

Purposeful Actions,
Promising Results:
**Relentlessly
ADVANCING**



UNIVERSITY *of* MARYLAND
SCHOOL OF MEDICINE

STATE *of the* SCHOOL ADDRESS

2013



INTRODUCTION

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 (MS, MPH, PhD), Physical Therapy and Rehabilitation Science, and Medical and Research Technology students. We recruit and develop faculty to serve as exemplary role models for our students.



ONLINE VIDEO

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

It is my great pleasure to present to you my 2013 State of the School Address, entitled “Purposeful Action, Promising Results, Relentlessly Advancing.”

Here I will share with you only a fraction of the collective and individual achievements that symbolize the progress we have made, and the tremendous momentum we have gained over the last year.

Sound strategies have been put in place to advance our shared goals of offering a top-tier education in both medicine and allied health, of conducting pioneering biomedical research, and delivering state-of-the-art clinical care.

While our progress has been considerable, you will see that we faced strong headwinds and challenges, some of which were anticipated, while others were harsh and unexpected.

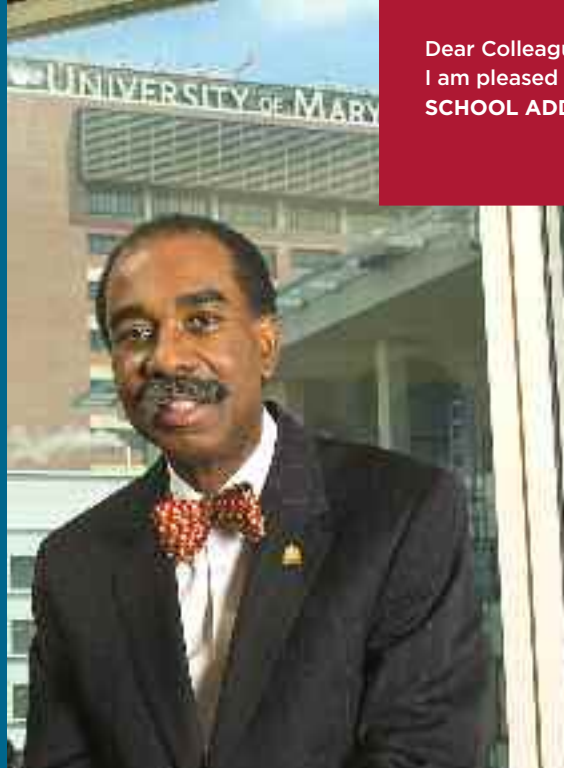
Troubling economic trends, at both the state and federal levels, threatened to derail our strategic imperatives. The ominous fiscal cliff and — ultimately — sequestration, were chief among the most challenging circumstances we encountered.

Of a predicted \$3.6 billion reduction in funding for federal research agencies in 2013, the single largest cut, by far, was nearly \$2 billion to the NIH budget from which we, and many other medical schools, obtain a significant portion of our research dollars. This translates into 1,300 fewer funded grants. There were also reductions to existing grants, which ranged from three to ten percent.

Purposeful **ACTIONS**, Promising **RESULTS**:
Relentlessly ADVANCING

CONTENTS

2	Workforce
4	Education
8	Research
18	Clinical Care
21	Partnership
22	Community Service
24	Finance & Philanthropy
28	Leadership and Faculty Highlights
32	In Memoriam
34	Media Coverage
36	A Shared Vision



Dear Colleagues:

I am pleased to provide you with a copy of my **STATE OF THE SCHOOL ADDRESS**. Some Highlights:

- Broke ground on new, \$305 million research building
- Secured grants and contracts of almost \$400 million
- “Topping out” of new \$200 million Proton Treatment Center
- Launched “Shared Vision 2020” for UM Medicine, including program to “Accelerate Innovation and Discovery in Medicine” (ACCEL-Med)
- Ranked 7th among public medical schools and 20th among all medical schools by AAMC Profile

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

E. Albert Reece, MD, PhD, MBA



To make matters worse, Maryland’s Health Services Cost Review Commission voted against increased hospital rates, forcing hospitals to absorb the two percent cut in Medicare reimbursement caused by sequestration. Job losses in certain areas of the health care industry ensued, which overall resulted in a very challenging environment.

We nevertheless embraced the charge of the great American author Henry David Thoreau who said, “*Go with confidence in the direction of your highest aspirations.*”

Against this tide of uncertainty, the School of Medicine persisted and advanced relentlessly. For example:

■ With support from the Maryland General Assembly, we **broke ground on our new, \$305 million, 430,000 square foot research building in September 2013**. This will serve as a magnet for attracting world-class researchers, and will further strengthen the School of Medicine’s biomedical research infrastructure.

■ We celebrated the **topping out of the \$200 million Maryland Proton Treatment Center**, one of only 12 centers of its kind in the nation. This center will bring to the region the world’s most advanced technology in radiation treatment for cancer.

■ We provided leadership for the establishment of the **state-wide Health Enterprise Zones in Maryland**, supported with \$16 million of State appropriations.

These funds will be used to address the growing health disparities across the State of Maryland.

Throughout the past year, we refused to be slowed down by outside forces that threatened to undermine our progress. **We took bold, purposeful and strategic actions. We were nimble and wisely opportunistic, pursuing the most promising opportunities while taking some calculated risks.** We advanced relentlessly, always with a goal toward maintaining our strong, competitive advantage.

This approach is most evident in the protracted — but ultimately successful — efforts to secure funding for the new SOM research building, to be known as Health Science Facility III (HSF III).

In the end, we learned that what underpins our progress is the basic tenet that we move forward together. As the famous saying goes, “*What lies behind us, and what lies before us, are tiny matters compared to what lies within us.*” **Within the School of Medicine lies tenacity, dedication, a pioneering spirit and strength.** These are the attributes that allow us to face a tide of uncertainty, to advance relentlessly and with confidence.

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

7,052

WORKFORCE



The School of Medicine's total workforce is 7,052 persons, and includes more than 2,900 full-time, part-time and adjunct faculty and nearly 3,000 staff members (Figure 1). Of our 1,370 full-time faculty members, 38.3 percent are women and eight percent are under-represented minorities (Figure 2). Our retention rate is 91.4 percent, reflecting our continued commitment to providing a positive and productive work environment. Our workforce is also comprised of 574 clinical and research fellows and more than 600 residents.

FIGURE 1

TOTAL **Workforce**

	2012	2013	
Full-Time Faculty	1,341	1,370	} 2,905
Part-Time Faculty	293	299	
Adjunct Faculty	1,229	1,236	
Clinical Fellows*	214	227	} 574
Research Fellows	343	347	
Residents*	606	637	
Staff (administrative, research and clinical – including University of Maryland Faculty Physicians, Inc.)*	3,057	2,936	
TOTAL INDIVIDUALS	7,083	7,052	

*University of Maryland Medical Center pays salaries of most

FIGURE 2

BREAKDOWN OF **Full-Time Faculty**

	FY2012	FY2013
TOTAL FULL-TIME FACULTY	1,341	1,370
Women	505 (37.7%)	525 (38.3%)
Under-represented Minorities	100 (7.5%)	110 (8.0%)
~91.42% RETENTION RATE OF FULL-TIME FACULTY		



EDUCATION

Of the more than 48,000 applicants attempting to find spots in U.S. medical schools last year, more than 4,900 applied to the University of Maryland School of Medicine (Figure 3). One hundred and sixty-three, ranging in age from 21 to 32, were accepted into this year's entering class. Seventy-three percent of the students are Maryland residents. Eleven percent are underrepresented minorities. And 63 percent are female — the first time the percentage of female students has been over 60 percent. The Class of 2017 came from 73 different colleges and universities, and they had an overall grade point average of 3.76 and an average MCAT score of 32, both well above the national average (Figure 4).

Starting with the Class of 2017, the School of Medicine is now introducing to all students a new course, called Foundations in Research and Critical Thinking. This course aims to strengthen the curriculum's focus on research and critical thinking by requiring each medical student to participate in a 10-lecture and small group program, and create and execute a scholarly scientific research project. We want to teach for the future, and for the next generation, when we believe the future of medicine will be based less on the vast amount of knowledge that one accumulates and more on excellent analytic and critical thinking. *"This allows us to work with all of the students to try to enhance skill sets in critical thinking and intellectual acuity for the entire class,"* says George Fantry, MD, Assistant Dean for Student Research and Education and Associate Professor, Department of Medicine.

"It's a great opportunity for the students to develop an advanced skill set in a new area that I think will serve them well regardless of what they choose to do in the future."

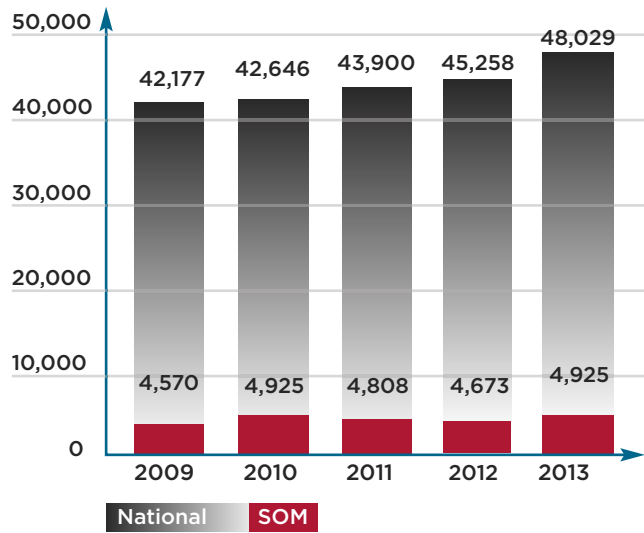
This initiative garnered national attention, with *The Chronicle for Higher Education* and *U.S. News and World Report* both citing our program in feature stories.

While our medical students comprise nearly half of the total student enrollment of 1,344, our student body also includes Allied Health and Physical Therapy students, as well as graduate students and students pursuing combined degrees (Figure 5). **We currently have ten joint degree programs:** three doctorate programs — MD/PhD; MD/DDS; and a DPT/PhD program within the Department of Physical Therapy & Rehabilitation Sciences (PTRS). In addition there are seven MD/Masters degree programs.

The rate of student diversity within the different areas ranges from eight percent to 33 percent (Figure 6). The most diverse are the Department of Medical & Research Technology and PTRS. Incredibly, PTRS increased the percentage of underrepresented students in its first-year class from 12 percent to an amazing 33 percent in one year! We congratulate them on all of the hard work they put into recruiting such a diverse class. Diversity is essential to the success of our medical school, as it further enriches the great learning environment we provide here for students of all backgrounds.

