



UNIVERSITY of MARYLAND
SCHOOL OF MEDICINE

FORGING AHEAD



DEFINING NEW PATHWAYS
IN CHALLENGING TIMES

2012

STATE OF THE SCHOOL ADDRESS

FORGING AHEAD

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DEFINING NEW PATHWAYS IN CHALLENGING TIMES

OUR MISSION: The University of Maryland SCHOOL OF MEDICINE is dedicated to providing excellence in biomedical education, basic and clinical research, quality patient care and service to improve the health of the citizens of Maryland and beyond.

The school is committed to the education and training of MD, MD/PHD, Graduate, Physical Therapy and Rehabilitation Science, and Medical and Research Technology students. We will recruit and develop faculty to serve as exemplary role models for our students.

INTRODUCTION

The title of my State of the School address this year is **FORGING AHEAD: Defining New Pathways in Challenging Times.**

The notion of a journey as a metaphor is pervasive in our history and literature. There is no shortage of examples that one could call upon to illustrate this point. All journeys involve travelers, paths traveled, a place of origin, landmarks and destinations. **Most journeys are purposeful and have clearly defined endpoints. In those cases it's often the routes taken, as well as the detours that we are sometimes required to take, that tell the most compelling and interesting stories.**

As we reflect on the past year, the journey as a metaphor seems most appropriate. Recently, our School of Medicine academic community completed a new five-year strategic plan, which carefully delineated a path to success. This plan was entitled: *Taking a Quantum Leap Forward* and established goals, among other things, to increase our margins and our reserves, to build and expand centers of research and clinical excellence and to explore new global opportunities. **Our school has experienced a prolonged period of sustained research success. A strong relationship has been formed with our clinical partners, and the legislature has allocated initial funds for**

the establishment of a major research facility. Indeed, our institutional GPS had a clear line on our ultimate destination and we felt assured that we had a smooth journey ahead.

Once we were on our way, however, we began to encounter challenges which quickly altered the outlook of our journey. Storm clouds and severe weather in the form of a faltering economy and major federal political gridlock began to slow our progress. The uncertainty of a federal budget crisis loomed ominously over the NIH budget and seriously endangered resources that will be necessary to train physicians, scientists and allied health professionals.

But as you know, severe weather is often accompanied by treacherous traveling conditions, causing accidents that can further delay a journey. Road closures, usually the result of an accident or construction, can also impede progress and often require a detour. The rising cost of healthcare and the impact of the uninsured and the under-insured on our system was a great concern to us. The discontinuation of the stimulus funding from Congress, as well as the flat funding of the NIH budget, have forestalled the growth of our research enterprise and slowed scientific progress. The federal government has, however, responded with a passage of the Affordable Care Act, which has been hailed by many in the academic community as

a tremendous response to our nation's growing healthcare crisis. This new legislation offers us one new path to our ultimate destination, but we must reprogram our GPS and endeavor to travel alternate routes. **New models of healthcare delivery and non-traditional funding are just two of the ways that we can continue to expand our clinical and research enterprises. Accountable care models, patient-centered homes, industry partnerships and private philanthropy are just some of the approaches that we believe can provide viable alternative routes now and in the future.** In spite of these challenges and these road-blocks, we remain undaunted.

The successes we experienced this past year, specifically within the research and clinical enterprises, serve as evidence that we have already identified new routes to successfully reach the destination that we envisioned in our original strategic plan. We must continue to be nimble but at the same time be alert to the external forces. **We must, at every turn, carefully examine all potential courses in these challenging times. Over the next pages I'll offer some examples of those within the School of Medicine who have already found an alternate path to success and in many cases have redefined our future accomplishments.** I am humbled and, indeed, honored to work with faculty and staff who are resolute and now stand ready to forge ahead towards our ultimate destination.



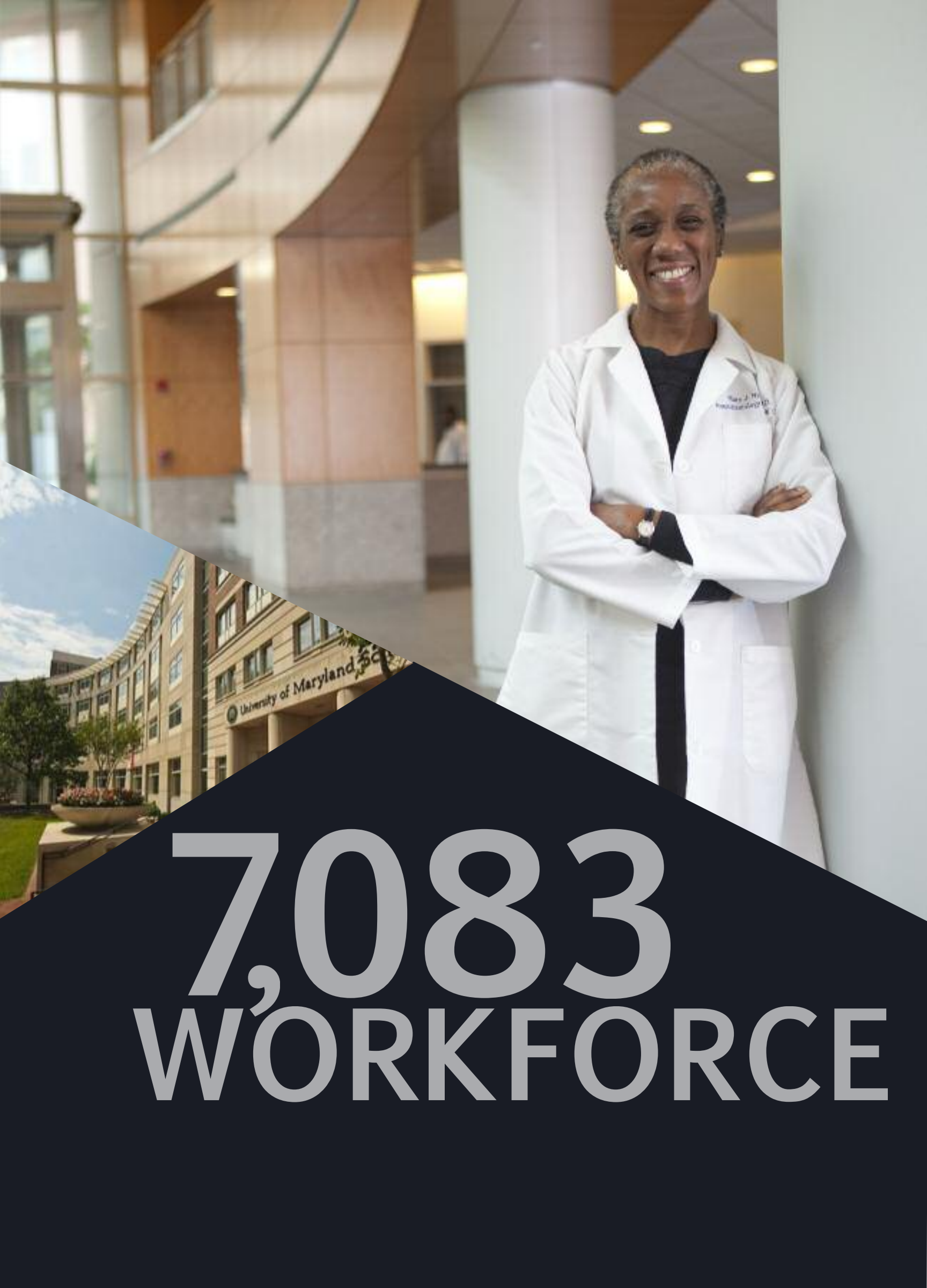
E. Albert Reece, MD, PhD, MBA



ONLINE VIDEO

View the State of the School Address at
www.medschool.umaryland.edu/SOTS





7,083
WORKFORCE

W O R K F O R C E



The School of Medicine's total workforce is approximately 7,000 persons and includes more than 2,800 full-time, part-time and adjunct faculty, and 3,000 staff members

FIGURE 1. Of our 1,341 full-time faculty members, nearly 38 percent are women and 7.5 percent are under-represented minorities

FIGURE 2. Importantly, our retention rate is hovering at around 92 percent, reflecting our commitment to providing a positive and productive work environment. Our workforce is also comprised of 557 clinical and research fellows and more than 600 residents.

FIGURE 1
TOTAL **Workforce**

	2011	2012	
Full-Time Faculty	1,334	1,341	} 2,863
Part-Time Faculty	279	293	
Volunteer Faculty	1,226	1,229	
Clinical Fellows*	209	214	} 557
Research Fellows	356	343	
Residents*	613	606	} 3,057
Staff	2,279	2,046	
Faculty Physicians, Inc. Staff	1,001	1,011	
TOTAL INDIVIDUALS	7,297	7,083	

*University of Maryland Medical Center pays salaries of most

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FIGURE 2
BREAKDOWN OF **Full-Time Faculty**

	FY2011	FY2012
TOTAL FULL-TIME FACULTY	1,334	1,341
Women	506 (37.9%)	505 (37.7%)
Under-represented Minorities	106 (8.0%)	100 (7.5%)
~92% RETENTION RATE OF FULL-TIME FACULTY		

EDUCATION



Of the more than 45,000 applicants attempting to find spots in the 138 U.S. medical schools last year, nearly 4,700 applied to the University of Maryland School of Medicine **FIGURE 3**. One hundred sixty, ranging in age from 21 to 35, were accepted into this year's entering class. Seventy-nine percent of the students are Maryland residents, 57 percent are female, and eight percent are under-represented minorities. The Class of 2016 came from 65 different colleges and universities, and they had an overall grade point average of 3.74 and an average MCAT score of 32, both well above the national average **FIGURE 4**.

Our medical students comprise nearly half of the total student enrollment of 1,338, which includes Allied Health and Physical Therapy students, as well as graduate students and students pursuing combined degrees **FIGURE 5**.

We currently have nine joint degree programs: two doctorate programs (MD/PhD and MD/DDS) and seven MD/Masters degree programs. A DPT/PhD degree program within the Department of Physical Therapy & Rehabilitation Sciences has also been approved. Among our PhD students, 319 have already received funding for their research, bringing in almost \$600,000.

The rate of student diversity within the different areas ranges from 12 percent to 36 percent **FIGURE 6**. The most diverse are the Department of Medical & Research Technology and the Master of Public Health Program, which had an incredible 10 percent increase in the number of minority students. We are quite proud of our diversity, and we believe it further enriches the great learning environment we provide, which we are very proud to provide at all levels.

