

PHOTO BY JEFF SAUERS



# INTRODUCTION

## INTRODUCTION

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The University of Maryland, Baltimore (UMB) is Maryland's public health, law, and human services university. UMB is a leading U.S. institution for graduate and professional education and a thriving academic health center combining cutting-edge biomedical research and exceptional clinical care. The University offers 40 doctoral, master's, and bachelor's degree programs and 10 certificate programs.

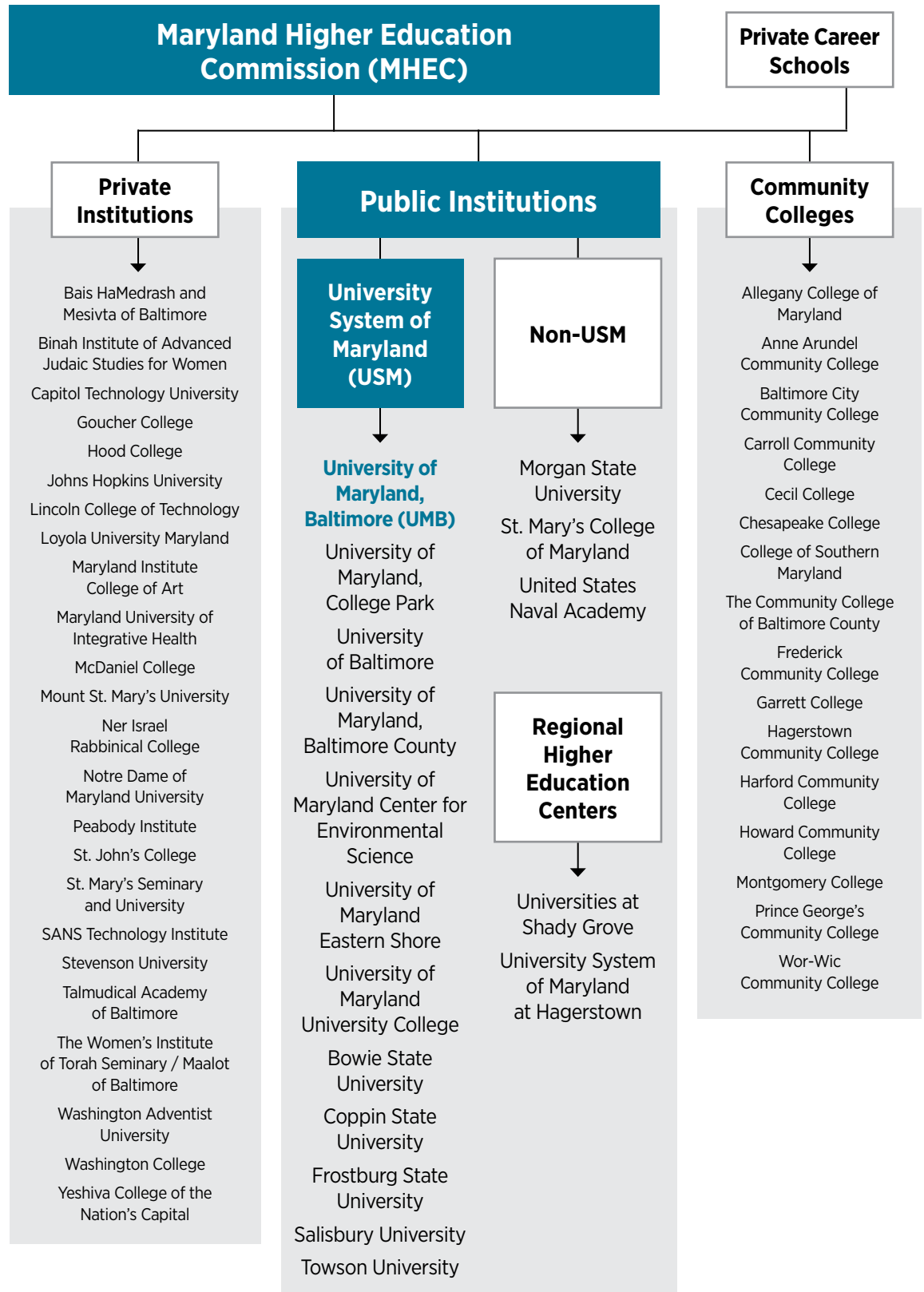
This introduction begins with a description of the manner in which the Maryland Higher Education Commission provides oversight over UMB as part of a complex portfolio of private and public institutions including community colleges and career schools. UMB is the founding institution of the University System

of Maryland (USM), which is comprised of 12 public institutions. As part of its function, USM assists with long-range planning and resource management and coordinates academic programs within the diverse assortment of institutions.