FIGURE 3

U.S. MEDICAL SCHOOL **Applications**



4,925
SOM APPLICANTS

FIGURE 4

2012 FIRST-YEAR STUDENT **Statistics**

- 4,925 total applications for class of 160 students
 - 73 colleges/universities are represented
 - Ages range from 21 to 32 years
 - 73% are Maryland residents; 27% are non-residents
 - 11% are underrepresented in medicine
 - 63% are female; 37% are male
 - Overall average GPA is 3.76
 - Average MCAT score is 32
- } Above National Average

FIGURE 5

TOTAL STUDENT **Enrollment**

Medical, Graduate, Allied Health and Public Health

STUDENTS	2012	2013
Medical (MD)	642	647
MD/PhD	36	39
Graduate (MS/PhD)	340	357
Public Health (MPH)	52	50
Physical Therapy (DPT/PhD)	185	180
Genetic Counseling (MS)	13	12
Medical and Research Tech (BS/MS)	70	59
TOTAL	1,338	1,344

FIGURE 6

STUDENT **Diversity**

*Percent of Minorities in the 2013 Programs**

Medical (MD)	12%
MD/PhD	15%
Graduate (MS/PhD)	15%
Genetic Counseling	10%
Public Health	8%
Physical Therapy	33%
Medical & Res Tech	29%

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





TOTAL GRADUATES 309

We could not be more proud of our graduates. In May 2013, 309 students received their degrees, including 157 newly minted physicians, eight of whom had dual degrees (MD/PhD or MD/MPH).

The 2013 medical school convocation speaker has dual degrees himself: **Harvey Fineberg, MD, PhD**, President of the Institute of Medicine, who has devoted most of his academic career to the fields of health policy and medical decision making. In our other programs, 57 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 24 Medical and Research Technology graduates; and 13 Masters of Public Health graduates (Figure 7).

On Match Day, 26 percent of this year's MD graduates ended up securing residency spots in Maryland. Match day is when fourth-year medical students around the country learn the programs into which they have been accepted. This was the largest Match in the history of The National Resident Matching Program (NRMP), making the quest for any residency more competitive than ever. However, as our Alumni Practice map shows, even those alumni who do residencies elsewhere often return to Maryland to practice once their training is completed (Figure 8).

FIGURE 7

TOTAL Graduates

Programs	2012	2013
MD	147	157
MD/PhD	3	1
MD/DDS	2	0
MD/MPH	0	7
Physical Therapy & Rehabilitation Science	44	57
Genetic Counseling	6	6
Medical & Research Technology	15	24
Masters in Public Health	8	13
MS Graduates	24	25
PhD Graduates	44	16
PhD/MS	0	1
DDS/MPH	0	1
DDS/PhD	0	1
Total Graduates	293	309

Students in our Graduate Program in Life Sciences (GPILS) had

174

PUBLICATIONS last year, 67 as first author.

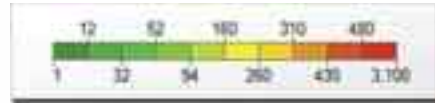
Among the current 296 PhD students, 59 percent are female and 13 percent are underrepresented minorities. Eighty-eight percent of them are training-grant eligible. Among the 46 MS students, 63 percent are female and 19 percent are underrepresented minorities. Eighty-five percent are training-grant eligible.

FIGURE 8

WHERE ARE OUR Alumni Practicing?



With 8,000 living alumni, the School of Medicine has graduates practicing across the U.S. — particularly on the East and West coasts.



Even those who do not practice in Maryland often return here to attend our annual alumni reunions. **This year, more than 800 of our 8,000 living alumni came back to campus to catch up at the 138th annual Medical Alumni Association reunion weekend in May,** which featured a number of special activities, including the School of Medicine Gala and 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 **Stonewall Jackson,** who was shot by friendly fire ten days before his death, most likely died of pneumonia, not infection or other complications of his wounds.



During reunion weekend, **the 2013 Alumni Leadership Award was presented to Louis Irving Taylor, MD, Class of 1943. The 2013 MAA Honor Award and Gold Key were presented to Paul Offit, MD, Class of 1977, by Nelson Goldberg, Class of 1973,** who is President of the Medical Alumni Association (MAA), as well as a Professor in the Department of Surgery. Ronald Taylor, MD, Class of 1973, and Richard Taylor, MD, Class of 1975, who have created the Taylor Endowment for the MAA Presidency, were honored by many past MAA presidents at a ceremony during the weekend, as well (Figure 9).

FIGURE 9

2013 MEDICAL ALUMNI ASSOCIATION Reunion



Paul Offit, MD '77 (left), receives the alumni Honor Award and Gold Key from **Nelson Goldberg, MD, '73,** President of the Medical Alumni Association



Dean Reece presents the Alumni Leadership Award to **Irving Taylor, MD '43**

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

OUR GOALS:

- To increase the pace and scope of innovation and discovery
- Create and/or expand research magnet programs and funding
- Increase emphasis on interdisciplinary and translational science
- Increase emphasis on collaboration and multidisciplinary 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



RESEARCH

Australia	Chile	Pakistan	Germany
Brazil	China	Mali	Jamaica
Belgium	Guyana	Kenya	Caribbean
	Haiti	Mozambique	Nations
	Sweden	Tanzania	Libya
	Vietnam	Egypt	United
	India	Gambia	Kingdom
	Bangladesh	Nigeria	Austria
		Uganda	Ireland
		Malawi	Norway
		Zambia	Sweden
		Rwanda	Russia
			Thailand

FIGURE 10
RESEARCH & SERVICE IN **34 Countries**



Our vision continues to be increasing the impact of our research and discovery on human health using a variety of approaches. These research programs are focused heavily on areas causing great disability, morbidity and mortality. Our research is not just in Baltimore or Maryland, it is international. **We have research programs in 34 countries worldwide** at the present time (Figure 10), and about \$90 million of our research grants are dedicated to these international programs and projects.

Research on such an international scale requires a great deal of funding. So we were very challenged by the federal cuts we experienced. We and several other medical schools decided to do something about it. **We staged a rally for medical research funding on the plaza in front of the hospital, where we promoted a three point message:**

- 1) **Research is imperative to patient care and patient health;**
- 2) **Research is important for the economy; and**
- 3) **Research is important for growing and developing the next generation of scientists and other leaders.**

We want to ensure that our young researchers are properly nurtured and properly supported, and thus we have been passionate about educating our legislators about the need to support enhanced funding for research and discovery, and research education.

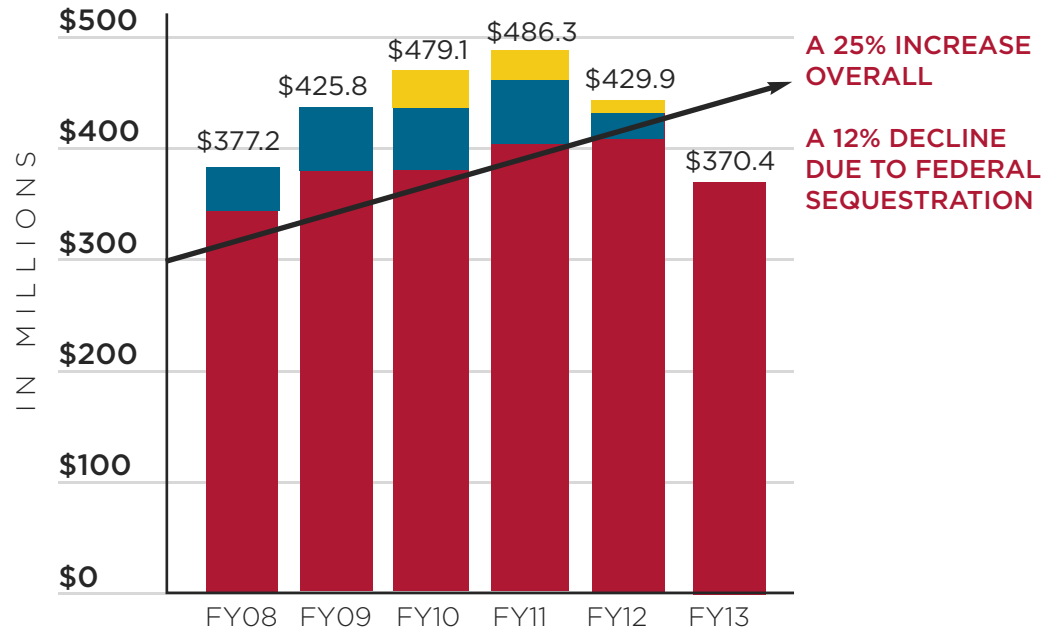
The School of Medicine also hosted a “Research Transforming Medicine” symposium in **November 2012**, inviting legislators and other dignitaries to campus to find out more about our research, and raise awareness of the importance of research funding. In January 2013, our faculty and students traveled to Annapolis to speak with the decision-makers there about the importance of enhanced funding for medical research and education.



FIGURE 11

TOTAL **Grants & Contracts**

- GRANTS & CONTRACTS
- PEPFAR
- ARRA



RESEARCH FUNDING

Funding is a fuel that makes it possible for our research engine to be effective. If you review the Grants & Contracts chart (Figure 11), you'll see that we continued to increase our research and grants contracts, with about a 25 percent increase overall for the entire period. This is very positive.

The blue color on the chart represents PEPFAR grants, the President's Emergency Fund Program for AIDS Research. Due to changes in the federal law, these funds have now been transitioned directly to Africa, rather than going through the university, so even though we did not lose these grants, they no longer appear under the School of Medicine's grants and contracts portfolio. In addition, in 2010 we were fortunate to have secured stimulus grants (ARRA) that were not expected to remain.

Most recently, there was also a new entity that we discovered this year, called sequestration. Sequestration had a major impact on us, and has changed the slope of our curve acutely from the previous year to this year.

Among the top 20 schools of medicine nationwide, there has been a reduction in grants and contracts because of sequestration. However, our 12 percent dip is much less than some schools, which have experienced declines as much as 29 percent (Figure 12).