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EDUCATION

FIGURE 3
U.S. MEDICAL SCHOOL **Applications**

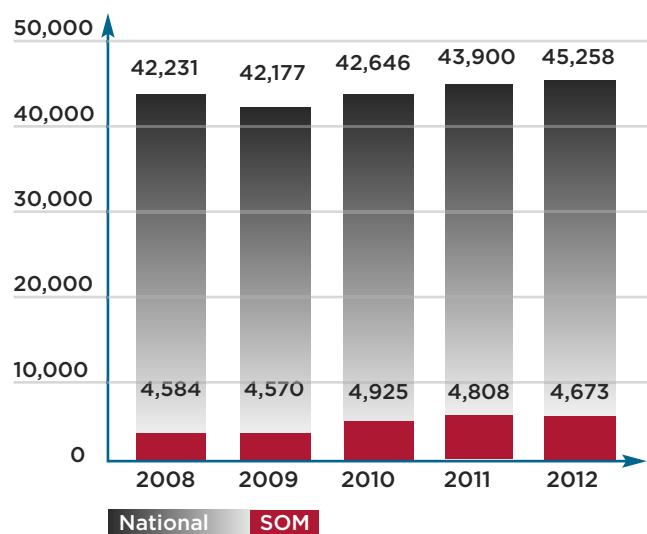


FIGURE 4
2012 FIRST-YEAR STUDENT **Statistics**

- 4,673 total applications for class of 160 students
- 65 colleges/universities are represented
- Ages range from 21 to 35 years
- 79% are Maryland residents; 21% are non-residents
- 8% are underrepresented in medicine
- 57% are female; 43% are male
- Overall average GPA is 3.74
- Average MCAT score is 32

} Above National Average

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FIGURE 5
TOTAL STUDENT **Enrollment**
Medical, Graduate, Allied Health and Public Health

STUDENTS	2011	2012	
Medical (MD)	634	642	} 678
MD/PhD	37	36	
Graduate (MS/PhD)	345	340	} 392
Public Health (MPH)	33	52	
Physical Therapy (DPT/PhD)	168	185	} 268
Genetic Counseling (MS)	13	13	
Medical and Research Tech (BS/MS)	72	70	
TOTAL	1,282	1,338	

FIGURE 6
STUDENT **Diversity**

*Percent of Minorities in the 2012 Programs**

Medical (MD)	12%
MD/PhD	17%
Graduate (MS/PhD)	15%
Physical Therapy	12%
Genetic Counseling	15%
Public Health	36%
Medical & Res Tech	36%

**Includes Native American, African American, Hispanic American and Multi-Racial Americans*

4,673 APPLICANTS

EDUCATION

One of the biggest milestones in the medical school experience is Match Day, where graduating students learn where and in what specialty they will continue training as residents. This year, 49 percent of our students matched in primary care fields (internal medicine, family medicine, pediatrics, OB/Gyn), up from 43 percent last year. This growth will be extremely important as insurance availability expands and more and more people seek out care **FIGURE 7**.

We could not be more proud of our graduates. In May 2012, 293 students received their degrees, including 152 newly minted physicians, five of whom earned dual degrees (three MD/PhD and two MD/DDS). **This year's medical school convocation speaker was Darrell Kirch, MD, president and CEO of the Association of American Medical Colleges**, which is leading the charge in finding solutions to America's pending physician shortage, campaigning for more funding for residency programs and medical schools.

In our other programs, 44 graduated with Doctor of Physical Therapy degrees from our Department of Physical Therapy & Rehabilitation Science; six completed the Masters in Genetic Counseling degree; there were 15 medical and research technology graduates; and eight Masters of Public Health graduates **FIGURE 8**.



Convocation speaker
Darrell G. Kirch, MD



Genetic Counseling Graduates

FIGURE 7

Match Day RESULTS

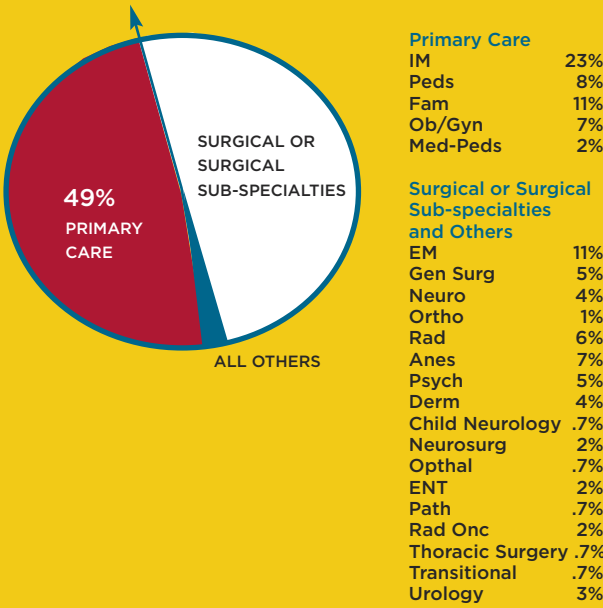


FIGURE 8

TOTAL Graduates

Programs	2011	2012
MD	151	147
MD/PhD	7	3
MD/DDS	2	2
MD/MPH	1	0
Masters in Public Health	5	8
PhD Graduates	35	44
MS Graduates	11	24
Physical Therapy & Rehabilitation Science	46	44
Genetic Counseling	6	6
Medical & Research Technology	16	15
Total Graduates	280	293

Students in our Graduate Program in Life Sciences published 167 peer-reviewed journal articles last year; 60 of them were first authors on these publications.

167
ARTICLES

Where do our students go after graduation and where do they practice medicine after their training? We have graduates living and working all over the country, but the majority come back to Maryland to practice. We also have a large number working in California, Pennsylvania, Florida, Virginia, Texas and North Carolina **FIGURE 9**.

Even those who do not return to practice in Maryland often return to attend our annual alumni reunions. This year, more than 800 of our 7,800 living alumni came back to campus to catch up at the 137th annual Medical Alumni

Association (MAA) reunion weekend in May, which featured a number of special activities, including the annual Clinico-Pathological Conference (CPC). The CPC uses contemporary medicine to determine the causes of death of historical figures. **This year, the CPC determined that Vladimir Lenin may have died of a stroke, possibly brought on by poisoning.**

During reunion weekend, the 2012 MAA Distinguished Service Award was presented to Louis Shpritz, MD, Class of 1970. The 2012 MAA Honor Award and Gold Key were presented to Elizabeth Abel, MD, Class of 1967 **FIGURE 10**.

FIGURE 9
WHERE ARE OUR
Alumni Practicing?

- 7,467 Graduates
- Post-residency Locations
- Graduated 1966-2007

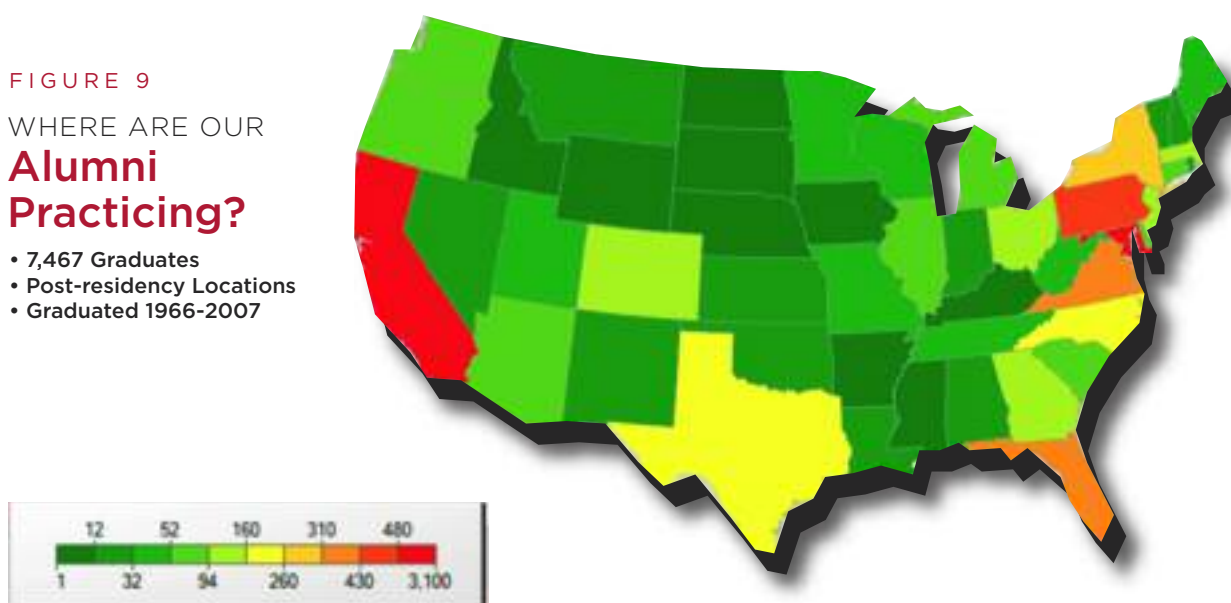


FIGURE 10
2011 MEDICAL ALUMNI ASSOCIATION **Reunion**



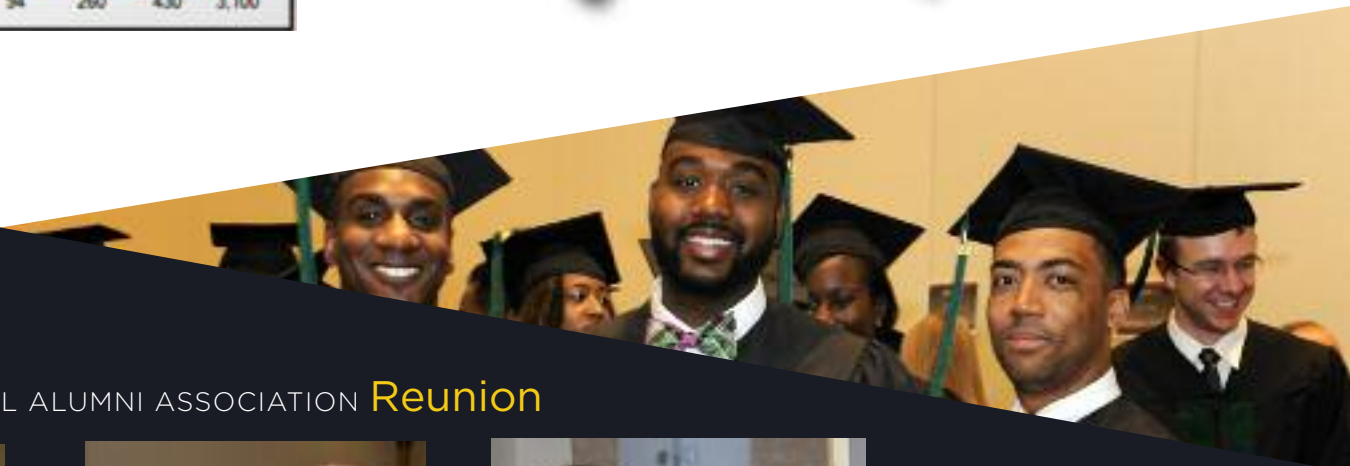
Vladimir Lenin
19th Historical
Clinicopathological
Conference medical
mystery subject