What follows is a brief overview of UMB, its constituent schools, and a chart showing UMB's affiliated institutions. Also provided are a synopsis of UMB's distinguishing characteristics, a summary of notable developments since the 2006 Middle States site visit, and a partial list of recent notable accomplishments.

**HIGHER EDUCATION IN MARYLAND: THE BIG PICTURE**

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**MARYLAND HIGHER EDUCATION COMMISSION**

The state of Maryland has 57 colleges and universities and more than 151 private career schools. These institutions are overseen at the state level by the Maryland Higher Education Commission (MHEC), which is the state’s higher education coordinating board responsible for establishing statewide policies for Maryland public and private colleges and universities and for-profit career schools. MHEC also administers the state’s financial aid programs. The commission’s 12 members are appointed by the governor. MHEC coordinates the growth and development of postsecondary education in Maryland. In keeping with the goals outlined in the State Plan for Postsecondary Education, the commission establishes statewide policies for public and private colleges and universities, and for private career schools. The commission reviews and approves the start-up and continuation of new colleges and universities in Maryland as well as requests for new academic programs at established schools, including those in the University System of Maryland.

**UNIVERSITY SYSTEM OF MARYLAND**

The University System of Maryland (USM) was established by the Maryland General Assembly in 1988 from the merger of the five University of Maryland institutions and the six members of the State University and College System of Maryland. Today, the University System of Maryland comprises a system office led by the chancellor, two regional higher education centers, and 12 institutions, including the University of Maryland, Baltimore. The mission of the University System of Maryland is to improve the quality of life for the people of Maryland by providing a comprehensive range of high-quality, accessible, and affordable educational opportunities; engaging in

research and creative scholarship that expand the boundaries of current knowledge; and providing knowledge-based programs and services that are responsive to the needs of the citizens of the state and the nation. USM fulfills its mission through the effective and efficient management of its resources and the focused missions and activities of each of its component institutions. USM’s programs and activities have a significant impact on the quality of life in Maryland, creating social and economic benefits for people throughout the state and beyond. A 17-member Board of Regents, including one full-time student, governs the University System of Maryland. Appointed by the governor, the regents oversee the system’s academic, administrative, and financial operations; formulate policy; and appoint the USM chancellor and the presidents at each of the system’s institutions. With the exception of the student member, each regent is appointed for a term of five years, and may not serve more than two consecutive terms. The student regent is appointed for a one-year term, and may be reappointed. Regents serve on the board without compensation.

**USM FAST FACTS**

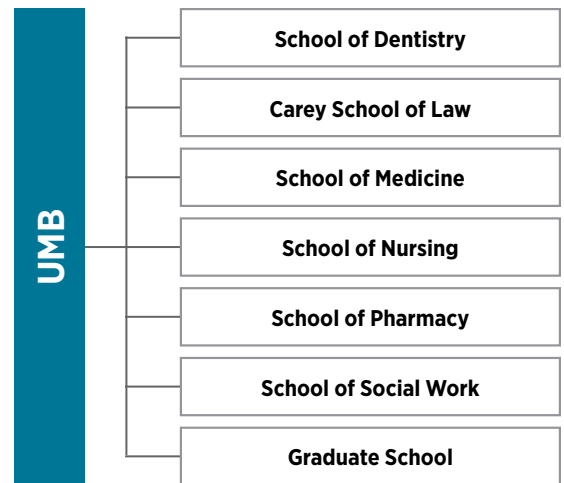
<b>Undergraduate Students:</b> 126,344	<b>Graduate/Professional Students:</b> 41,782
<b>Full-Time Faculty:</b> 8,747	<b>Part-Time Faculty:</b> 6,591
<b>Staff:</b> 23,419	<b>Buildings:</b> Nearly 1,000
<b>Operating Budget:</b> \$5.13 billion	

