint venture with Johns Hopkins Medicine)

DELIVERING
High-Value
HEALTH *care*



TOP DOCTORS IN THE REGION

Baltimore Magazine named 76 UMMC doctors, all members of the University of Maryland School of Medicine faculty, as “Top Doctors” last year. The magazine recognized experts across a broad range of specialties based on a survey of nearly 10,000 physicians in the Baltimore area.



NEW SHOCK TRAUMA CRITICAL CARE TOWER

In November 2013, UMMC dedicated its new Shock Trauma Critical Care Tower, with 140,000 square feet of new space for the world-renowned R Adams Cowley Shock Trauma Center, as well as new operating rooms and an expanded emergency department.

UMMC is a regional referral center for critical care, with 12 specialized intensive/critical care units and a total of 188 ICU beds and 48 neonatal intensive care bassinets. Last year, hospitals across the region transferred 11,884 patients to UMMC for specialized care.

University of Maryland Medical Center

The University of Maryland Medical Center (UMMC) comprises two

hospitals in Baltimore: an 801-bed teaching hospital — the flagship institution of the University of Maryland Medical System (UMMS) — and a 190-bed community teaching hospital, UMMC Midtown Campus.

UMMC’s flagship hospital — also called the UMMC University Campus — serves as a regional and national referral center for tertiary and quaternary care, with internationally recognized programs in trauma, cancer care, cardiac care, neurocare, women’s and children’s health, and organ and tissue transplantation. All attending physicians are faculty members of the University of Maryland School of Medicine.

Last year saw increased integration in patient services between the two UMMC campuses, including the consolidation of diabetes and endocrinology services in a new, expanded University of Maryland Center for Diabetes and Endocrinology at UMMC Midtown Campus.

UMMC continued to raise its national profile, with numerous awards and recognition from prominent organizations:

■ The American Nurses Credentialing Center (ANCC) re-designated UMMC a **Magnet hospital**. Only 7 percent of hospitals nationwide currently hold this



designation for sustaining nursing excellence, supporting evidence-based practice and demonstrating outstanding patient outcomes.

■ The Joint Commission recognized UMMC’s **Stroke Center as a Comprehensive Stroke Center**, a new designation awarded to fewer than 70 centers in the US.

■ UMMC won honors on both the national and state levels for its commitment to environmental excellence and sustainability. **UMMC was the first to receive Practice Greenhealth’s new Circle of Excellence Award for “Greening the OR (Operating Room),”** in recognition of its environmental innovation in surgical practices. The Circle of Excellence Award was one of three awards presented to the Medical Center last year. Maryland Hospitals for a Healthy Environment (MD H2E) also recognized UMMC with a Trailblazer Award for its sustainable food efforts.

■ UMMC received the **Delmarva Foundation’s 2013 Excellence Award for Quality Improvement** based on quality and safety indicators measured by hospitals nationwide.



University of Maryland Medical Center Midtown Campus

University of Maryland Medical Center Midtown Campus, a second location of the University of Maryland Medical Center, continued to expand and change in Fiscal 2014. One significant change was in leadership. **Brian Bailey,** former chief financial officer, was promoted to senior vice president and executive director, reporting directly to **Jeffrey A. Rivest,** president and chief executive officer of both campuses of the University of Maryland Medical Center. UMMC Midtown Campus and UMMC University Campus share the same mission, vision and strategic plan.

UMMC Midtown Campus now provides more programs and services than ever. In 2014, UMMC Midtown Campus expanded orthopaedic surgical services and welcomed new services including the **Sleep Disorders Center, the University of Maryland Center for Diabetes and Endocrinology, the Infectious Disease Clinic and the Institute of Human Virology's Jacques Initiative** program for patients with HIV. The primary care practice at UMMC Midtown Campus changed its name from Linden Medical Group to University of Maryland Primary Care to better reflect the practice's alignment with UMMC. UMMC Midtown Campus also opened the **Infusion Therapy Center** for patients who are healthy enough to be discharged but

need to continue receiving once-daily intravenous medications in a comfortable outpatient setting.