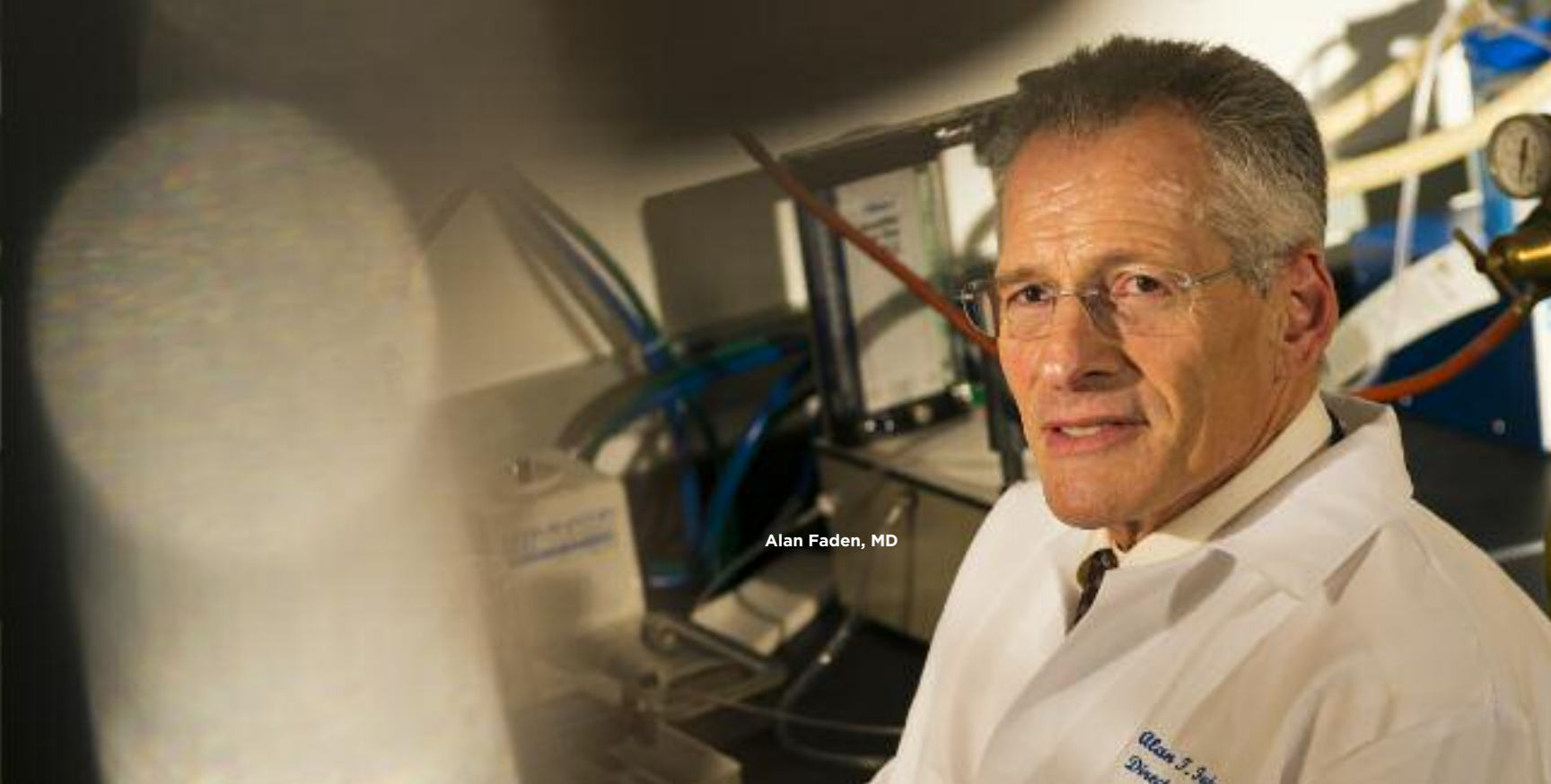


Louis A. Shpritz, MD '70 (left) was
presented the 2012 MAA Distinguished Service Award



The 2012 MAA Honor Award & Gold Key
was **Elizabeth A. Abel, MD '67 (right)**.





Alan Faden, MD

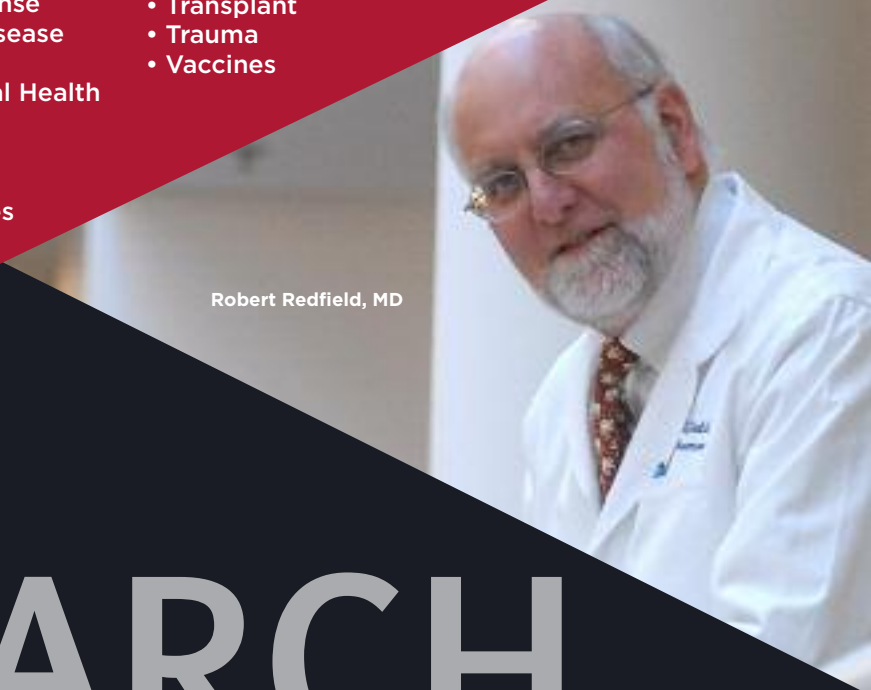
**SOM RESEARCH VISION:
INCREASING THE IMPACT OF
RESEARCH AND DISCOVERY
ON HUMAN HEALTH**

OUR GOALS:

- Create and/or expand research magnet programs and funding
- Increase emphasis on translational research
- Increase emphasis on collaboration and multi-disciplinary groups
- Increase consortia grants and contacts
- Enhance faculty recruitment and retention
- Achieve Top-10 ranking

MAJOR RESEARCH PROGRAMS BASED ON FUNDING

- AIDS/HIV
- Aging
- Bioterrorism Defense
- Cardiovascular Disease
- Cancer
- Community Mental Health
- Diabetes
- Disparities
- Genomics
- Infectious Diseases
- Metabolic Disorders
- Schizophrenia
- Transplant
- Trauma
- Vaccines



Robert Redfield, MD

RESEARCH IN 23 COUNTRIES

- Jamaica • Ethiopia • Kenya • Malawi • Nigeria • Rwanda • Uganda • Zambia • Mali • Chile • Haiti • Germany
- Sweden • Brazil • Afghanistan • Iraq • China • Liberia • Tanzania • Netherlands • Ireland • Turkey

RESEARCH



The research vision of the University of Maryland School of Medicine is to increase the impact of research and discovery on human health, not only in this region but around the world. We are not interested in theoretical research, but in research that will truly change people's lives for the better. Our research is rather broad and very deep, and it extends far, beyond our campus and Baltimore. **Faculty, staff and students are doing research and service in 23 countries around the globe.**

Supporting that global mission is expensive. We must aggressively seek funding on a regular basis just to maintain, let alone grow, our current research enterprise. For the past two years, this funding has grown, thanks in large part to stimulus money from the federal government for which universities could apply to support their research. This money is no longer being offered. PEPFAR, the President's Emergency Program for AIDS Relief, also offered government funding to universities for projects that were being administered elsewhere. In our case, it had been administered almost exclusively in Africa, where we have a variety of active AIDS research projects. However, this past year there has been a

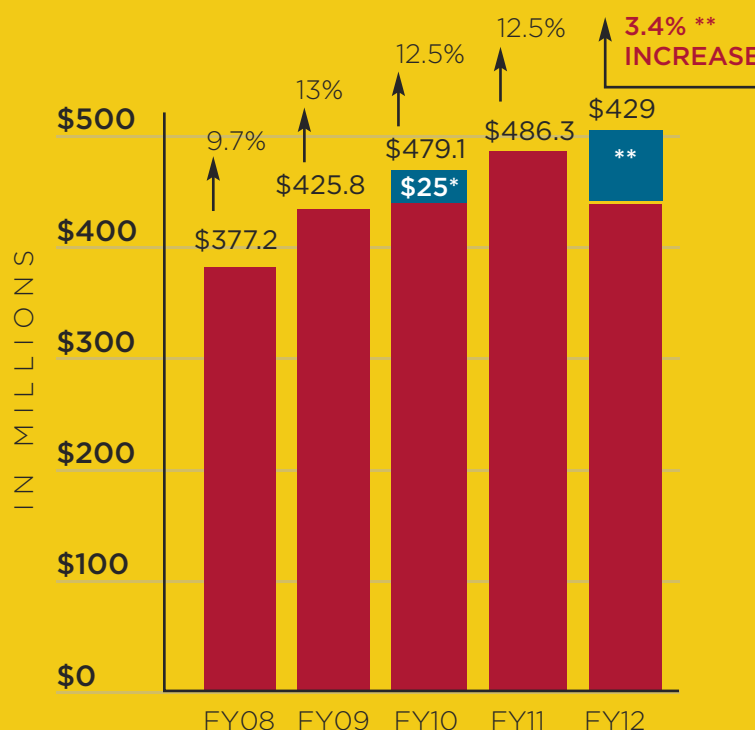
change in policy, so no longer will those funds come to American universities. Instead, they will go directly to the country where the work is being done. While we are still a part of the program, and we are still doing a great deal of AIDS work in Africa that continues to be funded, the money is no longer coming first to the university.