**UNIVERSITY OF MARYLAND, BALTIMORE**

The founding institution of the University System of Maryland, the University of Maryland, Baltimore (UMB) opened in 1807 along a ridge in what was then called Baltimore Town. Today, this 71-acre research and technology complex encompasses 67 buildings in West Baltimore near the Inner Harbor. UMB is Maryland’s only public health, law, and human services university. Six professional schools and a Graduate School confer the majority of health care, human services, and law professional degrees in Maryland each year. Under the leadership of President Jay A. Perman, MD, the University is one of Baltimore City’s major anchor institutions and is a leading partner in the redevelopment of Baltimore’s Westside. Attending physicians at the University of Maryland Medical Center are faculty members of the School of Medicine at UMB. The University of Maryland BioPark, which opened in October 2005, promotes collaborative research opportunities and bioscience innovation. Sponsored research totaled \$499.6 million in fiscal year 2015. With 6,329 students and 7,119 faculty members, graduate assistants, and staff, the University is an economic engine that returns more than \$14 in economic activity for every \$1 of state general funds appropriation. The University community gives more than 2 million hours a year in service to the public.

**UMB FAST FACTS**

<b>Undergraduate Students:</b>	<b>Graduate/Professional Students:</b>
866	5,463
<b>Faculty:</b>	<b>Staff:</b>
2,721	3,945
<b>Buildings:</b>	<b>Operating Budget:</b>
67	\$1.1 billion



**MISSION**

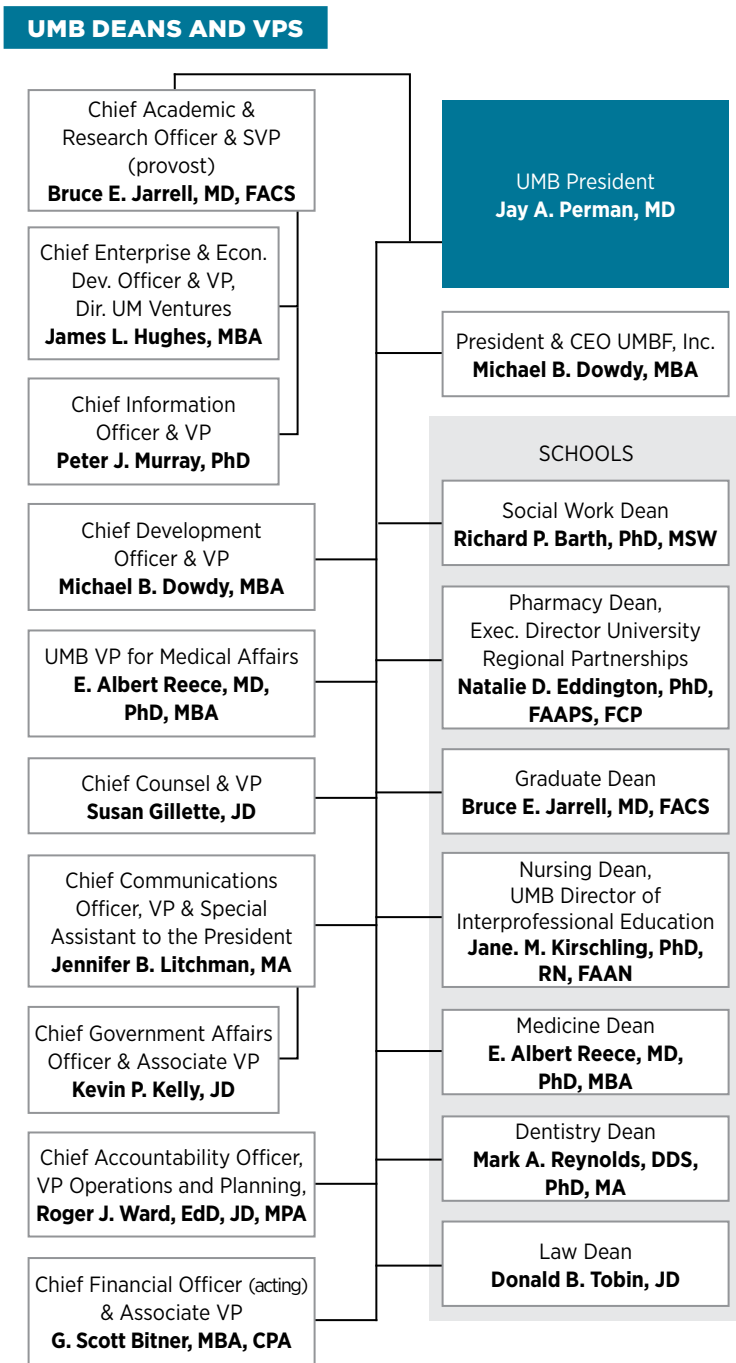
To improve the human condition and serve the public good of Maryland and society at-large through education, research, clinical care, and service.