QUALITY AND SAFETY AWARDS

For the third year running, UMMC Midtown Campus was awarded the **Delmarva Foundation Excellence Award for Quality Improvement.** The award honors hospitals that excel in patient safety and quality improvement. To receive the Delmarva Foundation Excellence Award, a hospital must meet specific national performance improvement criteria in four inpatient clinical areas: acute myocardial infarction (heart attack), heart failure, surgical care improvement and pneumonia.

The Joint Commission recognized UMMC Midtown Campus as a Top Performer on Key Quality Measures, one of only 16 hospitals in Maryland to be honored for exemplary performance in using evidence-based interventions shown to improve outcomes for medical conditions such as heart failure and pneumonia, as well as in surgical care.

University of Maryland Pediatrics, PA, at Midtown was recognized by the **National Committee for Quality Assurance as a Level-2 Patient-Centered Medical Home,** a health care setting that facilitates partnerships between individual patients, their personal physicians and, when appropriate, the patient's family.



CENTER OF EXCELLENCE

UMMC Midtown Campus is a **Center of Excellence for amyotrophic lateral sclerosis (ALS)**, also known as Lou Gehrig's disease. The ALS Association (ALSA), a national nonprofit organization, has named the University of Maryland ALS Center at UMMC Midtown Campus a Certified Treatment Center of Excellence — **the only one with this designation in Maryland.** This is the highest level of certification given by ALSA.

NATIONAL ACCREDITATIONS

The UMMC Midtown Campus **Vascular Center** was granted a three-year term of accreditation from the International Accreditation Commission (IAC) for its vascular lab. The IAC grants accreditation only to those facilities that provide high-quality patient care in compliance with national standards.

Two other centers were re-accredited this year and continue to provide the highest quality of care: The **UM Sleep Disorders Center** received continued accreditation for five years by the American Academy of Sleep Medicine. The **Division of Cardiology** received continued accreditation by the International Accreditation Commission of Echocardiography Laboratories.





University of Maryland Rehabilitation & Orthopaedic Institute



University of Maryland Rehabilitation & Orthopaedic Institute, with **144 beds, is the largest inpatient rehabilitation hospital in the state and a leader in surgery and treatment of musculoskeletal disease and sports injury, as well as in specialized dental surgery** for adults and children with developmental disabilities.

UM Rehab & Ortho Institute was Maryland's first orthopaedic specialty hospital, **founded more than 117 years ago**, and now offers the most advanced care in physical rehabilitation and orthopaedic surgery. The highly specialized staff provides an interdisciplinary continuum of care in a healing and caring environment, forming an integral component of the Medical System.

Signature rehabilitation programs include those focused on rehabilitation after stroke, spinal cord injury and brain injury, as well as comprehensive medical rehabilitation. Through the connections of the Medical System and the School of Medicine, **patients have access to academic medical specialists and research** in neurology, orthopaedics, urology, rheumatology and physical, occupational, speech and recreational therapy. Specialty programs are available for balance, amputation, multiple sclerosis, Parkinson's disease, and other neurodegenerative disorders. A broad range of outpatient services include the University of Maryland Pain Manage-

ment Center and the University of Maryland Center for Integrative Medicine.

UM Rehab & Ortho Institute is a national leader in the use of advanced rehabilitation technology. Therapists are now using a **robotic exoskeleton** that allows some spinal cord injury patients to stand and walk for the first time in years. Another robotic system with an overhead trolley allows therapists to work more effectively with patients to improve gait and balance training following neurologic or orthopaedic injury. School of Medicine faculty lead innovative and collaborative research projects focusing on technologies that improve the lives of patients, restore functionality and maximize independence.

UM Rehab & Ortho Institute also makes a big impact in the community, this year **offering the largest amputee walking clinic in the nation with more than 100 participants**. Hundreds of people also participate in the **Adapted Sports Recreation Program, which includes wheelchair rugby, basketball and adapted golf**.