Through many challenges, our researchers persevered to earn \$370 million in grants and contracts over the past year. These investigators

deserve congratulations for having faced all the fierce headwinds we confronted and still have been so successful in securing grants. An important part of this success was our collaborative research efforts across the UMB campus and the entire University System of Maryland. Our collaborative relationship with College Park has increased significantly, as has our partnerships with the other Schools here on campus. **Overall, we had a 20 percent increase in collaborative growth and collaborative research.** These partnerships have been very encouraging and rewarding, and we hope they will continue in an even more robust way in the future (Figure 13).

FIGURE 12

TOTAL **Decline from Sequestration**

Public	Change	Public/Private	Change
1. Minnesota	-1%	1. Mount Sinai	-2%
2. Wisconsin	-2%	2. Colorado	-9%
3. Oregon	-7%	3. Columbia	-10%
4. Colorado	-9%	4. Stanford	-11%
5. MARYLAND	-12%	5. Case Western	-11%
6. Florida	-12%	6. Penn-Perelman	-11%
7. UCSD	-13%	7. MARYLAND	-12%
8. UCSF	-13%	8. Pittsburgh	-12%
9. U. Washington	-13%	9. UCSD	-13%
10. Massachusetts	-13%	10. UCSF	-13%
11. North Carolina	-13%	11. U. Washington	-13%
12. Virginia	-14%	12. Vanderbilt	-13%
13. UCLA-Geffen	-16%	13. Duke	-13%
14. Indiana	-17%	14. UCLA - Geffen	-16%
15. Ohio State	-19%	15. Yale	-17%
16. Michigan	-20%	16. Johns Hopkins	-19%
17. Utah	-20%	17. Harvard	-20%
18. Arkansas	-21%	18. Wash U.-St. Louis	-20%
19. Alabama	-24%	19. Michigan	-20%
20. Cincinnati	-29%	20. Baylor	-22%

FIGURE 13

UMSOM COLLABORATIVE

RESEARCH EFFORTS ACROSS THE

**University System of Maryland and
all schools at UM, Baltimore**

TOTAL COLLABORATION RESEARCH FUNDING

2012	2013
\$12,555,436	\$15,045,308

**20%
GROWTH**

PAGE

11

NEW RESEARCH PROGRAMS



The Center of Excellence on Problem Gambling

was made possible by the expanded legislation on gaming in the state. We secured a **\$5 million grant** from the Department of Health and Mental Hygiene for this Center, and appointed **Dr. Christopher Welsh** from the Department of Psychiatry to be the medical director. This center will be focusing on training individuals to help those who have addiction issues or are at risk for addiction due to enhanced gambling opportunities in Maryland.

The Center for Health Related Informatics and Bioimaging (CHIB) is one in which we took the expertise and resources of UM College Park and UM Baltimore and brought them together under the “MPowering the State” initiative.

This center has two co-directors — **Dr. Owen White**, who is a professor in the Department of Epidemiology & Public Health and the Associate Head of the Institute for Genome Sciences, will be the co-director on the UM Baltimore campus. The co-director on the UM College Park campus is **Dr. Amitabh Varshney**. He is also Director of Computer Sciences and the Director of Advanced Computer Studies at College Park. **Together we are bringing together the extraordinary resources of both campuses to create great innovation and translation. “This is certainly the perfect time for this center to come into existence,”** says Dr. White. *“We have had a long record already of collaborations between the two campuses, and to formalize this partnership only creates even more opportunities to provide seed funding for different researchers who are out there starting new business opportunities.”*



Research Highlights

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**.

TOP GRANT AWARDEES



1)



2)



3)



4)



5)



6)



7)



8)



9)

Largest NIH Grants

1) **Bartley Griffith, MD**, the Thomas E. and Alice Marie Hales Distinguished Professor in Transplant Surgery, Department of Surgery, received a five-year, **\$4.9 million award** from the National Heart, Lung and Blood Institute (NHLBI) for *“First In-Human Use of an Artificial Lung for Ambulatory Respiratory Support.”*

2) **Stefanie Vogel, PhD**, Professor, Departments of Microbiology & Immunology and Medicine, received a four-year, **\$3.4 million award** from the National Institute of Allergy and Infectious Diseases (NIAID) for *“Eritoran (E5564), a TLR4 Antagonist, As a Novel Therapeutic for Influenza.”*

3) **James Gold, PhD**, Professor, Department of Psychiatry, received a five-year, **\$3.3 million grant** from the National Institute of Mental Health (NIMH) for *“Cognitive Neuroscience of Attention and Working Memory in Schizophrenia,”* and a five-year, **\$3.1 million grant**, also from NIMH, for *“Clinical and Computational Studies of Dopamine Function in Schizophrenia.”*

4) **Eugene Albrecht, PhD**, Professor, Departments of Obstetrics, Gynecology & Reproductive Sciences and Physiology, received a four-year, **\$2.4 million award** from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDKD) for *“Primate Fetal Adrenal Development: Impact on Physiological Processes After Birth.”*

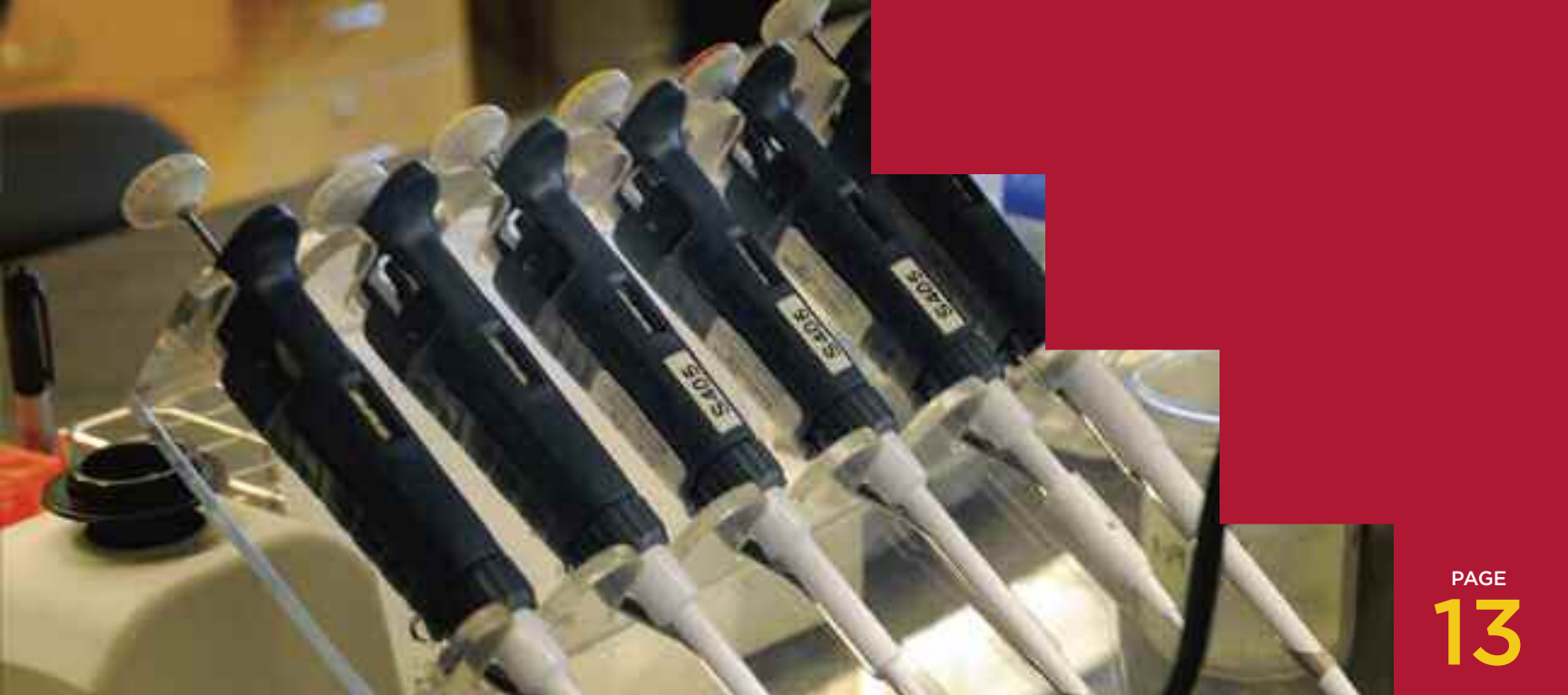
5) **Alan Faden, MD**, the David S. Brown Professor in Trauma, Departments of Anesthesiology, Anatomy & Neurobiology, and Neurosurgery, and Director of the Center for Shock, Trauma and Anesthesiology Research (STAR), received a five-year, **\$2.4 million multi-PI award** from the National Institute of Nursing Research for the *“Center for the Genomics of Pain,”* in partnership with Susan Dorsey, PhD, RN, from the School of Nursing, and Joel Greenspan, PhD, from the School of Dentistry.

6) **Yei-Pei Chang, PhD**, Associate Professor, Departments of Medicine and Epidemiology & Public Health, received a five-year, **\$2.4 million award** from NHLBI for *“Genetic and Functional Analyses of Hypertension Susceptibility Genes.”*

7) **Richard Eckert, PhD**, the John F.B. Weaver Professor and Chair, Department of Biochemistry & Molecular Biology, and Professor, Departments of Dermatology, and Obstetrics, Gynecology & Reproductive Sciences, received a five-year, **\$2.1 million award** from the National Cancer Institute (NCI) for *“Polycomb Proteins and Skin Cancer Prevention.”*

8) **Eileen Barry, PhD**, Professor, Departments of Medicine, Medical & Research Technology, and Microbiology & Immunology, and Center for Vaccine Development, received a three-year, **\$2 million award** from NIAID for *“Advancement of a Defined, Protective, Live Attenuated Tularemia Vaccine.”*

9) **Nicholas Carbonetti, PhD**, Associate Professor, Department of Microbiology & Immunology, received a five-year, **\$1.9 million award** from NIAID for *“Exacerbation of Pertussis Airway Inflammation and Pathology by Pertussis Toxin.”*



10)



11)



12)



13)



14)



15)



16)



17)



18)

10) **Shannon Takala Harrison, PhD**, Assistant Professor, Departments of Medicine and Epidemiology & Public Health, and Center for Vaccine Development, received a four-year \$1.7 million award from NIAID for “*Genome-Wide Studies to Identify Markers of Artemisinin-Resistant Malaria.*”

11) **James Galen, PhD**, Professor, Department of Medicine, and Center for Vaccine Development, received a five-year, \$1.7 million award from NIAID for “*Mucosal Live Vector Vaccine Against Recurrent Clostridium Difficile Infections.*”