**VISION**

The University will excel as a pre-eminent institution in its missions to educate professionals, conduct research that addresses real-world issues affecting the human condition, provide excellent clinical care and practice, and serve the public with dedication to improve health, justice, and the public good. The University will become a dominant economic leader of the region through innovation, entrepreneurship, philanthropy, and interdisciplinary and interprofessional teamwork. The University will extend its reach with hallmark local and global initiatives that positively transform lives and our economy. The University will be a beacon to the world as an environment for learning and discovery that is rich in diversity and inclusion. The University’s pillars of professionalism are civility, accountability, transparency, and efficiency. The University will be a vibrant community where students, faculty, staff, visitors, and neighbors are engaged intellectually, culturally, and socially.

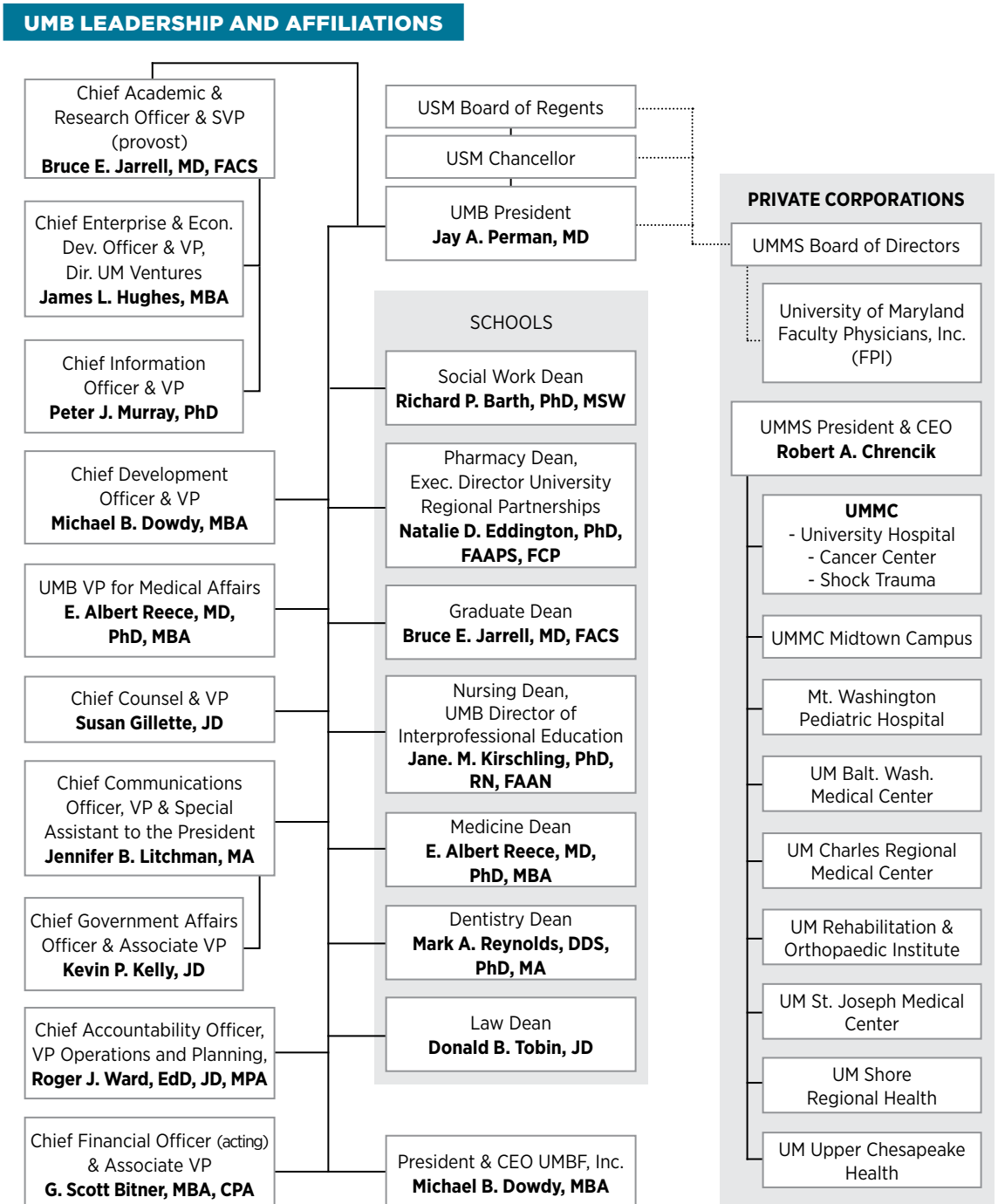
**ORGANIZATIONAL STRUCTURE**

The following organizational chart represents the reporting lines of the University’s senior leadership:



UMB also functions in a context with affiliated institutions such as the University of Maryland Medical Center. The following chart represents those relationships.

Attending physicians at the University of Maryland Medical Center are faculty members of the School of Medicine at UMB.



### INFORMATION ABOUT THE SCHOOLS

The University is uniquely organized as a collection of six professional schools and a Graduate School, each with a rich legacy of innovation and service. Degrees granted include the MD, PhD, DNP, DPT, PharmD, JD, DDS, LLM, MS, and BS. In 2015, 86 percent of students were enrolled in graduate/professional-level programs. Students enrolled in BS programs enter at the upper level; all general education coursework is completed prior to acceptance. The following is a brief history of each of the schools in the order in which they were founded.

#### School of Medicine

Established in 1807, the School of Medicine is the first public and the fifth oldest medical school in the United States, and it was also the first to institute a residency training program. The School of Medicine was the founding school of the University System of Maryland. Today, the School of Medicine serves as the anchor for a large academic health center, which aims