That community connection will grow in 2015 with **construction of the Hackerman-Patz House** on campus, which will provide a home-away-from-home for families facing extended stays when a loved one is receiving care at UM Rehab & Ortho Institute.

The Institute is also collaborating with other UMMS hospitals to expand and strengthen the **University of Maryland Rehabilitation Network (UMRN), a coordinated system of inpatient and outpatient rehabilitation facilities**, including expert teams of committed care providers from facilities all across the state. UMRN enables all Marylanders to receive the highest level of restorative care no matter where they live.



University of Maryland Baltimore Washington Medical Center

University of Maryland Baltimore Washington Medical Center (UM BWMC) offers innovative procedures and exceptional service for residents of the Baltimore-Washington Corridor. Since joining UMMS in 2000, the 319-bed medical center continues to be recognized annually as a leader in high-quality patient care.

In July 2013, UM BWMC's **Aiello Breast Center was recognized with the Excellence through Insight patient satisfaction award** by HealthStream, Inc., a national organization that provides software solutions for hospitals to collect and report quality information. The Aiello Breast Center received the award in overall medical clinic satisfaction. To qualify for the award, a clinic must consistently score in the 75th percentile or higher and show that it exceeds industry standards. The Aiello Breast Center received the highest ratings in medical clinic satisfaction from among HealthStream's clients in 2012 and has consistently scored in the 99th percentile. The center was the only medical clinic in Maryland to be recognized in this category.

In April 2014, the **Maryland Patient Safety Center honored the medical center for achieving "Top Performer" status for the first quarter of 2014**. Top performers score at least 90 percent overall in hand-hygiene compliance for three consecutive months. UM BWMC was among a select few of the more than 40 hospitals in the state to receive this



status, the goal of which is to enhance the prevention of health care-associated infections.

The American Heart Association presented the 2014 Mission: Lifeline Gold Receiving Quality Achievement Award in May to UM BWMC for implementing specific quality improvement measures for the treatment of patients who suffer severe heart attacks. In order to receive the Gold award level, organizations must meet specific criteria for at least two consecutive calendar years. The program helps hospitals, emergency medical services and communities improve response times so people who suffer from a STEMI — a type of heart attack — receive prompt, appropriate treatment. The program's goal is to streamline systems of care to quickly get patients from the first 911 call to hospital treatment. With more than 100,000 visits per year to its Emergency Department, UM BWMC sees a significant number of patients who present with chest pain symptoms. The ability to quickly restore blood flow is critical.

And in June 2014 the Delmarva Foundation for Medical Care, the Medicare Quality Improvement Organization for Maryland, **awarded the Delmarva Foundation Excellence Award for Quality Improvement to UM BWMC for the second time in three years**. The award honors individual hospitals that excel in patient safety and quality improvement. To receive the Delmarva Foundation Excellence Award, the hospital must meet specific performance improvement criteria in four national inpatient clinical areas: immunization heart failure, surgical care improvement and pneumonia.

NEW PROGRAMS

UM BWMC is consistently implementing new programs for improved patient outcomes. In March 2014, the medical center installed a **new barcode patient medication program, which assists in preventing medication errors**. It also provides reports that show the number of medication administrations that were prevented from going to the wrong person.

UM BWMC continues its focus on **preventive health services and enhancing the community's well-being**. Physicians, nurses and health educators offer free blood pressure checks and free vascular screenings to the community. The medical center also provides a variety of exercise classes, a farmers' market, smoking cessation, childbirth education, CPR classes, educational lectures and more, in addition to offering support groups to help community members manage illness and help themselves and their family members to stay healthy.





University of Maryland St. Joseph Medical Center



University of Maryland St. Joseph Medical Center (UM SJMC), located in Towson, is a 238-bed, acute care hospital. **Celebrating its historic 150th anniversary in 2014**, UM SJMC has a rich heritage of providing loving service and compassionate care since its founding in 1864. Ever present in its Catholic mission is the desire and will to care for the members of its community, offering a wide variety of outreach and wellness programs such as free flu-shot clinics and diabetes and nutrition education designed to keep patients healthy.