12) **Li Zang, PhD**, Associate Professor, Departments of Physiology and Surgery, received a five-year, \$1.7 million award from the National Institute of Neurological Disorders and Stroke (NINDS) for “*Mac-1 Coordinates PDGF-CC Activation by Microglia and Promotes BBB Opening.*”

13) **Stuart Martin, PhD**, Associate Professor, Department of Physiology, received a five-year, \$1.6 million R01 from the National Cancer Institute for “*Targeting Microtubule Stabilization to Reduce Breast Tumor Metastasis.*”

14) **David Kaetzel, PhD**, Professor, Department of Biochemistry & Molecular Biology, received a five-year, \$1.5 million grant from the National Cancer Institute for “*Suppression of Melanoma Initiation and Progression by NM23-H1.*”

Largest Non-NIH Grants

15) **Wilbur Chen, MD, MS**, Assistant Professor, Department of Medicine, and Center for Vaccine Development, received a one-year, \$2.7 million award from PaxVac for “*A Phase II Randomized, Double-Blind, Placebo-Controlled, Efficacy Trial of a Single Dose of Live Oral Cholera Vaccine Candidate, PXVX0200 CVD 103-HgR Strain, In Preventing Cholera Following Challenge.*”

16) **Robert Redfield, MD**, Professor, Departments of Medicine and Microbiology & Immunology and the Institute of Human Virology, received a one-year, \$2.5 million award supplement from the Centers for Disease Control and Prevention for “*Haitian Alliance for Institutional Strengthening.*”

17) **Myron Levine, MD, DTPH**, Director, Center for Vaccine Development; the Simon and Bessie Grollman Distinguished Professor, Department of Medicine; and Professor, Departments of Epidemiology & Public Health, Microbiology & Immunology, and Pediatrics, received a three-year, \$2.5 million award from the Bill and Melinda Gates Foundation for “*Protective Levels of Vaccine-Related Antibodies in Oral (Crevicular) Fluid of Infants, Toddlers and Older Children.*”

18) **James Gammie, MD**, Professor, Department of Surgery, received a five-year, \$2.2 million award from Edwards Lifesciences for “*Prospective, Non-Randomized, Multicenter Evaluation of the Edwards Pericardial Aortic Biorosthesis Model 11000A (Commence Trial).*”



19) **Colin Mackenzie, MB, ChB**, Clinical Professor, Departments of Anesthesiology and Physiology, received a three-year, **\$2.1 million award** from the U.S. Air Force for *“Development of Predictive Triage Indices for Outcome Following Trauma;”* a three-year, **\$2 million award** from the U.S. Army for *“Use of Performance Measure to Evaluate, Document Competence and Deterioration of ASSET Surgical Skills;”* and a two-year, **\$0.8 million award** from the U.S. Air Force for *“Predicting Casualty Blood Product Needs Using Pre-Hospital Vital Signs.”*

20) **Samer El-Kamary, MB, ChB, MPH**, Associate Professor, Departments of Epidemiology & Public Health and Pediatrics, received a one-year, **\$1.6 million award** from RottapharmMadaus for *“Phase III/III Treatment Trial Using Legalon SIL and Ribavirin for Patients with Chronic Hepatitis C Who Never Received Interferon Therapy (HEPASIL).”*

21) **Gary Fiskum, PhD**, the M. Jane Matjasko Professor for Research in Anesthesiology in the Department of Anesthesiology, and a Professor in the Departments of Biochemistry & Molecular Biology and Pharmacology, received a four-year, **\$1.5 million award** from the Department of Defense for *“Underbody Blast Models of Traumatic Brain Injury Caused By Hyperacceleration of Secondary Head Impact.”*

22) **Deus Bazira Mubangizi, MBA, MPH**, Assistant Professor, Department of Medicine, received a one-year, **\$1 million award** from the Center for Clinical Care and Research for a “care and treatment” sub-award under the project *“Engaging Indigenous Organizations to Sustain and Enhance Comprehensive Clinical Services for Preventions.”*

Awardee With Four NIH R01 Grants

23) **Anil Jaiswal, PhD**, Professor, Department of Pharmacology
TOTALING: **\$1.3 million per year**

Awardees With Three NIH R01 Grants

24) **James Gold, PhD**, Professor, Department of Psychiatry
TOTALING: **\$1.6 million per year**

25) **Alan Faden, MD**, the David S. Brown Professor in Trauma, Departments of Anesthesiology, Anatomy & Neurobiology, and Neurosurgery, and Director of the Center for Shock, Trauma and Anesthesiology Research (STAR)
TOTALING: **\$1.2 million per year**

26) **Margaret McCarthy, PhD**, Professor and Chair, Department of Pharmacology, and Professor, Departments of Physiology and Psychiatry
TOTALING: **\$1 million per year**

27) **J. Marc Simard, MD, PhD**, Professor, Departments of Neurosurgery, Pathology, and Physiology
TOTALING: **\$1 million per year**

Young Investigators With First NIH R01 Grant

28) **Christina Cairo, PhD**, Assistant Professor, Department of Medicine, received a four-year, **\$1.4 million award** from NIAID for *“Antigen Exposure in Utero: Impacts on Newborn Immunity and Infectious Diseases.”*

29) **Shannon Takala-Harrison, PhD**, Assistant Professor, Departments of Medicine and Epidemiology & Public Health, and Center for Vaccine Development, received a four-year, **\$1.7 million award** from NIAID for *“Genome-Wide Studies to Identify Markers of Artemisinin-Resistant Malaria.”*

30) **Wei Lu, PhD**, Assistant Professor, Department of Radiation Oncology, received a four-year, **\$1.3 million award** from NCI for *“Quantitative PET/CT Analysis to Improve Evaluation of Tumor Response.”*

31) **Zhiyong Zhao, PhD**, Assistant Professor, Departments of Obstetrics, Gynecology & Reproductive Sciences and Biochemistry & Molecular Biology, received a five-year, **\$1.5 million award** from National Institute of Child Health and Human Development for *“Protein Modifications and Unfolded Protein Response in Diabetic Embryopathy.”*



Now, how do we measure our academic scholarship? There are a number of ways we can, but funding is the most obvious. **Funding is measurable, it is objective, and it is not tainted by a great deal of subjectivity.** If you review the Association for American Medical Colleges (AAMC) profile data, out of the 76 public medical schools nationwide, **we rank number seven** in this metric. Looking at both public and private medical schools nationwide, **we rank number twenty** (Figure 14).

This is very strong, very respectable, and we are excited about these rankings, but our sights are set even higher.

Looking at the productivity of our faculty, AAMC data shows that among all medical schools, the mean funding per investigator is about \$311,000. At the University of Maryland School of Medicine, the mean funding per investigator is about \$450,000, making us the 18th most productive medical school in America, which I think, again, is a very strong endorsement (Figure 15).

RANKINGS

FIGURE 14

ALL PUBLIC SCHOOLS 7th out of 76

*FY2012 Total Grants and Contracts Direct Expenditures
Public Schools, All Regions*

AAMC RANK/SCHOOL	GRANTS & CONTRACTS
1 / UC San Francisco	\$754,549,294
2 / U Washington	\$741,830,906
3 / UCLA-Geffen	\$546,796,489
4 / UC San Diego	\$420,524,726
5/ Colorado	\$346,948,548
6 / Michigan	\$326,033,199
7 / Maryland	\$315,436,921
8 / North Carolina	\$301,586,039
9 / UT Southwestern	\$244,246,288
10 / Oregon	\$231,944,743

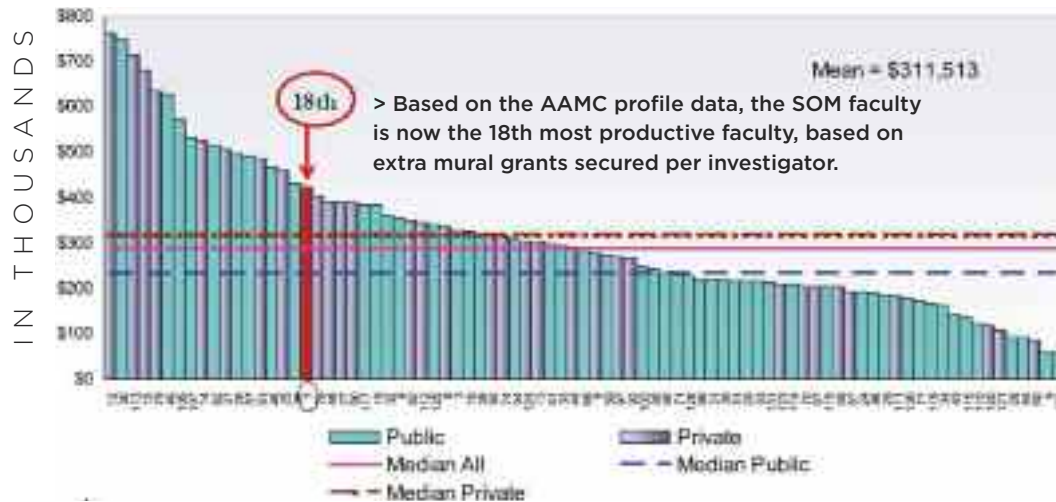
ALL PUBLIC & PRIVATE SCHOOLS 20th out of 140

*FY2012 Total Grants and Contracts Direct Expenditures
Public and Private Schools, All Regions*

RANK/SCHOOL	GRANTS & CONTRACTS
1 / Harvard	\$1,975,386,264
2 / UC San Francisco	\$754,549,294
3 / U Washington	\$741,830,906
4 / Duke	\$604,647,040
5 / Pennsylvania-Perelman	\$570,047,142
6 / Columbia	\$566,748,321
7 / UCLA-Geffen	\$546,796,489
8 / Johns Hopkins	\$534,803,741
9 / Mount Sinai	\$477,223,963
10 / Yale	\$460,244,792
11 / Pittsburgh	\$437,357,090
12 / UC San Diego	\$420,524,726
13 / Wash U-St. Louis	\$412,712,804
14 / Stanford	\$412,217,214
15 / Colorado	\$346,948,548
16 / Case Western	\$342,237,101
17 / Vanderbilt	\$330,185,518
18 / Baylor	\$329,067,748
19 / Michigan	\$326,033,199
20 / Maryland	\$315,436,921

FIGURE 15

SPONSORED PROGRAMS DIRECT EXPENDITURES PER
Principal Investigator



Helping grow this productivity is initiatives such as our Research Career Development Program, which offers classes in grant writing, identifying funding sources, and professional development, particularly when it comes to scientific leadership. It helped nearly 1,000 participants secure almost \$8 million in funding in FY 2013, and since its inception in 2006, almost \$39 million in funding has been awarded to students in the grant writing courses.