to provide the best medical education, conduct the most innovative biomedical research, and provide the best patient care and community service to Maryland and beyond. Together with its clinical partner, the University of Maryland Medical Center (UMMC), the School of Medicine educates and trains many of the state of Maryland's medical professionals, and its continuing education programs serve more than 5,000 physicians and other health professionals annually.

While its tradition of excellence remains constant, the School of Medicine and its reputation for academic achievement continue to grow. The research productivity of the faculty is among the highest in the country, and the School of Medicine remains among the fastest growing research enterprises in

the country. With 43 academic departments, centers, and institutes and a faculty of more than 3,000 physicians and research scientists, combined with more than \$400 million in extramural funding, the school is regarded as one of the nation's leading biomedical research institutions. The school has research and treatment facilities in more than 35 countries around the world.

#### Francis King Carey School of Law

The Francis King Carey School of Law was established in 1816 and began regular instruction in 1824. It is the third oldest law school in the nation, but its innovative programs make it one of the liveliest and most dynamic today. The Carey School of Law seeks to promote a more just society by educating outstanding lawyers, by advancing understanding of law and legal institutions, and by enhancing access to justice. Through excellence in teaching, the school seeks to prepare students for productive leadership and professional success in a wide range of careers and to promote in both students and faculty the highest standards of public and professional service.

The school's experiential programs are among the most extensive in the country. Through a nationally recognized Clinical Law Program, students can enroll in an array of courses to represent criminal defendants, emerging business owners, persons with HIV/AIDS, an environmental group, persons with a disability, or scientists seeking to patent new drugs. Students meet regularly with their professors to review the professional, ethical, and practical issues raised by their work. They also explore the connections between what is taught in the classroom and the practice of law as they are experiencing it.