Clinical programs and centers of excellence include the Heart, Cancer and Orthopaedic institutes, Women and Children's Services and affiliations with primary care physicians throughout Baltimore County.

The Heart Institute provides a complete continuum of care, including cardiac surgery, all-digital cardiac catheterization, accredited echocardiography lab, electrophysiology lab, nuclear medicine, hospital-wide monitoring capabilities and a cardiovascular fitness program. Recognized nationally, **UM SJMC's Heart Institute earned the highest possible 3-star quality rating from the Society of Thoracic Surgeons** for its outstanding patient care and outcomes in coronary artery bypass grafting and aortic valve replacement. Patients in need of cardiac surgery benefit from the joint program at UM SJMC and the University of Maryland Medical Center. **Together, this joint Division of Cardiac Surgery — One Program, Two Locations — is bringing the most advanced surgery options and lifesaving research to more patients than ever.**

Featuring a true multidisciplinary approach, the UM St. Joseph Cancer Institute includes radiation oncology, the Breast Center, urologic oncology, thoracic oncology, colorectal oncology (including ostomy care) and orthopaedic oncology. **A formal affiliate of the University of Maryland Marlene and Stewart Greenebaum Cancer Center, the Cancer Institute was awarded a three-year Gold Level accreditation with commendation as a comprehensive community cancer center by the American College of Surgeons Commission on Cancer, the highest recognition the commission awards.**

The Orthopaedic Institute has been named one of the nation's top orthopaedic facilities by *U.S. News & World Report*, and designated a Blue Distinction Center in the categories for hip, knee and spine surgery by CareFirst BlueCross BlueShield. The institute includes the Scoliosis and Spine Center and Spine Research Lab, and offers sports medicine, joint replacement, spine surgery, complex disc replacement, upper-extremity surgery and foot and ankle surgery. The 50-bed Orthopaedic Unit includes a rehabilitation facility.

The Family Childbirth Center includes labor, delivery and recovery suites; postpartum mother/baby suites and a Level III+ Neonatal Intensive Care Unit. The Perinatal Center offers high-risk obstetrical services; ultrasound in an AIUM-accredited practice; genetic counseling; prenatal diagnosis and testing for fetal well-being.

UM SJMC also includes the University of Maryland St. Joseph Medical Group, more than 120 physicians and mid-level practitioners who offer primary and specialty care.

University of Maryland Shore Regional Health

University of Maryland Shore Regional Health is committed to achieving its mission of **“Creating Healthier Communities Together”** by providing quality, accessible health care services and programs to the residents of Caroline, Dorchester, Kent, Queen Anne’s and Talbot counties. To fulfill that commitment, a new strategic plan was launched in Fiscal 2014 in addition to multiple expansion and development projects.

Construction of the new Emergency Department at UM Shore Medical Center at Chestertown has been underway since July 2013. **This \$4.3 million renovation is expected to be complete in the fall of 2014** and includes construction of a new entrance to the Medical Center, two patient elevators and a new lobby area. The state-of-the-art ED contains 18 emergency beds (an increase from 10), including nine private patient rooms, four observation rooms, a two-bed trauma bay and a private behavioral health patient room. The construction project includes a designated emergency entrance and a new parking area for patients and visitors, providing more convenient access to the ED.

In June 2014, UM Shore Regional Health celebrated the commencement of **three expansion projects in Dorchester, Queen Anne’s and Talbot counties**. UM Shore Medical Pavilion at Dorchester, a renovated medical office building located on the campus of UM Shore Medical Center at Dorchester, will provide updated office space for Shore Medical Group pediatricians and other medical specialties including cardiology and neurology. This expansion project is being funded



by UM Shore Regional Health and generous pledges from the Dorchester General Hospital Foundation and the hospital Auxiliary.