When figures are adjusted for the phasing out of stimulus funding and the changes in PEPFAR funding policies, **our total funding of \$429 million actually represents a 3.4 percent increase over the previous year and a 25 percent increase over the last five years.** Our faculty should be quite proud of this success in such tough times, when you have more researchers competing for fewer dollars because of flat NIH funding **FIGURE 11.**

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FIGURE 11

TOTAL Grants & Contracts



*\$454.1 million of research funding plus \$25 million of "one-time" stimulus funding for construction & equipment

** Reflects phase out of PEPFAR service grants



RESEARCH

FIGHTING CHILDREN'S HEART DISEASE WITH SURGICAL AND STEM-CELL THERAPY

Sunjay Kaushal, MD, PhD, associate professor, Department of Surgery, is exploring novel ways to treat serious heart problems in children. He and his colleagues conducted the first direct comparison of the regenerative abilities of neonatal and adult-derived human cardiac stem cells. **Among their findings: cardiac stem cells (CSCs) from newborns have a three-fold ability to restore heart function to nearly normal levels compared with adult CSCs.** Furthermore, in animal models of heart attack, hearts treated with neonatal stem cells pumped stronger than those given adult cells. The study was published in the September 11, 2012, issue of *Circulation*. **"The surprising finding is that the cells from neonates are extremely regenerative and perform better than adult stem cells,"** says Dr. Kaushal, who is also director of pediatric cardiac surgery at the University of Maryland Medical Center. "We are extremely excited and hopeful that this new cell-based therapy can play an important role in the treatment of children with congenital heart disease, many of whom don't have other options."

Insights gained through this research may provide new treatment options for a life-threatening congenital heart syndrome called hypoplastic left heart syndrome (HLHS). **Dr. Kaushal and his team have received approval to begin the first clinical trial in the United States to determine whether damage to hearts of babies with HLHS can be reversed with stem-cell therapy.** HLHS limits the heart's ability to pump blood from the left side of the heart to the body. Current treatment options include either a heart transplant or a series of reconstructive surgical procedures. Nevertheless, only 50 to 60 percent of children who have had those procedures survive to age five.

Dr. Kaushal's research has a variety of funding sources, including a NIH K08 Award, a Howard Hughes Early Career Award, and a grant from the Children's Heart Foundation.

GROWING PROGRAM SEEKS NUTRITIONAL FUTURE FOR BALTIMORE'S CHILDREN

Maureen Black, PhD, the John A. Scholl, MD, and Mary Louise Scholl, MD, Distinguished Professor, Department of Pediatrics, is pursuing research into both obesity and failure-to-thrive in children, particularly children living in poverty. She heads the department's Division of Growth and Nutrition, which oversees an interdisciplinary clinic for young children with growth and/or feeding problems. The division also conducts NIH-funded obesity-prevention trials among toddlers and adolescents; oversees the FUTURES study (Following Urban Teens: Unique and Resilient at Every Step), a National Institute on Drug Abuse (NIDA)-funded follow-up of children who were prenatally exposed to illegal drugs; and monitors the growth and development of young children as one of five Children's HealthWatch sites nationwide.

A study Dr. Black published in the *Archives of Pediatric and Adolescent Medicine* found that **as family stresses such as food insecurity and maternal depression increase, children's health risks also increase.** Participation in food assistance programs such as the Women's, Infants and Children Program (WIC) can reduce — but do not eliminate — the negative health consequences associated with stressed families. "The building blocks that support children throughout life are formed during their early years," Dr. Black says. "Disparities associated with household food insecurity and caregiver depressive symptoms disrupt these building blocks and can compromise children's health, resulting in lifelong negative consequences to their health and well-being."

Dr. Black was honored in March with induction to the Maryland Women's Hall of Fame, in recognition of her tireless efforts in helping Baltimore children grow up healthy. Her work is supported by NIH R01 grants, as well as funding from the U.S. Department of Agriculture and NIDA.

NEW RESEARCH PROGRAMS

- The Clinical Translational Science Institute



(CTSI) is co-directed by **DR. STEPHEN DAVIS (top)**, professor and the Dr. Theodore E. Woodward Chairman of the Department of Medicine, and **DR. ALAN SHULDINER**, the John L. Whitehurst Endowed Professor in the Department of Medicine.



The purpose of the CTSI is to facilitate the rapid transition of novel therapies from

basic research to clinical benefit. It will also aim to foster collaboration across the campus and across the University of Maryland Medical System.

- The Child and Adolescent Health Innovations



Center, lead by **DR. DAVID PRUITT**, a professor in the Department of Psychiatry, aims to enhance psychosis screening among children and teens, identifying those who

are most at risk and providing them with evidence-based interventions and integration of behavior health services on a multi-disciplinary basis.

- The Center for Biomolecular Therapeutics



(CBT), lead by **DR. DAVID WEBER**, a professor in the Department of Biochemistry and Molecular Biology, is dedicated to taking fundamental discoveries and transitioning

those findings into drugs or other therapeutics.



Sunjay Kaushal,
MD, PhD



Maureen Black, PhD

HELPING CHILDREN



Research HIGHLIGHTS

TOP GRANT AWARDEES IN 2012

This section features the outstanding work of just a few of our investigators, those who were able to secure very large and/or prestigious grants over the last year. **Featured here are investigators who received NIH grants, non-NIH grants, and multiple NIH R01 grants. We also spotlight young investigators who secured their first NIH R01 grants.**

LARGEST NIH GRANTS



Michael Terrin, MD, CM, MPHP

Professor, Departments of Epidemiology & Public Health and Medicine, received a **five-year, \$12.6 million award** from the National Institute on Aging (NIA) for a clinical trial (N-TA3CT) to test non-invasive treatments for abdominal aortic aneurysms.



Miriam Laufer, MD

Associate professor, Departments of Pediatrics, Medicine and Epidemiology & Public Health, received a **four-year, \$7.4 million award** from the National Institute of Allergy and Infectious Diseases (NIAID) for a clinical trial to test Trimethoprim-Sulfamethoxazole or Chloroquine in Adults on ART.



Jay Magaziner, PhD, MSHyg

Professor and chair, Department of Epidemiology & Public Health, received a **five-year, \$5.4 million award** from NIH/NIA to study the effects of multi-modal exercise intervention post hip fracture.



Howard Dubowitz, MBChB

Professor, Department of Pediatrics, received a **five-year, \$3.1 million award** from the National Institute on Drug Abuse (NIDA) to study drug-use trajectories and the transition to adulthood among maltreated youth.



Alan Faden, MD

The David S. Brown Professor in Trauma in the Department of Anesthesiology and director of the Center for Shock, Trauma and Anesthesiology Research (STAR) & the National Study Center for Shock & EMS, and co-PI Susan Dorsey, PhD, associate profes-

sor, Department of Adult Health Nursing in the School of Nursing, received a **five-year \$3.2 million award** from the National Institute of Nursing Research (NINR) to study spinal mechanisms underlying SCI-induced pain and its implications for targeted therapy. Dr. Faden also received a **five-year \$2.4 million award** from the National Institute of Neurological Disorders and Stroke (NINDS) to study the role of cell cycle pathways in traumatic brain injury.



Owen White, PhD

Professor, Department of Epidemiology & Public Health, and director of Bioinformatics, Institute for Genome Sciences, was awarded a research cooperative agreement worth **\$2.8 million over three years** from the National Human Genome Research Institute (NHGRI) for the project Open Data Framework (OSDF): Support Infrastructure for Next Generation Sequence Data Storage, Analysis and Management.



Pedro Jose, MD, PhD

Professor, Department of Medicine, received a **three-year, \$2.5 million award** from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) to study renal dopamine-1 receptor defects in hypertension. He also received a **\$2.2 million award** from NIDDK to study renal dopamine receptors and regulation.



David Weber, PhD

Professor, Departments of Biochemistry & Molecular Biology and Medicine, received a **five-year, \$2.4 million award** from the National Cancer Institute to study the restoration of tumor suppression activity in malignant melanoma.

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RESEARCH

Research HIGHLIGHTS continued



Stephen Seliger, MD, MS

Associate professor, Department of Medicine, received a **four-year, \$2.4 million award** from NIDDK to study exercise training and cognitive and physical function in CKD.



Asaf Keller, PhD

Professor, Department of Anatomy & Neurobiology, received a five-year, \$1.9 million award from the National Institute of Dental & Craniofacial Research (NIDCR) to study cortical modulation of brainstem circuits.



Christopher Plowe, MD, MPH

Professor, Departments of Medicine, Epidemiology & Public Health and Microbiology & Immunology received a four-year, \$2.3 million award from NIAID to study the immo-epidemiological epitope mapping of a blood-stage malaria vaccine antigen.



Jessica Mong, PhD

Associate professor, Department of Pharmacology, received a five-year, \$1.7 million grant from NIDA to study methamphetamine-induced neuroplasticity and female reproductive health.

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LARGEST NON-NIH GRANTS



Robert Redfield, MD

Professor, Departments of Medicine and Microbiology & Immunology and the Institute of Human Virology, received a **five-year, \$7.5 million award** from the Centers for Disease Control & Prevention (CDC) for the Partnership for Health Systems Strengthening (PHSS) in Rwanda.

He also received a **one-year, \$6.1 million award** from the CDC for the Haitian Alliance for Institutional Strengthening (HAIS); a **one-year, \$3.1 million award** from the Christian Health Association of Nigeria and the CDC for CHARIS: Comprehensive HIV and AIDS Response Interfaith Solution; and a **one-year, \$1 million award** from the University of Nairobi for the Central Province Response Integration, Strengthening & Sustainability Project (CRISSP) in Kenya.



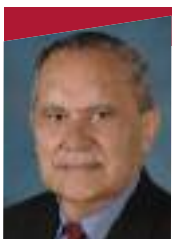
Myron Levine, MD, DTPH

The Grollman Distinguished Professor in the Department of Medicine and Director of the Center for Vaccine Development, received a **four-year, \$4 million award** from Wellcome Trust to study live vaccines to prevent invasive non-typhoidal salmonella infections in infants and young children in sub-Saharan Africa. He also received a **two-year, \$1.4 million award** from JSI Washington and JSI Logistics Services to support the Universal Immunization Project in Ethiopia.