Another way of measuring our academic impact is to review technology transfer — patents, foreign or domestic; technology inventions; start-up companies; or even new scientific disclosures — we continue to have a strong showing in all categories; very positive (Figure 16). Selected products on the market or clinical trials is another way of assessing impact, and again, that also looks very strong (Figure 17).

FIGURE 16

TECHNOLOGY Transfer

	FY2011	FY2012	FY2013
U.S. Patents Issued	24	29	20
Foreign Patents Issued	65	15	15
Scientific Disclosures (Pre-patent)	77	121	106
Technology Inventions Licensed	15	26	26
Start-Up Companies Formed	3	2	2



FIGURE 17

SELECTED SCHOOL OF MEDICINE Inventions

PRODUCTS ON THE MARKET	SOM INVENTORS	COMPANIES
Products on the Market:		
• Stroke Rehab Device	Jill Whithall, PhD Sandy Macomb Waller, PT, PhD	EncorePath, Baltimore
• Medical Software	Christopher Meenan	Analytical Informatics, LLC
• KIDnet* (an outcomes monitoring system)	Laurel J. Kiser, PhD	Advance Management Services, Baltimore
Advanced Clinical Trials:		
• Cholera Vaccine	Myron Levine, MD, DTPH James Kaper, PhD	PaxVax, San Diego
• TTI-1612 (treatment for interstitial cystitis)	Susan K. Keay	Trillium Therapeutics, Toronto, Canada
• Stroke	Marc Simard, MD, PhD	Remedy Pharmaceuticals, New York
• Cancer	Scott Strome, MD	Gliknik, Baltimore
• Prostate Cancer	Vincent Njar, PhD Angela Brodie, PhD	Tokai, Boston

* FY2013

HSFIII UNVEILED

Maryland Governor Martin O'Malley; Maryland Lieutenant Governor Anthony Brown; Baltimore Mayor Stephanie Rawlings-Blake; Congressman Dutch Ruppersberger; Congressman Elijah Cummings; Congressman John Sarbanes; Chair of the SOM Board of Visitors Michael Cryor, who is also President of The Cryor Group; University System of Maryland Chancellor William E. "Brit" Kirwan, PhD; UMMS President and CEO Robert Chrencik; UMB President Jay A. Perman, MD; and SOM Dean E. Albert Reece, MD, PhD, MBA, participated in the groundbreaking.

PAGE
17



The School of Medicine's tagline states *"a place where discovery transforms medicine."* However, over the last several years, we have been running very low on space in which to pursue the science that leads to life-saving medical breakthroughs. That is about to change.

After being awarded funding by the State legislature and acquiring the matching funds needed to meet the terms of that funding, **we were finally able to break ground this past September on Health Sciences Facility III, a state-of-the-art research building that will serve as a magnet for attracting world-class researchers and will further strengthen the School of Medicine's Biomedical research infrastructure.** We had a wonderful celebration for the groundbreaking and were very delighted and privileged to have had our Governor, Lieutenant Governor, Mayor, several legislators, the University System of Maryland Chancellor and the UMB President with us to mark this very special occasion.

This building will allow us to accelerate the pace and scope of innovation and discovery through a number of approaches and collaborative research. It will be a building that will house well-funded scientists working on **"big science"** — ideas that will try to unravel major mysteries such as brain science or genome science. One of the first programs we hope to house in that building — and the only one with designated space — will be the genome science and personalized and genomic medicine partnership, bringing together a large conglomerate of programs, well-funded to advance medicine beyond even our imagination.

OTHER CAPITOL PROJECTS

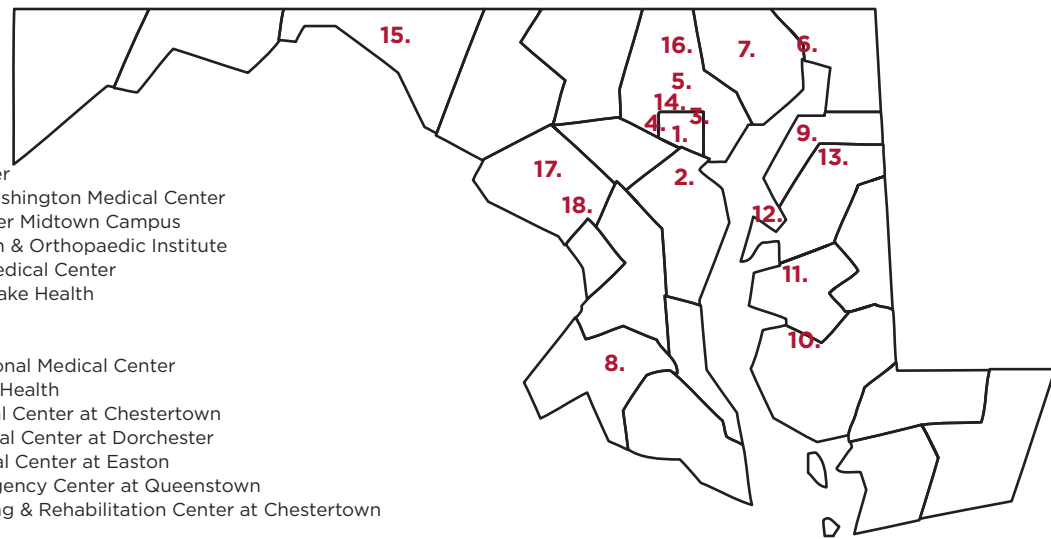
We also celebrated the topping out of the \$200 million Maryland Proton Treatment Center in January 2013. This is one of only 12 such centers of its kind in the nation. This center, which is on schedule to open in 2015, will bring to the region the world's most advanced technology in radiation treatment for cancer.

Additionally, we provided leadership for the establishment of statewide health enterprise zones, supported with \$16 million of state appropriations. These funds will be used to address the growing health disparities across the State of Maryland.



Jeff Bordok, CEO of Advanced Particle Therapy; Dr. Mehta; Dean Reece; Dr. Regine; and Paul Tyler of the Haskell Company

FIGURE 18
 CLINICAL SERVICE
 SITES THROUGHOUT
Maryland



1. University of Maryland Medical Center
2. University of Maryland Baltimore Washington Medical Center
3. University of Maryland Medical Center Midtown Campus
4. University of Maryland Rehabilitation & Orthopaedic Institute
5. University of Maryland St. Joseph Medical Center
6. Harford Memorial Hospital
7. Upper Chesapeake Medical Center
8. University of Maryland Charles Regional Medical Center
9. University of Maryland Shore Regional Health
10. University of Maryland Shore Medical Center at Chestertown
11. University of Maryland Shore Medical Center at Easton
12. University of Maryland Shore Emergency Center at Queenstown
13. University of Maryland Shore Nursing & Rehabilitation Center at Chestertown
14. Mt. Washington Pediatric Hospital
15. Westminster Cardiology
16. Texas Station Orthopaedics
17. Columbia Orthopaedics
18. College Park Orthopaedics



CLINICAL CARE



**1,180,112
 PATIENTS**



New Faculty Practice Optical Center in Baltimore opened April 11, 2013, Former Ravens kicker Matt Stover was on hand at the event.



Our clinical practices are strategically located across the State of Maryland, and our strategy calls for placing our practices either in or near our system hospitals. These system hospitals are located all across the state (Figure 18). The School of Medicine has embraced opportunities, and began programs with these partner hospitals to bolster both our existing programs as well as new programs that we hope to add in the areas of cardiology, surgery, cancer, orthopedics and pediatrics among others.

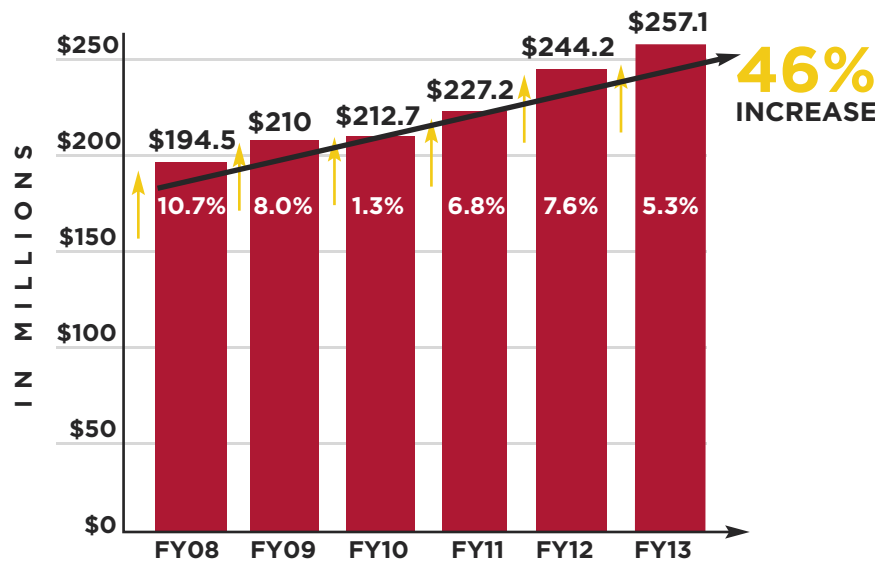
A new faculty site was also established in **Columbia, MD**, which will eventually be a multi-disciplinary practice, although it will start out initially with just one service — in this case, an orthopedics practice. Another new practice facility is an **optical center** that was started in April here on this campus. They are doing a terrific job in expanding the opportunities for all of us here who may need that service. Another set of clinical initiatives that began this past year was the **new University of Maryland Medical Center Midtown Campus (formerly Maryland General Hospital)**, where several services were either started or, in part, relocated to that campus from other sites.

The University of Maryland Medical Center also started a **brand new program called the CCRU, or the Critical Care Resuscitation Unit**. This is a strategic disruptive innovation where we are actually repurposing our trauma model. The trauma model is where patients who have experienced a traumatic injury in any part of the state can be brought to the Shock Trauma Center by air or by ground, to the trauma resuscitation unit. Likewise, in the CCRU, patients from across the state — or the region, for that matter — who may be in need of critical care, for whatever reason, are transferred to us via the CCRU, get an immediate evaluation, and, based on the determination, patients are placed in the appropriate critical care unit throughout the hospital within hours.