The **Ambulatory Surgery Center at Queenstown (ASC)**, located at UM Shore Medical Pavilion at Queenstown, will provide a broad range of convenient, outpatient surgery options for the residents of Queen Anne’s County and the other communities served by UM Shore Regional Health. The state-of-the-art ASC, which is being funded by UMMS and will be managed by UM Shore Regional Health, will contain one general surgery suite and three procedure rooms.

In Talbot County, construction of the **UM Shore Medical Pavilion at Easton** began in June. The Pavilion will provide a home for **multiple UM Shore Medical Group physician practices in one location**. The construction project, totaling 60,000 square feet of leased space, will consist of two phases. After the first phase of the project is completed, seven Shore Medical Group practices will assume 27,500 square feet of the space. Additional practices will move in after the completion of the second phase.



ACCOMPLISHMENTS

UM Shore Regional Health celebrated two monumental accomplishments in 2014. The **Comprehensive Breast Center was granted a three-year, full accreditation designation** by the National Accreditation Program for Breast Centers (NAPBC), a program administered by the American College of Surgeons. Accreditation by the NAPBC is given to only those centers that have voluntarily committed to the highest level of quality breast care and that undergo a rigorous evaluation and review of their performance.

UM Shore Medical Centers at Dorchester and Easton achieved Magnet redesignation from the American Nurses Credentialing Center (ANCC). Both UM Shore Regional Health medical centers were first awarded Magnet recognition in 2009. UM Shore Medical Center at Chestertown has begun the journey to Magnet designation and will be included in the reapplication process that concludes in 2018.



CELEBRATING

75
YEARS

University of Maryland Charles Regional Medical Center

University of Maryland Charles Regional Medical Center (UM CRMC) has provided excellence in acute health care and preventive services in Charles County and the surrounding communities since 1939, **celebrating the 75th anniversary this year of what was first named Physicians Memorial Hospital.** Originally built in response to a devastating tornado, the hospital has a long tradition of serving the community. UM CRMC continues to provide excellence in health care for Charles County and the surrounding southern Maryland area.

July 2014 marked another milestone — one year since the former Civista Medical Center began operating under its new name, University of Maryland Charles Regional Medical Center, to highlight its affiliation with the University of Maryland Medical System.

The medical center received several awards in Fiscal 2014 for high-quality patient care and workplace excellence. In the past year, UM CRMC has received these recognitions:

■ **2014 Minogue Award for Patient Safety Innovation** for its winning submission, “Improving Sepsis Outcomes Through Coordinated Early Recognition, Assessment and Treatment.” The award is the highest given by the Maryland Patient Safety Center.



■ **2013 Delmarva Foundation Excellence Award for Quality Improvement** for hospitals that excel in patient safety and quality improvement.

■ **Top Performer on Key Quality Measures award from The Joint Commission for the second consecutive year**, for exemplary performance in using evidence-based clinical processes that are shown to improve outcomes for heart failure, pneumonia and surgical care.

■ **American Heart Association/American Stroke Association awards Get With The Guidelines Stroke Gold-Plus Quality Achievement Award and Target: Stroke Honor Roll** for implementing quality improvement measures to reduce death and disability for stroke patients.

■ **Workplace Excellence and the Health & Wellness Seal of Approval awards from the Alliance for Workplace Excellence** for outstanding commitment to overall workplace quality and to employee health and wellness, received for the 10th consecutive year.

EXPANDING EXPERTISE

To continue growing to meet community needs, UM CRMC expanded its surgical practice to include **several general surgeons with subspecialties in colon and breast surgery, as well as a board-certified vascular surgeon.** UM Charles Regional Neurology, La Plata’s first neurology practice, opened in February 2014. The hospital also successfully recruited several new physicians to community practices in its service area.

FINANCIAL GROWTH

Continuing a four-year trend of increases in operating margins, Fiscal 2014 has been a record year for UM CRMC in volume and revenue.