Alan Schmaljohn, PhD

Professor, Department of Microbiology & Immunology, received a **two-year, \$2.1 million award** from Paragon Bioservices to study Venezuelan equine encephalitis replicon particle trivalent filovirus vaccine process development, formulation, and manufacturing.



Edson Albuquerque, MD, PhD

Professor, Departments of Epidemiology & Public Health, Medicine and Pharmacology, received a **one-year, \$17.8 million award** from Countervail Corporation to study nerve agent countermeasures for downwind and worried well populations.



Mary-Claire Roghmann, MD, MS

Professor, Departments of Epidemiology & Public Health and Medicine, received a **three-year, \$1.3 million award** from the Agency for Healthcare Research and Quality to study the effect of modifying contact precautions for MRSA in extended-care facilities.



George Lewis, PhD

Professor, Department of Microbiology & Immunology and Institute of Human Virology, received a **three-year, \$7 million award** from the Bill & Melinda Gates Foundation to study antibody specificity, Fc-mediated effector function, and HIV-1 vaccines.



Scott Jerome, DO

Assistant Professor, Department of Medicine, received a **four-year \$1.2 million award** from Brigham and Women's Hospital, Inc., for HPS 3/TIMI 55 – REVEAL (Randomized Evaluation of the Effects of Anacetrapib through Lipid-Modification).

**Alan Shuldiner, MD**

The John Whitehurst Professor in the Department of Medicine, associate dean for Personalized Medicine, and director of the Program in Personalized & Genomic Medicine, received a **one-year, \$1.1 million award** from the University of Maryland at College Park to support the Personalized Medicine Initiative.

**AWARDEES WITH FOUR NIH RO1 GRANTS****Alan Faden, MD**

The David S. Brown Professor in Trauma in the Department of Anesthesiology and director of the Center for Shock, Trauma and Anesthesiology Research (STAR) & the National Study Center for Shock & EMS

Totaling: \$2.1 million/year

**Patricio O'Donnell, MD, PhD**

Professor, Departments of Anatomy & Neurobiology and Psychiatry

Totaling: \$1.2 million/year

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**Joseph Cheer, PhD**

Associate professor, Department of Anatomy & Neurobiology

Totaling: \$1.2 million/year

AWARDEES WITH THREE NIH RO1 GRANTS**Pedro Jose, MD, PhD**

Professor, Department of Medicine

Totaling: \$1.3 million/year

**Anil Jaiswal, PhD**

Professor, Department of Pharmacology

Totaling: \$1 million/year

**Dudley Strickland, PhD**

Professor, Departments of Surgery and Physiology

Totaling: \$1.1 million/year

**Iris Lindberg, PhD**

Professor, Departments of Anatomy & Neurobiology and Biochemistry & Molecular Biology

Totaling: \$1 million/year

**Eric Sundberg, PhD**

Associate professor, Departments of Medicine and Microbiology & Immunology

Totaling: \$1.1 million/year

**J. Marc Simard, MD, PhD**

Professor, Departments of Neurology, Pathology and Physiology

Totaling: \$1 million/year

RESEARCH

Research HIGHLIGHTS continued

**Richard Eckert, PhD**

The John F.B. Weaver Professor and Chair,
Department of Biochemistry & Molecular
Biology

Totaling: \$0.9 million/year

**Jian-Ying Wang, MD, PhD**

The Joseph and Corrine Schwartz Professor,
Department of Surgery

Totaling: \$0.9 million/year

YOUNG INVESTIGATORS WITH FIRST NIH RO1 GRANTS

**James Waltz, PhD**

Assistant professor, Department of Psy-
chiatry, received a **five-year, \$1.7 million
R01 award** from the National Institute of
Mental Health (NIMH) to support neu-
rocomputational and FMRI studies of
motivational deficits in schizophrenia.

**Leonardo Tonelli, PhD**

Assistant professor, Department of
Psychiatry, received a four-year, \$1.5
million RO1 from NIMH to study
neuroimmune mechanisms of risk
and resilience to maladaptive responses
to stress.

**Quon Zhou, MD, PhD**

Assistant professor, Department of Bio-
chemistry & Molecular Biology, received
a five-year, \$1.6 million R01 award from
the National Cancer Institute to study
MIR-140 and breast cancer prevention.



Research RANKINGS

How do we measure the quality and impact of our academic scholarship? Funding is a standard, objective measure of program excellence because it is secured through a competitive process. It is also a direct reflection of the strength of our research enterprise. The Association of American Medical Colleges (AAMC) collects data for all medical schools across the nation in order to create objective rankings based on their total grants and contracts and direct expenditures.

In 2012, we rose to 6th among the 76 public medical schools nationwide, keeping us in the top 10 percent. Of the 138 public and private medical schools across the nation, we have moved up from 17th to 16th. **Both increases in the rankings are to be celebrated, but our sights are still set much higher** FIGURE 12.

Technology trends as a measure of research output is another good barometer of how well we have done this past year. Patents — both U.S. patents and foreign patents, as well as scientific disclosures or pre-patents, technology licenses, and start-up companies formed: all indicate we are moving in a very positive direction FIGURE 13.

FIGURE 12

ALL PUBLIC SCHOOLS 6th out of 76*

2011 Total Grants and Contracts Direct Expenditures Public Schools, All Regions

AAMC RANK/SCHOOL	GRANTS & CONTRACTS
1 / UWASH	\$784,611,376
2 / UCSF	\$756,068,277
3 / UCLA-Geffen	\$571,385,780
4 / UCSD	\$405,171,492
5/ Colorado	\$352,590,697
6 / Maryland	\$352,068,835
7 / Michigan	\$344,089,855
8 / North Carolina	\$304,765,886
9 / Alabama	\$255,373,364
10 / Oregon	\$247,597,325

ALL PUBLIC & PRIVATE SCHOOLS 16th out of 138*

2011 Total Grants and Contracts Direct Expenditures Public and Private Schools, All Regions

RANK/SCHOOL	GRANTS & CONTRACTS
1 / Harvard	\$2,083,479,003
2 / U Washington	\$784, 611,376
3 / UC San Francisco	\$756,068,277
4 / Duke	\$617,933,462
5 / Pennsylvania-Perelman	\$602,168,184
6 / UCLA-Geffen	\$571,385,780
7 / Columbia	\$566,653,318
8 / Johns Hopkins	\$545,205,979
9 / Mount Sinai	\$482,376,272
10 / Pittsburgh	\$464,971,680
11 / Yale	\$456,892,188
12 / Wash U-St. Louis	\$431,572,366
13 / Stanford	\$431,082,001
14 / UC San Diego	\$405,171,492
15 / Colorado	\$352,590,697
16 / Maryland	\$352,068,835
17 / Michigan	\$344,809,855
18 / Case Western	\$336,673,303
19 / Vanderbilt	\$331,873,871
20 / Baylor	\$318,823,725

*Association of American Medical Colleges (AAMC)

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FIGURE 13

TECHNOLOGY Transfer

	FY2011	FY2012
U.S. Patents Issued	24	29
Foreign Patents Issued	65	15
Scientific Disclosures (Pre-patent)	77	121
Technology Inventions Licensed	15	26
Start-Up Companies Formed	3	2

RESEARCH

Our research discoveries are translating into viable, marketable products. We are not conducting only theoretical research; we have truly transformed research so that it is having a measurable impact on people's lives.

FIGURE 14. Our research is also having an economic impact.

In all medical schools, the average direct expenditure per principal investigator is \$315,469, according to AAMC, which uses this figure to assess the productivity of faculty who are engaged in research. The higher the number, the more productive they are. **Our researchers are far above average, with a mean of more than \$500,000, ranking us 8th in the country** **FIGURE 15.** That is incredible, and I am very excited about that.



Myron Levine, MD, DTPH

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FIGURE 14

SELECTED SCHOOL OF MEDICINE

Inventions

INNOVATIONS	SOM INVENTORS	COMPANIES
Products on the Market:		
• Stroke Rehab Device	Jill Whithall, PhD Sandy Maccomb Waller, PT, PhD	EncorePath, Baltimore
• Medical Information System • Medical Software	Marcelo Cardarelli, MD, MPH Christopher Meenan	Blink Medical Technologies, Baltimore Analytical Informatics, LLC
Phase III Clinical Trials:		
• Cholera Vaccine (2012)	Myron Levine, MD, DTPH James Kaper, PhD	PaxVax, San Diego
Phase II Clinical Trials:		
• Stroke • Celiac Disease • Head and Neck Cancer • Prostate Cancer	Marc Simard, MD, PhD Alessio Fasano, MD Scott Strome, MD Vincent Njar, PhD Angela Brodie, PhD	Remedy Pharmaceuticals, New York Alba Therapeutics, Baltimore Gliknik, Baltimore Tokai, Boston