The school also offers specialty certificates in Environmental Law and Law and Health Care, the latter of which was ranked No. 1 and No. 2 nationally by *U.S. News & World Report* the past two years. Other programs include Advocacy, Alternative Dispute Resolution, Business Law, Clinical Law, Intellectual Property Law, and International and Comparative Law. Because these programs are interdisciplinary, students can work with lawyers and professionals in related fields to resolve problems that transcend traditional disciplinary boundaries. For example, a student in the Law and Health Care Program could supplement a diverse curriculum of classroom courses with clinical opportunities, internships with organizations such as the National Institutes of Health, and an editorial position on the school's *Journal of Health Care Law and Policy*.

### **School of Dentistry**

The School of Dentistry, the world's first dental college, celebrated its 175th anniversary in 2015. In addition to the doctor of dental surgery degree, which the school originated, it offers advanced training programs in six specialties; Maryland's only baccalaureate dental hygiene program; graduate programs in oral and craniofacial biological sciences and experimental pathology; and combined DDS/MPH and accelerated RDH-to-MPH programs.

Students, faculty, and staff provide care for nearly 30,000 patients annually at clinics in Baltimore City and underserved areas such as Perryville, Frederick, Carroll, and Rockville, Md. An international research hub, the school is ranked fifth in National Institutes of Health funding for public dental schools.

Its class of 2016 performed nearly 6,000 hours of community service outside of their daily clinical responsibilities in 2015. The school's academic externships span the globe, touching 20 countries on six continents. Its Department of Neural and Pain Sciences has gained a national reputation, leading to the creation of UMB's interdisciplinary Center for the Advancement of Chronic Pain Research.

### **School of Pharmacy**

The School of Pharmacy has a rich and distinguished heritage. First incorporated as the Maryland College of Pharmacy in 1841, it is one of the oldest pharmacy schools in the country. Primarily an independent institution until 1904, the Maryland College of Pharmacy then became the Department of Pharmacy of the University of Maryland. Throughout this history, the School of Pharmacy has been a local and national leader in the profession. It was a founding member of the American Association of Colleges of Pharmacy, the national organization of schools and colleges of pharmacy and their faculty. The school also was instrumental in the formation of the Accreditation Council for Pharmacy Education, the national accreditation organization for educational programs in pharmacy. In 1970, through the efforts of the school and the Maryland Board of Pharmacy, Maryland became the first state to replace unstructured internships with a professional-experience program incorporated in a school's curriculum, setting a national standard for professional pharmacy education. In 1993, the school again set the pace for curriculum reform by adopting a four-year Doctor of Pharmacy program as its sole professional educational program. The PharmD is now the required program in all schools and colleges of pharmacy nationwide.

Today, the School of Pharmacy continues to lead pharmacy education, scientific discovery, patient care, and community engagement in Maryland and beyond. The school is a comprehensive institution, offering not only the Doctor of Pharmacy degree but also post-PharmD residency and fellowship opportunities, two Doctor of Philosophy programs training independent scientists, and a variety of dual-degree programs with law, business, public health, and the pharmaceutical sciences. The school's research program in pharmaceutical health services and pharmaceutical sciences is at the cutting edge of scholarly advances. A wide range of clinical service programs provides excellent pharmaceutical care to patients. Community outreach programs touch thousands of individuals through the Maryland Poison Center, the Peter Lamy Center for Drug Therapy and Aging, and the Maryland P<sup>3</sup> (Patients, Pharmacists, Partnerships) Program.

### **School of Nursing**

In 1889, Louisa Parsons, a colleague of Florence Nightingale, established the School of Nursing, one of the nation's oldest formal nursing training programs, at the University of Maryland. The School of Nursing has pioneered a variety of innovative educational programs, including the world's first nursing informatics graduate program. The school offers two entry-level options for students interested in a professional nursing career, the Baccalaureate of Science degree and a master's entry clinical nurse leader option (ranked No. 1 in the country by *U.S. News & World Report*). It also offers a range of specialties at the master's level, including informatics, community/public

health, and health services leadership and management. Nurse practitioner options, such as pediatrics, family, and adult/gerontology, and a nurse anesthesia option, also are offered through the school's Doctor of Nursing Practice (DNP) program.