University of Maryland Upper Chesapeake Health

For the past century, University of Maryland Upper Chesapeake Health (UM UCH) has offered the residents of northeastern Maryland an unparalleled combination of award-winning clinical expertise, leading-edge technology and an exceptional patient experience. The organization's vision is to become the preferred, integrated health care system creating the healthiest community in Maryland. In late 2013, UM Upper Chesapeake Health formally merged into the University of Maryland Medical System in order to continue a commitment to provide its growing community with expanded clinical services, programs, facilities and physician recruitment.

UM Upper Chesapeake Health includes two acute care, not-for-profit hospitals — UM Upper Chesapeake Medical Center (UM UCMC) in Bel Air and UM Harford Memorial Hospital (UM HMH) in Havre de Grace. UM UCH operates the Upper Chesapeake Health Foundation, the Klein Ambulatory Care Center and two medical office buildings on its Bel Air campus. It also owns and operates the Senator Bob Hooper House, an assisted-living community specializing in hospice care in Forest Hill, and the newly built Patricia D. and M. Scot Kaufman Cancer Center.

The University of Maryland Faculty Physicians Inc. practice has

offices in Pavilion II at UM UCMC.

A wide variety of pediatric and adult specialists see patients in this office for services including adult endocrinology, cardiology and urology, and pediatric pulmonology, gastroenterology and otorhinolaryngology.

In October 2013, UM UCMC opened the **Patricia D. and M. Scot Kaufman Cancer Center**, which proudly boasts multidisciplinary care where specialists in medical, surgical, and radiation oncology meet with patients in a single visit. Its affiliation with the University of Maryland Marlene and Stewart Greenebaum Cancer Center means local access to clinical trials, the highest quality radiation oncology program, genetic counseling and a joint Tumor Board, which meets to discuss individual cases.

The reduced-dose lung cancer screening program offered by UM UCH has been selected as a Lung Cancer Alliance Center of Excellence, screening 145 individuals in 2013. CT lung cancer screenings can reduce the number of deaths from lung cancer by 20 percent. Patients involved in the screening program have access to a thoracic surgeon, pulmonologists, oncologists and radiologists — all in one convenient location.



AWARDS AND ACCOLADES

Both UM UCH hospitals have received various accolades and recognition over the past year, including the Joint Commission's Top Performers on Key Quality Measures, Delmarva Foundation Excellence Award for Quality Improvement, the American Heart Association/American Stroke Association's Get With the Guidelines-Stroke Gold Plus Quality Achievement Award, Maryland Patient Safety Innovation Center Award (UM HMH), Beacon Award for Excellence (UM UCMC), and the Mission: Lifeline Bronze Receiving Quality Achievement Award (UM UCMC).





Mt. Washington Pediatric Hospital

Since 1922, Mt. Washington Pediatric Hospital (MWPH) in Northwest Baltimore has played a key role in children's health care throughout the Baltimore region, offering sophisticated medical care in a family-friendly environment. **Children are able to heal, grow, go home stronger, and learn the skills necessary to lead happier, more independent lives.**

Mt. Washington Pediatric Hospital is **jointly owned and operated by the University of Maryland Medical System and Johns Hopkins Health System.**

In the last year, the non-profit hospital has continued its growth to accommodate the region's increased demand for the wide range of pediatric services it provides.

One of the highlights was completion of a three-story, 6,300-square-foot addition to the main Eliasberg Family Building.

The addition's first floor is the new home for the Feeding Day Program, which provides a comprehensive and therapeutic approach to helping children who have trouble eating. A goal of the expansion was to cut wait times for families to get their child into the program. With twice as many treatment rooms as before, the program is able to serve more children — about 12 patients at one time now, compared to eight previously.

Families can view all treatment sessions in a new parents' observation room with monitors. Therapists also have monitors in the office to be used for training sessions.

The roomy, new playroom is doubled in size, with cubbies for the kids' belongings and a 6-foot table for crafts and other play activities. A bank of bay windows offers a view of the leafy wooded area behind the hospital.

MWPH renovated its five-bed Sleep Lab and expanded it into the feeding

program's former space. The new sleep lab affords a quieter environment with more sound-proofing of patient and staff rooms. Room sizes have increased to accommodate more patients with medical complexities. The updated decor provides a warm and comforting atmosphere.