SELECTED SCHOOL OF MEDICINE

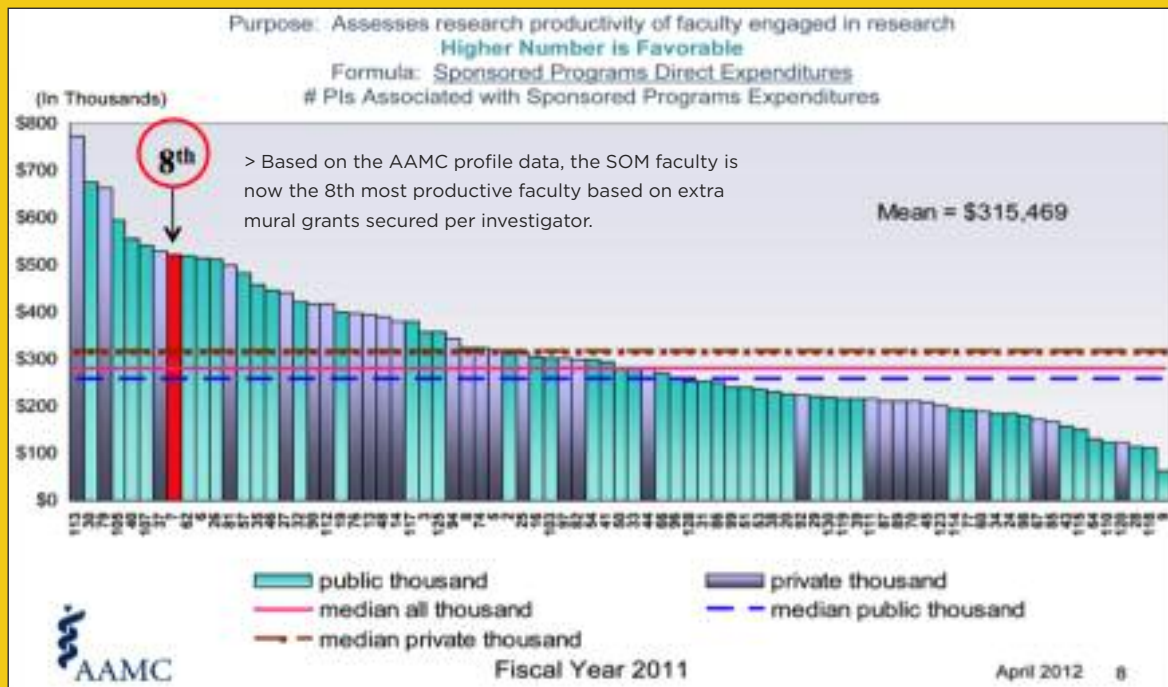
Licenses

COMPANY	SOM INVENTORS	INVENTION
• Bio-Rad Laboratories, Hercules, CA	Alessio Fasano, MD	Human Zonulin, a Physiologic Modulator of Tight Junctions, as Pre-Heptogoblin-2
• Soutor Surgical, Jackson, WY	Vadim Morozov, MD	Electrosurgical Element and Uterine Manipulator for Total Laparoscopic Hysterectomy
• Immotions Medical,* Hopkinton, MA	Warren D'Souza, PhD	Techniques for Compensating Movement of a Treatment Target and Method for Monitoring Accuracy of Tissue Motion Prediction from Surrogates
• Analytical Informatics,* Baltimore, MD	Christopher Meenan	Medical Software Applications-Radiology Data Management
• Tokai Pharmaceuticals, Boston, MA	Angela Brodie, PhD	CYP17 Inhibitor VN/124-1 Inhibits Growth of Androgen Independent Prostate Cancer Cells
• Wellcome Trust/Bharat Biotech, UK, India	Myron Levine, MD, DTPH	Paratyphoid and Non-Typhoidal Salmonella Vaccine Development

* UMB Start-Ups

FIGURE 15

SPONSORED PROGRAMS DIRECT EXPENDITURES PER Principal Investigator



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NEW Advanced Research Facility

One of the byproducts of our success is that we're out of research space. After being awarded funding by the State legislature and acquiring the matching funds needed to meet the terms of that funding, we have now hired a company to begin architectural drawings for our Health Sciences Facility III (HSF III), and we're hopeful that next year, with additional funding support from the legislature, we will finally see that beautiful building erected.

> Artist rendering of new SOM research building





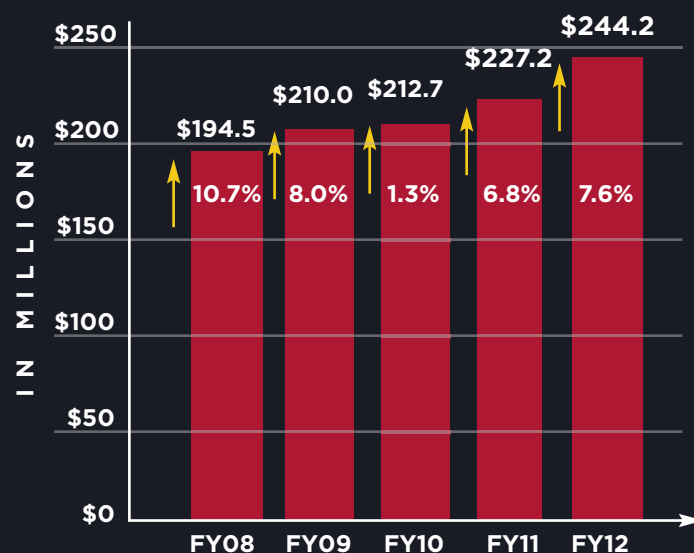
CLINICAL CARE

Amir Dorafshar, ChB, MB; Michael Christy, MD; Eduardo Rodriguez, MD, DDS; Branko Bojovic, MD; and Daniel Borsuck, MD

1,169,079
PATIENTS

FIGURE 16

TOTAL FY2008-2012 **Clinical Revenue**



CLINICAL CARE



Our clinical vision starts with our strong clinical partnership with the University of Maryland Medical System (UMMS). By utilizing the high-quality talent available on both sides, together we are able to provide the best possible patient-centered care across the state.

Additionally, admissions and observations increased by 4.2 percent, and surgeries increased 5.6 percent. This becomes very important, because it allows us to keep up our clinical revenue base. In these constrained fiscal times, we depend on our financial revenue from the clinical side to not only support the financial enterprise but also, in part, to support our research and educational components. So I'm very pleased to report that this past year we had extraordinarily strong growth, with a 7.6 percent increase in revenue in the clinical enterprise, generating \$244.2 million in total clinical revenue in FY12 **FIGURE 16**. We have experienced a 26 percent growth rate over the last five years, of which the leadership and the clinical faculty can be very proud.

Our faculty members deliver care through Faculty Physicians, Inc. (formerly UPI). Our faculty practice, which generates clinical dollars

to support school salaries and operations, continued to be successful despite the ongoing challenge of reduced reimbursements. **Total patient volume, including inpatient and outpatient visits, increased 3.3 percent, while admissions to the University of Maryland Medical Center increased 4.2 percent to 41,260.** In addition, we had very respectable improvements in two key indicators of practice plan performance **FIGURE 17**. The number of days in accounts receivable was reduced an incredible 16.7 percent, and the number of accounts unpaid for longer than 90 days is down to 20 percent **FIGURE 18**. This now places us as a practice plan in the top 10 percent of the country.

Like our research space, our clinical space is also undergoing transformation. Although we cannot make too many changes to the exterior of the building at 419 Redwood Street because of its historical status, the outside has been aesthetically enhanced as much as possible. The inside will be undergoing a much more extensive transformation, with new carpet, new air conditioning, brighter hallways and new furniture, creating a much nicer atmosphere for our patients.

FIGURE 17
PATIENT CARE **Statistics**

Practice Plan Performance	2011	2012	Change
Total Patient Volumes (Includes office and inpatient/outpatient visits)	1,131,405	1,169,079	↑ 3.3%
Admissions (UMMC only; includes newborns and trauma)	39,585	41,260	↑ 4.2%
Inpatient Surgeries (UMMC only; includes trauma)	14,896	15,729	↑ 5.6%

FIGURE 18
KEY INDICATORS FOR **Billing & Collections**

	FY11	FY12	Change
Days in Accounts Receivable	48	40	-16.7%
Accounts Receivable > 90 days	20.3%	20.0%	-0.3%
Initial Denial Rate	6.2%	6.3%	0.1%

Excellent Practice Plan Performance



New Maryland Proton Treatment Center

Bigger changes are coming across campus, where we are currently building a new proton treatment center, the first of its kind in the Baltimore/Washington area.

The Maryland Proton Center, which will be located next to the BioPark, will open in 2014. We had its groundbreaking ceremony in April 2012. We had many dignitaries in attendance, including leadership from this campus, from the University of Maryland Medical System, the mayor, the governor and our corporate partner, Advanced Particle Therapy, with whom we are collaborating in making this \$200 million project go forward.

We are very fortunate to have recruited a luminary in the field of radiation oncology, Dr. Minesh Mehta, who is recognized as a leader in developing clinical trials and moving new radiation technologies forward.



Dr. Minesh Mehta

> Artist rendering of new Proton Treatment Center



Clinical Care HIGHLIGHT

SCHOOL OF MEDICINE FACULTY SURGEONS COMPLETED
GROUNDBREAKING FIRST FULL-FACE TRANSPLANT



Our faculty earned national attention when they **completed the most extensive full-face transplant completed to date**. The 36-hour operation occurred on March 19-20, 2012 at the R Adams Cowley Shock Trauma Center at the University of Maryland Medical Center and involved a multi-disciplinary team of faculty physicians from the University of Maryland School of Medicine and a team of over 150 nurses and professional staff.

The face transplant, formally called a vascularized composite allograft (VCA), **was part of a 72-hour marathon of transplant activity at one of the busiest transplant centers in the world**. The family of one anonymous donor generously donated his face and also saved five other lives through the heroic gift of organ donation. **Four of these transplants took place over the course of two days at the University of Maryland Medical Center**.

The face transplant team was led by **Eduardo D. Rodriguez, MD, DDS**, associate professor in the Department of Surgery at the University of

Maryland School of Medicine and chief of plastic, reconstructive and maxillofacial surgery at Shock Trauma. Dr. Rodriguez is Board-certified in plastic and reconstructive surgery as well as in oral and maxillofacial surgery. **This marks the first time in the world that a full-face transplant was performed by a team of plastic and reconstructive surgeons with specialized training and expertise in craniofacial surgery and reconstructive microsurgery.**

The face transplant recipient, 37-year-old Richard Lee Norris of Hillsville, VA, was injured in a 1997 gun accident. Since that time, he has undergone multiple life-saving and reconstructive surgeries. Due to the accident, Mr. Norris lost his lips and nose and had limited movement of his mouth. Mr. Norris first came to the University of Maryland Medical Center in 2005 to discuss reconstructive options with Dr. Rodriguez.

Grant funding from the Office of Naval Research (ONR) in the Department of Defense to **Stephen**

Bartlett, MD, the Peter Angelos Distinguished Professor and Chair in the Department of Surgery, has **supported the University of Maryland's basic and clinical research program in vascularized composite transplantation, leading up to and supporting this groundbreaking face transplant.**

The ONR funds medical research to support military operational medicine and clinical care of returning veterans. The scientific team that included Drs. Bartlett and Rodriguez, as well as **Rolf Barth, MD**, focused on the anatomic and immunologic challenges to craniofacial transplantation.

The future of medicine depends on rapid translation of research and creating high-performing teams. This face transplant is a perfect example of the life-changing options we can provide for our patients when we combine the expertise of our research and clinical teams to pursue procedures that would have seemed unfathomable not so long ago.

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Robert Chrencik and Dean Reece

PARTNERSHIP & RECOGNITION

The Power of Partnership and Institutional Alignment

PARTNERSHIP AND RECOGNITION



I want to bring special attention to the positive outcomes of our joint vision for healthcare between the Medical School and the Medical System. I am pleased to congratulate our clinical faculty and the Medical Center for earning a number of important accolades. Credit goes not only to our faculty, but to the leadership and staff of the Medical Center for their hard work and dedication to excellence in patient care.