FIGURE 19

TOTAL FY2008-2013 **Clinical Revenue**



CLINICAL CARE

One final center that was started this past year was the **Center for Integration of Molecular Imaging and Therapeutics, or CIMIT**. This is very exciting for a number of reasons. We have a member of the Radiology department, Dr. Rao Gullapalli; a member of the Neurosurgery department, Dr. Graeme Woodworth; and the Chairman of the Radiology department, Dr. Elias Melhem. They have created a program where they'll be using scientific innovations and non-invasive means to perform brain surgery more successfully.

Our faculty members deliver care through **UM Faculty Physicians, Inc. (FPI)**. 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 about one percent. Admissions and observations declined about 1.5 percent, but total surgeries, inpatient surgeries, increased about two percent. When we review clinical practice revenue over the past year, it continued to rise, climbing 5.3 percent above the previous year (Figure 19).

Unfortunately, our expenses continue to rise at a concomitant rate. However, **our practice plan performance has remained impressive**. Two strong indicators of a successful practice plan are, typically, days in accounts receivable and aged accounts. You'll see that our initial denial rate is extremely low, 5.8 percent, and the aged account rate is about 20 percent, which is the same as it was last year (Figure 20 and 21).

FIGURE 20

PATIENT CARE **Statistics**

Practice Plan Performance	FY12	FY13	%Change
Total Patient Volumes (Includes office and inpatient/outpatient visits)	1,169,079	1,180,112	1%
Admissions (UMMC only; includes newborns and trauma)	41,260	41,067	-1.5%
Inpatient Surgeries (UMMC only; GOR & STC)	15,729	15,973	2%

FIGURE 21

KEY INDICATORS FOR **Billing & Collections**

	FY12	FY13	Change ()=unfavorable
Days in Accounts Receivable	40	42	(2days)
Accounts Receivable >90 days	20%	20%	---
Credit Balances	2.7%	1.99%	.71%
Initial Denial Rate	6.3%	5.8%	.50%



This past year, we took time out to honor the oldest building on campus, Davidge Hall, which celebrated its 200th birthday in October 2012. Named in honor of Dr. John Beale Davidge, the first Dean of the School of Medicine, Davidge Hall is the oldest medical school building in continuous use in the Western Hemisphere and was designated a national landmark in 1997.

OUR CLINICAL CARE PARTNERSHIP

The Power of Partnership

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 staff and the leadership of the Medical Center, including the CEO, Jeff Rivest, for their hard work and dedication to excellence in patient care.

■ **The Leap Frog Group**, as you know, is a national organization that assesses patient safety and quality of care. Fortunately for us, **the University of Maryland Medical Center has been listed as one of their top hospitals for safety and quality for the past seven years**, including this year. We're very delighted with this kind of acknowledgment.

■ **Likewise, *Baltimore Magazine* continues to rate our doctors highly.** This year, a record number of them, **98, were named top doctors** in the magazine. We, of course, know they are, but it's nice to get external affirmation.





COMMUNITY SERVICE

Mini-Medical School for Kids

SOM is a great neighbor. Over

7,000
students

have participated in Mini-Med School programs in the last 10 years.

The enthusiastic response from these students is amazing.





BioBlast, an annual event at the BioPark, lets local middle school students get hands-on experience with science, with a little help from our students and faculty.

Community service is a very important activity on which we put a great deal of emphasis. Of particular note is our **Mini-Med School**, a five-week program held each fall where faculty give lectures — in layman’s terms — on medical topics that are of importance to the local community.

We had another successful Mini-Med School this year, with nearly **250 attendees**. Thousands have attended this program over the last 13 years, and **variations of the program have successfully been held on the Eastern Shore, in Western Maryland, and in various high schools around Baltimore.**

Healthy habits are best established as early as possible, as one of our most successful Mini-Med School spinoffs has proven. **Six 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 five to 15. Our goal is to instill not only healthy habits in this young, impressionable audience, but to also 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 is amazing, and we hope to keep this program going for many years to come.

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 that feeds more than 400 people.** Volunteers come from all the schools on campus, but it is our SOM students who take the lead in organizing this event, which provides not only holiday meals, but also health screenings, clothing and non-perishable foods.



Halloween: A little bit of science (and a whole bunch of candy) from faculty and staff at the BioPark are a treat that local elementary school students look forward to every October.



FIGURE 22

Revenue IN MILLIONS

	FY12	FY13	Change
Grants & Contracts	\$429.9	\$370.4	13.9% ↓
Tuition & Fees	\$24.8	\$27.9	12.5% ↑
Medical Service Plan (UPI)	\$244.2	\$257.1	5.3% ↑
Affiliated Hospitals	\$143.0	\$151.4	5.9% ↑
Gifts & Others (Expended)	\$12.4	\$14.1	13.7% ↑
State Appropriations	\$30.9	\$41.9*	36% ↑

**Increase in State support reflects a new accounting procedure for the allocation of fringe benefits*

FINANCE & PHILANTHROPY

Our total budget is about \$900 million, but we have an **economic impact of over \$2 billion** in the state of Maryland. That means for every dollar the state spends on us, they get back two. Still, only five percent of our budget comes from state appropriations. We value that very much; however, it doesn't come anywhere close to the nearly one billion we need to operate, so we have to find other means of support. Tuition and fees only pay 3.2 percent of these costs. Grants and contracts provide a great deal of our budget, but as I have noted, in these challenging times they cannot keep pace with our financial needs (Figure 22).

Therefore, philanthropy is more important now than it ever was. **In 2008, we launched the *Transforming Medicine Beyond Imagination* campaign, with the ambitious goal of raising half a billion dollars over five years to support our research**

and clinical activities. Each year we exceeded our yearly goal, ever so slightly. This year, however, we significantly exceeded our goal. As you can see, we are already at **70 percent of our overall goal**, and we still have two more years remaining to achieve and hopefully exceed this number (Figure 23).

I want to particularly thank publicly and repeatedly those donors who made the most significant gifts this past year, totaling in excess of \$13 million. These gifts range from half a million dollars all the way up to \$5 million (Figure 24).

A big THANK YOU!

FIGURE 23

CAMPAIGN **Transforming Medicine Beyond Imagination**

Campaign Goal: \$500,000,000
 Timeframe: July 1, 2008 - June 30, 2015
 Amount Raised: \$350,142,908 (as of June 30, 2013)
70% of Goal

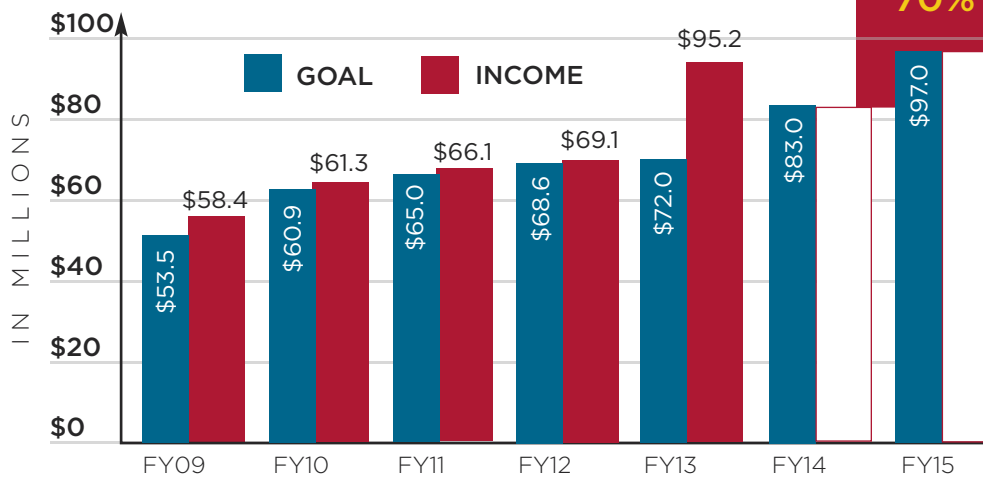


FIGURE 24

FY2013 TOP PHILANTHROPIC **Gifts From Individual Donors**

Donor	Gift Amount	Recipient
Willard Hackerman/Whiting-Turner Contracting Company	\$5,118,900	Integrative Medicine
Hansjörg Wyss	\$2,500,000	Trauma
Elizabeth Shamburger	\$1,421,605	Fellowship
United Therapeutics	\$1,200,000	Surgery
Independent Dialysis Foundation, Inc.	\$888,965	Medicine
Carolyn McGuire-Frenkil/James and Carolyn Frenkil Charitable Foundation	\$500,000	Medicine
Orokawa Foundation	\$400,000	Radiation Oncology; Cancer Center; Otorhinolaryngology - HNS
Frank C. Carlucci, III and Marcia M. Carlucci	\$375,950	Dean's Office; Neurology
Thelma M. Kimmel	\$352,700	Scholarship
Homer & Martha Gudelsky Family Foundation, Inc.	\$250,000	Neurosurgery

TOTAL	\$13,081,120
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DAVIDGE HALL
 NAMED FOR THE FIRST DEAN OF THE UNIVERSITY OF MARYLAND SCHOOL OF MEDICINE, DR. JOHN A. DAVIDGE. NOTED FOR ITS UNIQUE CLASSICAL APPEARANCE, IT IS THE OLDEST BUILDING IN THE COUNTRY USED CONTINUOUSLY FOR MEDICAL EDUCATION. THE MEDICAL SCHOOL ESTABLISHED IN 1807 BY THE GENERAL ASSEMBLY OF THE STATE OF MARYLAND IN THE UNITED STATES.



INVESTITURE CEREMONIES

This past year we had Endowed Professorship Investiture Ceremonies for Aaron Rapoport, MD; Kevin Cullen, MD; John Olson, Jr., MD, PhD; and Alan Faden, MD. These ceremonies honored both them and the generous donors behind their professorships.

Many of these gifts result in the creation of endowed professorships, which is **one of the highest honors that a medical school can give** to both recruit the best and the brightest and/or retain the best and the brightest faculty.