The increased space means the Department of Psychology can **increase psychological care in the community** and continue to develop its specialty treatment programs. For instance, the **Autism Assessment and Related Therapeutic Services (AARTS) program is projected to see a large volume increase in the coming months** — specific clinics for children with gastrointestinal disorders, diabetes, feeding disorders and concussion will continue to expand. With this added space, psychology is now able to expand its core and part-time clinical faculty.

The Education Department has moved into a new suite that includes a Simulation Lab designed to improve the effectiveness of clinical scenarios, such as a Code Blue, by making the experience more realistic for all participants. The observation room allows the education team to control the scenario and the simulation mannequin from a separate room.

One of the most important phases of simulation learning is the debriefing. Audiovisual equipment now records the scenario for playback during the debriefing. In this way, the clinical staff who took part in the scenario can see their performance for themselves, adding an extra layer of effectiveness to the simulation exercise.

WHERE
Marylanders
COME *first.*

WE
HEAL



UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE

FISCAL 2014 *facts*

FACULTY 2,969

- 1,369 Full-time
- 288 Part-time
- 1,312 Adjunct

STAFF 2,931

(Administrative, Research
& Clinical Staff, including
University of Maryland
Faculty Physicians, Inc.)

STUDENTS 1,302

- 626 Medical (MD)
- 44 MD/PhD
- 347 Graduate (MS/PhD)
- 36 Public Health (MPH)
- 178 Physical Therapy (DPT/PhD)
- 13 Genetic Counseling (MGC)
- 54 Medical and Research Technology (BS/MS)
- 4 Clinical Research Certificate

POST-DOCTORAL FELLOWS 589

- 204 Clinical
- 385 Research

RESIDENTS 689

(Trained by SOM Faculty)

OUR INCOME

Tuition and Fees	\$ 26,878,229
State Appropriations	41,337,588
Total Grants and Contracts	400,220,421
Gifts, Endowments and Other Expenses	14,739,821
Medical Service Plan	278,700,000
Reimbursements from Affiliated Hospitals	161,999,167
Total	\$ 923,875,226

OUR EXPENSES

Instruction/Training	\$ 87,088,531
Research	407,230,586
Clinical Service	392,014,064
General and Administrative	37,542,045
Total	\$ 923,875,226

financial

UNIVERSITY *of* MARYLAND
MEDICAL SYSTEM

FISCAL 2014 QUICK *facts*

LICENSED BEDS	2,369
EMPLOYEES	23,643
HOSPITAL ADMISSIONS	120,248
OUTPATIENT VISITS	1,602,177
EMERGENCY VISITS	411,108
SURGICAL CASES	51,150

OUR INCOME

From services to inpatients	\$ 2,066,977,000
From services to outpatients	1,723,634,000
These services produced total gross revenue of	\$ 3,790,611,000
Less amounts we had to deduct for contractual allowances to third-party payors	(538,689,000)
Less the cost of charity care for persons without the ability to pay for their care and for uncollectible accounts	(335,088,000)
Therefore, our net revenue from patient care services was	2,916,834,000
In addition, our other revenue from operating, including state support, was	110,012,000
Thus, our total revenue from operations was	\$3,026,846,000

OUR EXPENSES

For salaries, wages and fringe benefits to our employees	\$ 1,490,727,000
For medical supplies, pharmaceuticals and purchased services	1,284,145,000
For depreciation on our buildings and equipment	168,033,000
For interest costs on our outstanding bonds	68,263,000
All of these operating expenses totaled	\$3,011,168,000

OUR NET RESULTS

Income from operations	\$ 15,678,000
Plus non-operating revenue net of expenses, which excludes changes in market value of financial investments and other activities	8,366,000
Net income	\$24,044,000

REPORT

**Fiscal Year 2014 figures are unaudited and include Upper Chesapeake Health System as of December 6, 2013.*

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