- Nine of our specialties were ranked in the *U.S. News and World Report's* **Best Hospital rankings**. There are thousands of hospitals across the United States, but they rank only 50, and we made that top 50 list in nine different areas.
- The Leap Frog Group — which evaluates hospitals for patient safety and quality — chose the Medical Center as one of its **top hospitals for the sixth year in a row**. Last year, the Leap Frog Group named University of Maryland Medical Center (UMMC) a Hospital of the Decade, one of only two in the country.

- Baker Hospital Review named **Jeffrey Rivest, president and CEO of the University of Maryland Medical Center** to its list of the **Top 100 Leaders** of Great Hospitals and put UMMC on its list of Top 100 Hospitals to Know.

“We like to use the word alignment to describe our relationship, and I’m very proud that we have stayed in alignment over the years as our organizations have grown tremendously in size and complexity,” says Robert Chrencik, president and CEO of the University of Maryland Medical System. “But the kind of growth that we have collaboratively experienced can only happen in a very productive and supportive environment. Fortunately, we have that environment in our joint medical enterprise.”

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Jeffrey Rivest

COMMUNITY SERVICE



Community service is a priority for the School of Medicine. An educated consumer is the best consumer, so we often reach out to our West Baltimore neighbors, not only to teach them ways to stay healthy, but to also become a trusted part of their lives. Each year, nearly 300 of them come to campus for Mini-Med School, a five-week program where faculty give lectures — in layman's terms — on medical topics that are of importance to this population. Thousands have attended this program over the last 12 years, and variations of it have successfully been held on the Eastern Shore, in Western Maryland, and in various high schools around Baltimore **FIGURE 19.**

It's never too soon to learn good health, as one of our most successful Mini Med School offshoots has proven. Five years ago, we started a summer Mini-Med School program for campers in West Baltimore's Franklin Square Boys & Girls Club, ranging in age from 6 to 16. Our goal is to instill not only healthy habits in this vulnerable popula-

tion, but also to give them a love of science that we hope might one day bring them to our medical school as students. The enthusiastic response from these students has been amazing, and it would not be surprising to one day see some of them graduating from here and eventually returning to their old neighborhoods, working as doctors and caring for others who are growing up with the same challenges they faced **FIGURE 20.**

Our doctors-in-training know how important it is to give back. Every year, they coordinate Project Feast, a Thanksgiving dinner for the less fortunate in West Baltimore. Volunteers come from all the schools on campus, but it is our students who take the lead in organizing this event. Elizabeth Coe, Andrew Dubina and Grace Kim, now third-year students, oversaw the 2011 Feast **FIGURE 21.**

FIGURE 19

SOM IS A GOOD NEIGHBOR **Mini-Med Summary**

Maryland Region	2007	2008	2009	2010	2011	2012
Baltimore	200	300	225	220	243	280
Baltimore-Ele/Middle	35	40	75	55	80	58
Baltimore-High School	85	100	75	75	230	180
Eastern Shore	105	120	80	80	62	
Western Maryland	140	154	132		80	192
Bioethics (statewide)				510	442	
TOTALS	565	714	587	940	1,137	710

TOTAL NUMBER OF PARTICIPANTS BETWEEN 2001-2012 = 6,559

6,559

COMMUNITY

FIGURE 20



FIGURE 21

MINI-MED Students



FIGURE 22
REVENUE IN **Millions**

	FY11	FY12	Change
Grants & Contracts	\$486.3	\$429.9*	11.6% ↓
Tuition & Fees	\$23.6	\$24.8	5.1% ↑
Medical Service Plan (UPI)	\$227.2	\$244.2	7.5% ↑
Affiliated Hospitals	\$140.6	\$143.0	1.7% ↑
Gifts & Others (Expended)	\$11.3	\$12.4	9.7% ↑
State Appropriations	\$29.6	\$30.9	4.4% ↑

**Reflects
phase out
of PEPFAR
and stimulus
funds*

FINANCE & PHILANTHROPY



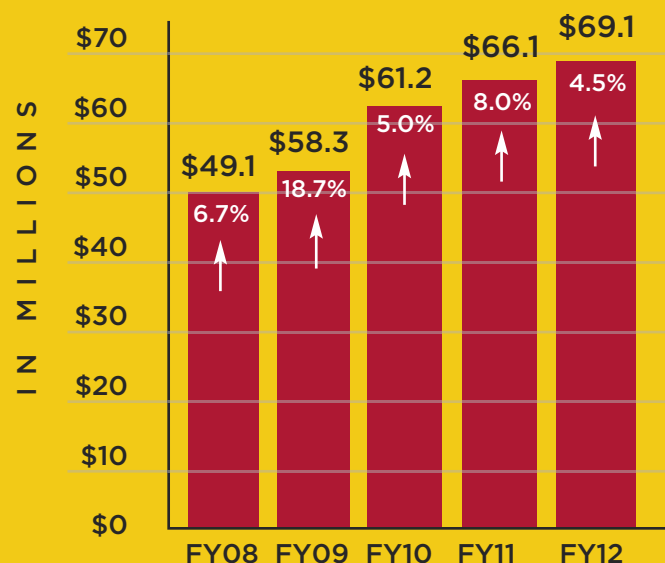
FINANCE & PHILANTHROPY

Our total budget is more than \$900 million, but we have an economic impact of over \$2 billion in the state of Maryland alone. That means for every dollar the state spends on us, they get back two. Still, only 3.5 percent of our budget comes from the state. We value that very much; we certainly don't want to lose that. However, it doesn't come anywhere close to the \$900 million we need to operate, so we have to find other means of support. Tuition and fees only pay 2.8 percent of these costs. As for the rest, about 49 percent comes from competitively securing grants from the NIH, the Department of Defense, Homeland Security, and other federal sources; and about 40 percent comes from our clinical care revenue **FIGURE 22**.

The additional 1.4 percent comes from philanthropy. These private gifts are very important, because we need those discretionary funds to make up gaps in funding. Our philanthropy dollars are typically a combination of private individual gifts and foundation grants. I am very pleased to report that in this past year, we had a 4.5 percent increase in philanthropy, with almost \$69 million in gifts, 50 percent from individuals and 50 percent from foundations **FIGURE 23**.

FIGURE 23

Private Support BY YEAR



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FINANCE & PHILANTHROPY

When we look at how we performed in the last five years, **there has been a 41 percent increase in philanthropy over that time.** This is something that we need very badly, and we are very, very pleased that this trend has continued. We're particularly grateful for our top donors, whom you can see listed on this page **FIGURE 24.** These donors set a pace that others can follow. **Their generosity has also resulted in the establishment of two more endowed professorships over the last year.** Stephen Reich, MD, was invested as the first Frederick Henry Prince Distinguished Professor in Neurology. Jian-Ying Wang, MD, PhD, was invested as the first Joseph and Corinne Schwartz Professor in Surgery.

Our annual Fund for Medicine Gala also gave us the opportunity to celebrate the accomplishments of our faculty. This year's gala

was a wonderful occasion, **with nearly 1,000 guests in attendance, including Governor Martin O'Malley and his wife Katie, who was honorary chair.** "As a lifelong Marylander, I am well aware of how fortunate we are to have the University of Maryland School of Medicine in our community," First Lady O'Malley said. "The physicians and scientists that make up this premier institution are breaking boundaries every day. And **they've established the University of Maryland's School of Medicine as a medical powerhouse well beyond the state's borders.**" The gala raised nearly half a million dollars, money that will provide critical funding for both translational research and clinical initiatives at the School of Medicine.

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FIGURE 24
FY2012 SELECTED PHILANTHROPIC Gifts — Thank You

Donor	Gift Amount	Recipient
ANONYMOUS	\$7,500,000	Integrative Medicine
Elizabeth C. Hosick, MD'66	\$5,000,000	Scholarships
Mr. Anthony Gerace	\$1,658,000	MEIMSS and Trauma
Mrs. Corinne C. Schwartz	\$1,500,000	Surgery
United Therapeutics	\$1,435,000	Surgery
Katherine L. and Alston G. Lanham, MD'31	\$970,500	Surgery
Orokawa Foundation	\$550,000	Radiation Oncology, Oncology, Medicine, Otorhinolaryngology
Mr. Irvin S. Naylor	\$515,000	Neurology
TOTAL		\$19,128,500



Dr. Jian-Ying Wang with Richard Schwartz, son of Joseph and Corinne Schwartz: Harry Hochman and Dean Reece.



FIGURE 36

President Jay Perman, MD, with members of the Board of Visitors.

The Knipp family, who so far have had five generations attend the School of Medicine.



GALA

1,000 Guests/\$500,000 Raised

First Lady Katie O'Malley

Faculty HIGHLIGHTS

FACULTY AND LEADERSHIP HIGHLIGHTS OF THE PAST YEAR



Nevins Todd, MD

Associate professor, Department of Medicine, was selected by the graduating medical students to receive the Golden Apple Award (Pre-Clinical).



Angela Brodie, PhD

Professor, Department of Pharmacology, was the 2012 recipient of the Pharmacia-ASPET Award for Experimental Therapeutics, which recognizes outstanding research in pharmacology and experimental therapeutics, particularly research that has had a major impact on the pharmacological treatment of disease.



Mayur Narayan, MD

Assistant professor, Department of Surgery, was selected by the graduating medical students to receive the Golden Apple Award (Clinical) and to address the graduating class at the 2012 convocation ceremony.



Elijah Saunders, MD, clinical professor, Department of Medicine, had an annual award named in his honor by the Baltimore Chapter of the American Heart Association in February 2012. He was also selected by the *Daily Record* as a 2012 Influential Marylander.



Scott Strome, MD

Professor and chair, Department of Otorhinolaryngology — Head & Neck Surgery, was the recipient of the 2011 University of Maryland Entrepreneur of the Year Award. Dr. Strome and David Block, MD, MBA, co-founded biotech start-up Gliknik, Inc. in 2007, to commercialize Dr. Strome's research into potential therapies for patients with cancer and autoimmune and inflammatory diseases.



Thomas Abrams, PhD

Associate professor, Departments of Pharmacology and Anesthesiology, received a 2012 University System of Maryland Regents' Faculty Award for teaching, the highest honor the Board bestows in recognition of outstanding faculty achievement. He was recognized for establishing The Core Curriculum in GPLIS and a "Pro-Seminar" that teaches hypothesis testing and experimental design.