GARY JOBSON PROFESSORSHIP IN MEDICAL ONCOLOGY, From left to right: Gary Jobson, Deborah Rapoport, Dr. Aaron Rapoport, Janice Jobson, and Brooke Jobson



CAMPBELL AND JEANETTE PLUGGE PROFESSOR IN SURGERY, From left to right: Dean Reece, Dr. Olson and Dr. Bartlett



MARLENE & STEWART GREENEBAUM DISTINGUISHED PROFESSORSHIP IN ONCOLOGY, From left to right: Dean Reece, Amy Burwen, Dr. Steve Burwen, Michael Greenebaum, Stewart Greenebaum, Marlene Greenebaum, Dr. Kevin Cullen, Robert Chrencik, and Jeffrey Rivest



DAVID S. BROWN PROFESSORSHIP IN TRAUMA, From left to right: Dr. Peter Rock, Dr. Thomas Scalea, Dean Reece, Howard S. Brown, and Dr. Alan Faden



GALA



1,000 GUESTS

Our annual Fund for Medicine gala gave us the opportunity to **publically kick off our *Transforming Medicine Beyond Imagination* campaign**, while at the same time celebrating significant accomplishments among our faculty and securing additional discretionary funds. **More than 1,000 donors, alumni, faculty, staff, students and friends of the School of Medicine attended this special event, which was co-chaired by alumnus Harry Knipp, MD, FACR, Class of 1976, a radiologist and a founding member of Advanced Radiology, PA; Robert Fischell, ScD, President of Fischell BioMedical, LLC, and a member of the School of Medicine Board of Visitors; and Frank Calia, MD, MACP, Professor Emeritus, Department of Medicine, and Former Vice Dean of Clinical Affairs.**

Photos from top to bottom: Faculty from the Institute for Genome Sciences and their significant others. Dean Reece chats with Michael Greenebaum and Adele A. Richer. Leonard Golombek, MD, Class of 1948, with his wife Betty and Marlene Greenebaum. Generous donors provided many of our students with tickets to the gala event.



Leadership Highlights

THE SCHOOL OF MEDICINE WELCOMED SIX NEW DEPARTMENT CHAIRS OVER THE PAST YEAR:

- Scott Thompson, PhD, Department of Physiology
- Bankolé Johnson, DSc, MD, MPhil, Department of Psychiatry
- Andrew Pollak, MD, Department of Orthopaedics
- Bennie Jeng, MD, MS, Department of Ophthalmology & Visual Sciences
- Christopher Harman, MD, Department of Obstetrics, Gynecology & Reproductive Sciences
- Elias Melhem, MD, Department of Diagnostic Radiology & Nuclear Medicine

NEW APPOINTMENTS



1)



2)



3)



4)



5)



6)



7)



8)



9)

1) **Robert Buchanan, MD, Interim Director**, Maryland Psychiatric Research Center (MPRC). Dr. Buchanan replaces **William Carpenter, MD**, who has decided to focus more fully on research after 36 years as MPRC director.

2) **Mark Rogers, PhD, PT, Interim Chair**, Department of Physical Therapy & Rehabilitation Science. Dr. Rogers replaces **Mary Rodgers, PhD, PT**, who stepped down after 15 years as Chair but will remain with the department in the new administrative role of Vice Chair.

3) **Barney Stern, MD, Interim Chair**, Department of Neurology. Dr. Stern, who was previously Vice Chair, was named Interim Chair upon the death of Chair **William Weiner, MD**.

4) **Michael Donnenberg, MD**, Professor, Departments of Medicine and Microbiology & Immunology, was appointed **Director** of the Medical Scientist Training Program (MSTP).

5) **Achsah Keegan, PhD**, Professor, Department of Microbiology & Immunology, was appointed **Associate Director** of the program, which oversees the training of MD/PhD students.

6) **James Gammie, MD**, Professor, Department of Surgery, was appointed **Chief** of the Division of Cardiac Surgery.

7) **Sheri Slezak, MD**, Professor, Department of Surgery, was appointed **Chief** of the Division of Plastic and Reconstructive Surgery.

8) The Institute for Human Virology named former Maryland Lieutenant Governor **Kathleen Kennedy Townsend, JD**, as **chair** of its **Global Virus Network (GVN)**. GVN was co-founded by IHV founder and director **Robert Gallo, MD**, to prevent deaths associated with viral disease. It will serve as a catalyst for bench-to-bedside applications and promote research that bridges virus surveillance and response.

9) The Office of Development named **Darren Parker** as **Assistant Dean** for Development. Mr. Parker, who had been Director of Development for the Department of Neurology since coming to the School of Medicine in 2010, replaced **Andrew Dunsmore, PhD**, who passed away in December 2012.



The PROGRAM IN TRAUMA restructured in 2013, creating three divisions, each with its own leadership. **Jose Diaz, MD**, Professor, Department of Surgery, continued as Chief of Acute Care Surgery. **Thomas Scalea, MD, FACS, MCCM**, the Francis X. Kelly Professor of Trauma Surgery, continues to oversee all three divisions as Director of the Program in Trauma. **Deborah Stein, MD, MPH**, Associate Professor, Department of Surgery, was appointed Chief of Trauma. **James O'Connor, MD, FACS**, Associate Professor, Department of Surgery, was appointed Chief of Trauma Critical Care.

FACULTY & STAFF HIGHLIGHTS



1)



2)



3)



4)



5)



6)



7)



8)



9)

1) **Brenda Ali**, Office Manager, Institute for Genome Sciences, was named **Public Servant of the Year** by the University of Maryland, Baltimore. She also received the Board of Regents Staff Award from the University of Maryland System in recognition of her community outreach efforts.

2) **Claudia Baquet, MD, MPH**, was chosen to present the 2012 **American Association for Cancer Research Distinguished Lectureship** on the Sciences of Health Disparities. This lectureship is funded by Susan G. Komen for the Cure.

3) **Maureen Black, PhD**, the John A. Scholl, MD, and Mary Louise Scholl, MD, Professor, Department of Pediatrics, received the 2013 **Friend of the WIC Leadership Award** from the National WIC (Women, Infants & Children) Association.

4) **William Blattner, MD**, Professor, Department of Medicine and Institute for Human Virology, was presented with a **Certificate of Recognition from Baltimore Mayor Stephanie Rawlings-Blake**, honoring his 10 years of service as Chair of the Baltimore City Commission on HIV/AIDS Treatment and Prevention.

5) **Angela Brodie, PhD**, Professor, Department of Pharmacology, was named an **inaugural Fellow of the newly created American Association for Cancer Research Academy**.

6) **Robert Buchanan, MD**, Professor, Department of Psychiatry, and Interim Director, Maryland Psychiatric Research Center, received the **American College of Psychiatrists' 2013 Stanley Dean Research Award**.

7) **Gregory Carey, PhD**, Assistant Professor, Department of Microbiology & Immunology, and Director of Student Summer Research and Community Outreach at the School of Medicine, **received the University of Maryland, Baltimore's Martin Luther King Jr. Diversity Award for Outstanding Faculty/Staff** in February 2013.

8) **William Carpenter, MD**, Professor, Department of Psychiatry, **received the 2013 Indo-Global Appreciation Award and the 2013 William C. Menninger Memorial Award**, both from the American College of Physicians.

9) **Richard Eckert, PhD**, the John F.B. Weaver Professor and Chair, Department of Biochemistry & Molecular Biology, was **voted President-Elect of the Association of Medical and Graduate Departments of Biochemistry**.



FACULTY & STAFF HIGHLIGHTS



10)



11)



12)



13)



14)



15)



16)



17)



18)

10) **Raymond Fang, MD**, Clinical Associate Professor, Department of Surgery, received the **Hero of Military Medicine Award** from the Henry M. Jackson Foundation for the Advancement of Military Medicine.

11) **Claire Fraser, PhD**, Professor, Department of Medicine, and Director, Institute for Genome Sciences, was named to *The Daily Record's* list of 2013 **Influential Marylanders**.

12) **Marc Hochberg, MD, MPH**, Professor, Department of Medicine, received the 2012 **Distinguished Clinical Investigator Award** from the American College of Rheumatology.

13) **James Kaper, PhD**, Professor and Chair, Department of Microbiology & Immunology, and Center for Vaccine Development, was elected **President of the Association of Medical School Microbiology & Immunology Chairs**, beginning in January 2014.

14) **W. Jonathan Lederer, MD, PhD**, Professor, Department of Physiology, and Director, Center for Biomedical Engineering and Technology (BioMET) was named the **University of Maryland, Baltimore's 2013 Researcher of the Year**.

15) **Alicia Lucksted, PhD**, Associate Professor, Department of Psychiatry, was the 2012 recipient of the **prestigious Armin Loeb Award** from the U.S. Psychiatric Rehabilitation Association.

16) **Amal Mattu, MD**, Professor and Vice Chair, Department of Emergency Medicine, received the **2013 Pete Rosen Award** from the American Academy of Emergency Medicine.

17) **Mayur Narayan, MD**, Assistant Professor, Department of Surgery, received the **Clinical Golden Apple Award** from the Class of 2013 at their Convocation ceremony in May. The Golden Apple Award is presented by each graduating class to their choices for top pre-clinical and clinical instructors.

18) **William Olmsted, MD**, Clinical Professor, Department of Diagnostic Radiology & Nuclear Medicine, received the **2012 Gold Medal of the Radiological Society of North America**.

19) **Christopher Plowe, MD, MPH**, Professor, Department of Medicine and Center for Vaccine Development, received the **American College of Physicians Award for Outstanding Work in Science as Related to Medicine**.



19)



20) **Jacques Ravel, PhD**, Professor, Department of Microbiology & Immunology and the Institute for Genome Sciences, was elected as a **Fellow in the American Academy of Microbiology**.

21) **E. Albert Reece, MD, PhD, MBA**, Vice President for Medical Affairs, University of Maryland, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine, was **elected to the governing council of the Institute of Medicine (IOM) of the National Academy of Sciences** for a three-year term beginning in January 2013.

22) **Thomas Scalea, MD, FACS**, the Francis X. Kelly Professor of Trauma Surgery in the Department of Surgery, and Director, Program in Trauma, was **voted President-Elect of the American Association for the Surgery of Trauma**.

23) **Michael Shipley, PhD**, the Donald E. Wilson, MD, MACP Distinguished Professor and Chair, Department of Anatomy & Neurobiology, was **elected Secretary/Treasurer of the Association of Medical Schools Neuroscience Department Chairs** for a two-year term (2013-2015).

24) **David Stewart, MD**, Associate Professor and Chair, Department of Family & Community Medicine, was the **inaugural recipient of the Dean's Faculty Award for Diversity and Inclusion**.

25) **Nevins Todd, MD**, Associate Professor, Department of Medicine, **received the Pre-Clinical Golden Apple Award** from the Class of 2013 at their Convocation ceremony in May. The Golden Apple Award is presented by each graduating class to their choices for top pre-clinical and clinical instructors.

26) **Donna Parker, MD**, and 27) **Dan Schulze, PhD**, were **inducted into the Carolyn J. Pass, MD '66 and Richard M. Susel, MD '66 Academy of Educational Excellence**, which was established in 2008 to honor faculty members past and present who demonstrate exceptional innovation in, and dedication to, medical education; who embody the highest ideals of the medical and/or science professions; and who display a singular commitment to the best interests of medical students.

28) **Tonya Webb, PhD**, Assistant Professor, Department of Microbiology & Immunology, was named one of the **"Top 100 Women of Maryland"** by *The Daily Record*.

29) **Matthew Weir, MD**, Professor, Department of Medicine, **received the Champion of Hope Award** from the National Kidney Foundation of Maryland.

MOST UNFORTUNATELY THE SCHOOL OF MEDICINE HAS **LOST A FEW SPECIAL FRIENDS AND COLLEAGUES** THIS PAST YEAR. WE ARE TREMENDOUSLY GRATEFUL FOR THEIR MANY, MANY CONTRIBUTIONS. EACH ONE WILL BE ENORMOUSLY MISSED.

IN MEMORIAM



Andrew Dunsmore, PhD

Assistant Dean for Development, passed away on December 24, 2012.

Andy joined the Office of Development in October 2009, and was responsible for leading the major gifts program at the School of Medicine, securing several gifts in excess of \$1 million. He also played a key leadership role in the planning phases of the School's Transforming Medicine Beyond Imagination \$500 million comprehensive campaign.



William Weiner, MD

Professor and Chair, Department of Neurology, passed away on December 29, 2012.

Dr. Weiner was nationally known for his work with Parkinson's disease and other movement disorders. He wrote or edited 25 textbooks, the best known of which were *Movement Disorders — A Comprehensive Survey*, co-written with Dr. Tony Lang, which is considered a classic in the field, and *Neurology for the Non-Neurologist*, now in its sixth edition, co-written with Dr. Chris Goetz in 1981. Dr. Weiner was also the author of more than 300 peer-reviewed articles on various topics in neurology and had contributed 100 chapters to other works.



Clifford Turen, MD

Former Chief of Orthopaedic Trauma Services and Former Director of the Shock Trauma Center's Orthopaedic Traumatology Fellowship Program, passed away on January 13, 2013.



Martin Helrich, MD

Professor Emeritus and Former Chair, Department of Anesthesiology, passed away on June 2, 2013.

Dr. Helrich led the Department of Anesthesiology from 1956 until 1986, and the chair position in the department is named in his honor. Peter Rock, MD, MBA, is the current Helrich Professor and Chair.



John M. Dennis, MD

Former Dean of the School of Medicine, passed away on January 17, 2013. He was a 1945 graduate of the University of Maryland School of Medicine.

Dr. Dennis served as Chairman of the Department of Radiology from 1953-1973, at which time he was named Acting Dean of the School of Medicine. He became Dean in 1974, a position he held until 1990. Dr. Dennis was named Dean Emeritus in 1990, and Professor Emeritus in diagnostic radiology in 1995. At its 1993 commencement, the University of Maryland, Baltimore (UMB), honored Dr. Dennis with an honorary Sc.D. degree. In 1984 he was named the University of Maryland Alumnus of the Year.

During Dr. Dennis' deanship, the School of Medicine developed into a major research institution with considerable growth in faculty and research support. Dr. Dennis also stewarded the development of a new Baltimore Veterans Administration Medical Center on the UMB campus.



MEDIA COVERAGE

With dramatic changes to the healthcare industry and research funding cuts, it's more critical than ever for the School of Medicine to communicate its key messages and stories to stakeholders around the world. Driven by news about our groundbreaking research, innovative medical education, and advanced clinical care, **School of Medicine faculty were highly visible in print, broadcast and online media. Last year, there were nearly 15,000 media mentions of the School and medical center worldwide, nearly 1,200 stories per month.** Our faculty appeared on national media outlets, including NBC, CNN and National Public Radio (NPR).



■ Dr. Margaret McCarthy made national news with her study, published in the *Journal of Neuroscience*, which found there may be a biological reason why women talk more than men.

The School of Medicine was also featured in major print publications:

- The *Wall Street Journal* spent two days at the University of Maryland for a front-page, in-depth, multimedia feature on the R Adams Cowley Shock Trauma Center team.
- As mentioned previously, *U.S. News and World Report* and the *Chronicle on Higher Education* both reported on our innovative new course in research and clinical thinking.
- A variety of news outlets came to campus when faculty, staff and students gathered for the National Rally for Medical Research, raising awareness about the impact of federal budget cuts on scientific discovery and urging Congress to make NIH funding a top priority.

Getting the Word Out

Using our **state-of-the-art broadcast studio**, we produced dozens of video news segments over the past year, featuring the research findings and clinical expertise of our faculty. These videos were viewed by thousands around the world via our School of Medicine YouTube channel and other social media outlets.





Watch Live

Show Clips

News Clips

Fox News Radio

Account



Dr. Margaret McCarthy and students in her lab made national news this past year.



NEWLY DISCOVERED PROTEIN MAY EXPLAIN WHY WOMEN TALK MORE THAN MEN

21st Century and Beyond



1,200 STORIES PER MONTH



Maryland Public Television often welcomes our physicians as guests on 'Direct Connection' to answer viewers' health questions.





LOOKING AHEAD

We have a clear vision of where we want to go. This past year, I put together with Mr. Robert Chrencik, President and CEO of the Medical System, a **Shared Vision 2020** document, which focused on key strategies and approaches that we wish to take over the next seven years:

- Make bold, realistic and selective decisions.
- Introduce selective initiatives that will increase the pace and scope of innovation, discovery and the highest quality of patient-centered care.
- Think and act out of the box in order to achieve “strategic disruptive innovations” when possible or appropriate.

It is certainly my sincere hope that this publication has demonstrated to you **the strategic and the purposeful actions that we have taken and the positive results that we have had thus far.**

We will continue to be forward thinking, and we expect to continue to maintain our strong pace and steep trajectory far into the foreseeable future.

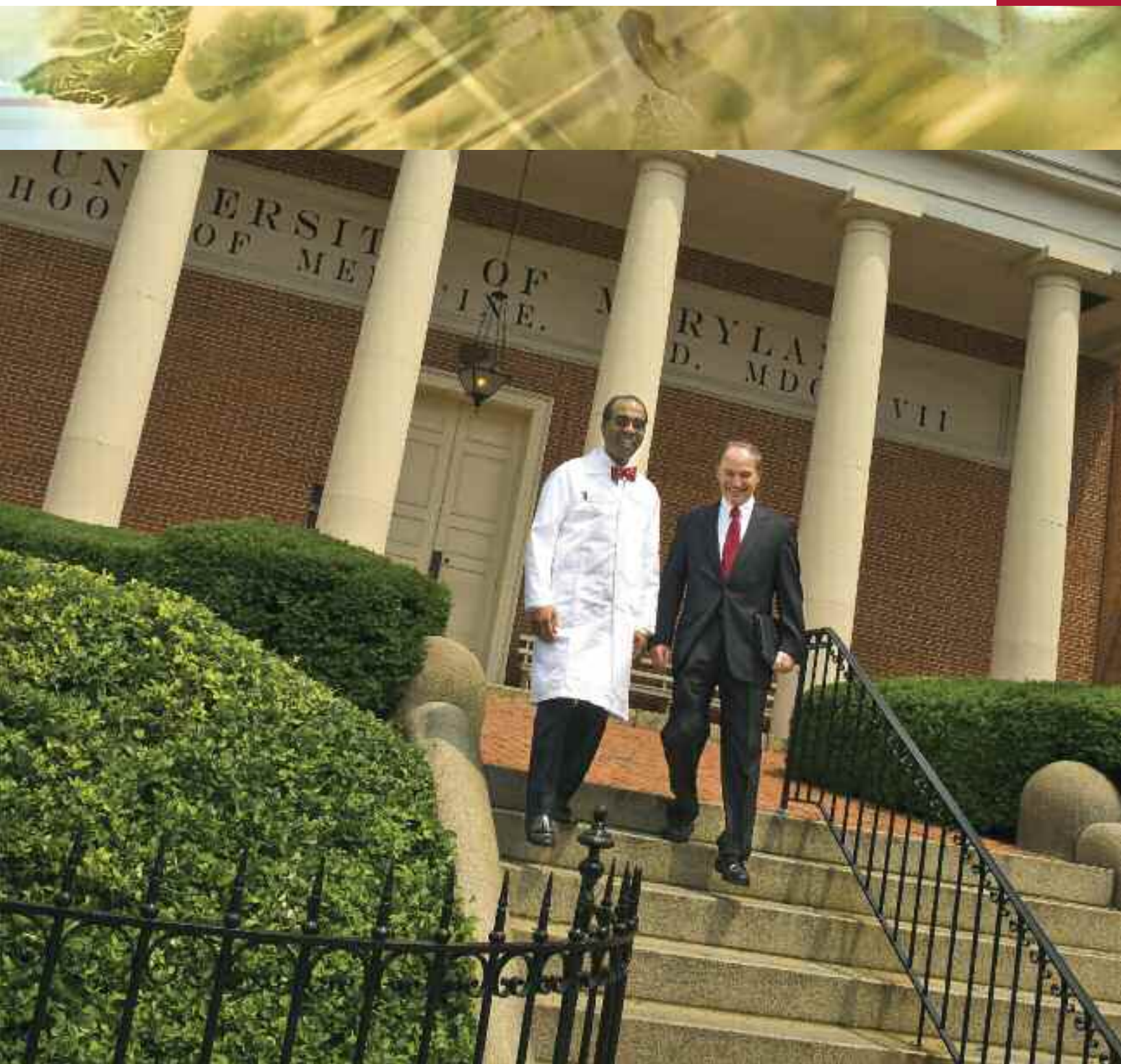
In the relentless pursuit of excellence, I am

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

SHARED VISION 2020 HIGHLIGHTS

- Accelerate pace and scope of discovery and innovation in biomedical research
- Redouble our efforts toward achieving the highest quality of care
- New teaching philosophy focused on training innovators and discoverers
- Obtain federal funding to train the next generation of medical/biomedical workforce
- Become Maryland and the region's premier healthcare system
- Obtain a philanthropic goal in excess of half a billion dollars
- Promote discovery-based medicine within our academic community
- Introduce a robust incentive-based investment model





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