Gary Fiskum, PhD

The M. Jane Matjasko Professor for Research in Anesthesiology in the Department of Anesthesiology, was the recipient of the 2011 University of Maryland Researcher of the Year Award, recognizing his well-funded research pertaining to mitochondrial dysfunction associated with brain injury and optimizing cerebral resuscitation.



Claire Fraser, PhD

Professor, Departments of Medicine and Microbiology & Immunology, and director, Institute for Genome Sciences, was elected to membership in The Institute of Medicine (IOM) of the National Academies. Being named to the IOM is considered one of the highest honors in the fields of health and medicine.



Robert Redfield, MD

Professor, Departments of Medicine and Microbiology & Immunology, and

William Blattner, MD

Professor, Departments of Medicine and Epidemiology & Public Health, were presented with the 2012 University of Maryland Entrepreneur of the Year award, in recognition of their global impact on treating and preventing HIV/AIDS. The two co-founded the Institute for Human Virology with IHV's director, Robert Gallo, MD, in 1997.



Jay Magaziner, PhD, MSHyg

Professor and chair, Department of Epidemiology & Public Health, was winner of a 2012 Gerontological Society Award and was invited to provide the Rehabilitation Awardee Lecture during the 2013 annual meeting.



E. Albert Reece, MD, PhD, MBA
Vice President for Medical Affairs, University of Maryland, and Dean, University of Maryland School of Medicine, was named the 2012 winner of the prestigious Norbert Freinkel Award, presented by the American Diabetes Association (ADA). Part of his award was an invitation to deliver the Freinkel lecture at the ADA's 72nd annual scientific sessions on June 10th in Philadelphia.



Robert Buchanan, MD
Professor, Department of Surgery, was selected as the senior recipient of the American Psychiatric Association/Kempf Fund Award for Research Development in Psychobiological Psychiatry. The award recognizes a senior researcher who has made a significant contribution to research on the causes and treatment of schizophrenia.



Marc Hochberg, MD, MPH
Professor, Department of Medicine, received the prestigious Roger Demers Award from the Laurentian Conference of Rheumatology. The award recognizes contributions to the international community of rheumatology.



Richard Goldberg, PhD
Associate professor, Department of Psychiatry, was the recipient of the 2011 Armin Loeb Award from the U.S. Psychiatric Rehabilitation Association (USPRA). This prestigious award is presented for excellence in psychiatric rehabilitation services research.



Yvette Rooks, MD
Assistant professor, Department of Family & Community Medicine, was awarded the 2012 John M. Dennis Award from the Western Maryland Area Health Education Center (AHEC) in recognition for her leadership in the creation and implementation of community medicine rotations in Western Maryland.



Alicia Lucksted, PhD
Associate professor, Department of Psychiatry, was recipient of the 2011 GLBT Lifetime Achievement Award from the U.S. Psychiatric Rehabilitation Association's (USPRA) Multicultural Committee.



Thomas Scalea, MD, FACS
The Francis X. Kelly Professor of Trauma Surgery and Director of the Program in Trauma was the 2012 recipient of the President's Award from the Baltimore City Medical Society (BCMS). The Society's highest award, it is given in recognition of exemplary service and steadfast commitment to patients, physicians and the larger community in improving the quality of health and well-being of all.



Paul Welling, MD
Professor, Department of Physiology, received the Arthur Guyton Distinguished Lecturer Award from the Association of Chairs of Departments of Physiology.



Rose Chasm, MD
Assistant professor, Department of Emergency Medicine, won the New Speakers Rising Star Award during a competition at the Scientific Assembly of the American College of Emergency Physicians for her presentation "Just Too Sweet for Me: Pediatric Diabetic Ketoacidosis."



Rolf Barth, MD
Associate professor, Department of Surgery, was awarded the prestigious Vanguard Prize by the American Society of Transplant Surgeons. This award honors junior members for their publication efforts in basic and clinical research.



Jay Menaker, MD
Assistant professor, Departments of Surgery and Emergency Medicine, received the Peter C. Canizaro Award from the American Association for the Surgery of Trauma (AAST) for his paper "Evaluation of Multidetector Computed Tomography for Penetrating Neck Injury: A Prospective Multicenter Study."

Faculty HIGHLIGHTS continued



Claudia Baquet, MD, MPH

Professor, Department of Medicine, and associate dean of Policy and Planning was appointed a member of the Societal and Ethical Issues in Research study section with the Center for Scientific Review of the National Institutes of Health.



Philip Mackowiak, MD

Professor and vice chair, Department of Medicine, was appointed president-elect of the American Clinical and Climatological Association (ACCA). ACCA was organized in 1884 by physicians and scientists who set about to improve medical education, research and practice in this country.



The Charles "McC." Mathias, Jr., National Study Center for Trauma and EMS, which began as the research arm of the R Adams Cowley Shock Trauma Center and is now a part of the Shock, Trauma and Anesthesiology Research (STAR) Center, celebrated its 25th anniversary in November 2011.

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Charlene Hafer-Macko, MD

Associate professor, Department of Neurology, was elected to the executive board of the Myasthenia Gravis Foundation of America and was the keynote speaker at its national conference.



Geoffrey Rosenthal, MD, PhD

Professor, Department of Pediatrics, chaired the Pediatric Advisory Committee of the FDA, which met to discuss Pediatric-focused safety reviews, as mandated by the Best Pharmaceuticals for Children Act and the Pediatric Research Equity Act.



MedSchool Maryland Productions and producers **Susan Hadary** and **John Anglim** won a regional EMMY for their documentary *Departing Rosewood*, which profiled Steven Corderman's journey from Rosewood Center, a facility for individuals with developmental delays, into mainstream society.



Robert Gallo, MD

Professor, Departments of Medicine and Microbiology & Immunology and director of the Institute of Human Virology, received the 2012 Mino Damato Award at a ceremony held in Rome, Italy. He also received his 30th honorary doctorate degree and delivered the keynote address for the University of Connecticut's Graduate School commencement ceremony.



The Center for Integrative Medicine hosted a Health and Wellness Conference in April 2012, as the culmination of their year-long 20th anniversary celebration. The keynote speaker at the conference was best-selling author and integrative medicine pioneer **Andrew Weil, MD**.



Yvette Rooks, MD

IN MEMORIAM

Sadly, a few School of Medicine family members left us this year.



Timothy Gilbert, MD, assistant professor, Department of Anesthesiology, died on February 9, 2012 at the age of 51. He first came to the University of Maryland in 1992 for an adult echocardiography preceptorship and would later also serve as associate vice chair for research in the department, as well as acting director of the division of Cardiothoracic Anesthesiology. Dr. Gilbert is survived by his wife and four daughters.



Ronald Gutberlet, MD, Department of Pediatrics, died on February 29, 2012 at the age of 78. A 1956 graduate of the University of Maryland School of Medicine, he joined the SOM faculty in 1967 and served as director of the division of Neonatology for 14 years. He also served as Interim Chair of Pediatrics from 1997-1999 and was Chairman of the Department of Pediatrics at Mercy Medical Center from 1984 until his retirement in 2011. Dr. Gutberlet is survived by his wife Shirley, three sons and three grandchildren.



Duane Sewell, MD, associate professor, Department of Otorhinolaryngology-Head and Neck Surgery, died on November 27, 2011. He was only 44. Dr. Sewell joined the SOM faculty in 2007 and was also a member of the MD/PhD program's Advisory Committee. He is survived by his wife and twin sons.

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MEDIA



MEDIA COVERAGE

The School of Medicine has had an impressive number of extraordinary things happen this year, which led to **extensive media coverage**. For example, we had 100 more stories per month in the press than last year; the UMMC website had 50 million visitors, a 22 percent increase over last year; and **our online videos were viewed over 1 million times**.

We credit this success not only to the quality and caliber of our faculty and what is happening here, but also the fact that we have established new and exciting ways to work more closely with the media. We now have a TV studio, a collaborative initiative between UMMC and the School of Medicine, where we are able to do satellite up-links to any place in the world, so our faculty can be interviewed by CNN, ABC or any other major news organization at any time to present their expert opinions wherever and whenever they are requested. I must acknowledge **Carolyn Frenkil, one of our Board members, whose generous contribution made this TV studio possible**.

The ready cam broadcast-quality camera has a direct internet connection to Video Link headquarters in Boston, which handles all aspects of satellite transmissions to the networks. ABC News was easily able to speak with Steven Scharf, MD, PhD, a professor in the Department of Medicine and Director of the Sleep Disorder Center, when they needed an expert to discuss a

study linking sleeping pills to a higher risk of death. When University of Maryland faculty physicians completed the most successful face transplant to date, news organizations from around the world used the ready cam to interview members of the transplant team.

The face transplant was, as you can imagine, our number one story of the year. The 36-hour operation included replacing the patient's jaws, teeth and tongue and involved a multidisciplinary team of more than 150 doctors, nurses and other professional staff. It was the culmination of ten years of basic science research that resulted in the best combination of immunotherapy and surgical therapy to make the face transplant successful. The story generated more than 1,000 news articles and dominated headlines around the world for several days after the press briefing.



Curt Civin, MD, being interviewed in our new TV studio.

Expanding News Coverage from Maryland to the World

- **Average of 100 more stories per month than FY2011**
 - **50 million visits to umm.edu in FY2012, a 22 percent increase over the previous year**
 - **Our online videos were viewed over 1 million times**
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C O N C L U S I O N

So where do we go from here? We certainly want to advance our major development campaign, *Transforming Medicine Beyond Imagination*, with a goal of raising half a billion dollars. Fortunately, we are half way there! This money would go toward increasing scholarship support for our students, who are graduating with more overwhelming debt each and every year. It would also expand our number of endowed professorships, helping us attract more top talent to our faculty ranks. And it would help us meet future programmatic and other critical needs, as well.

SELECTED 2013 PRIORITIES:

- Increase financial margins and reserves in all academic units
- Advance our ambitious five-year strategic plan, *Taking a Quantum Leap Forward*
- Work with UMMS to integrate, collaborate and coordinate clinical services across the 12-hospital system and satellite practices
- Build and/or expand Centers of Research and Clinical Excellence
- Advance research education at all levels, and expand medical education programs to meet current and regional needs
- Expand the UMSOM research engine into the I-270 Biotechnology corridor
- Explore new global opportunities

I have the utmost confidence that together we will faithfully pursue our original goals and develop new pathways to guarantee our “safe arrival.” We’ll create new approaches that anticipate shifts in political and economic factors. **We’ll call upon our many collective strengths, but most importantly we will position our school to forge ahead and define new pathways in these challenging times.**

In the relentless pursuit of excellence, I am
Sincerely,



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







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