The School of Nursing is affiliated with more than 300 hospitals and health care entities throughout Maryland and operates a mobile health clinic for people who are uninsured. In addition, the 154,000-square-foot building in Baltimore as well as the site at the Universities at Shady Grove in Rockville, Md., house state-of-the-art clinical simulation and standardized patient laboratories, giving students extensive hands-on training in a real-life setting. This approach to clinical instruction enhances students' learning experiences while providing vital health care services to Maryland residents.

The School of Nursing is ranked sixth among graduate nursing programs by *U.S. News & World Report* and is ranked 11th in receipt of research funding by the National Institutes of Health's National Institute of Nursing Research, with extramural research funding of \$3.2 million and total extramural funding of \$7.6 million in fiscal year 2015. Nursing students in the PhD program directly benefit from the school's research-intensive environment. In addition, the School of Nursing receives substantial funding from the Agency for Healthcare Research and Quality, Centers for Disease Control and Prevention, the National Institute for Occupational Safety and Health, and other sources.

**Graduate School**

Since 1917, the Graduate School has offered graduate education and training in biomedical, health, and human service sciences. The school currently offers 24 Master of Science and Doctor of Philosophy degree programs, along with three post-baccalaureate certificate programs. The Graduate School also offers dual degrees with the University's professional schools, including PhD/MD, PhD/PharmD, and PhD/DDS degree programs. The school also participates in inter-institutional studies in biochemistry, gerontology, and toxicology with other University System of Maryland campuses.

All doctoral students are actively engaged in research with faculty members to address some of society's most pressing problems and biomedical research's most challenging questions. These innovative efforts, supported by research grants and contracts, are undertaken collaboratively with the National Institutes of Health, the National Science Foundation, the University of Maryland Medical Center, the Baltimore Veterans Affairs Medical Center, the Institute of Human Virology, the University of Maryland Biotechnology Institute, and others.

The Graduate Program in Life Sciences (GPILS) offers cutting-edge research training in basic, biomedical, clinical, and population sciences. Graduate programs cover the entire range of biomedical research, from the basics of protein structure and molecular biology, through integrative systems physiology, virology, and vaccine development up to behavior, cognition, population-based genetics, and the impact of the environment on human health. The programs place a special emphasis on the importance of translational research. Graduate programs are independent from

departments and consist of faculty in the basic science and clinical departments of the School of Medicine, School of Dentistry, School of Nursing, a wide array of Internationally recognized Organized Research Centers and institutes on campus in addition to collaborations with other University System of Maryland campuses.

**School of Social Work**

In response to growing social and cultural needs, the School of Social Work opened in 1961 with a mission to develop practitioners, leaders, and scholars to advance the well-being of populations and communities and to promote social justice. As national leaders, the school creates and uses knowledge for education, service innovation, and policy development. Currently, the School of Social Work is educating the vast majority of social workers throughout Maryland. Students come to the School of Social Work from more than 20 states, the District of Columbia, and several foreign countries.

In a short period of time, the School of Social Work has become the leader in social work education in the state, while becoming known to a national and international audience. Among the top 20 graduate-level social work programs in the nation, the School of Social Work produces outstanding social workers whose practice advances the well-being of all the people they serve, especially members of populations at risk. The school also focuses on services through Social Work Community Outreach Service (SWCOS). Much of the school's research supports SWCOS's work. The School of Social Work provides 500,000 hours of social work services per year within the state of Maryland and surrounding communities and the school's faculty ranks among the nation's best for the number of research articles published in scholarly social work journals.

## DISTINGUISHING CHARACTERISTICS

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### PROFESSIONAL AND GRADUATE EDUCATION

As the state of Maryland's academic health, law, and human services institution, the University includes a unique configuration of schools and educational programs with extensive responsibilities for clinical care and legal and social services. UMB's student mix differs markedly from other University System of Maryland institutions. Only 14 percent of UMB's students are enrolled in its three baccalaureate degree programs; namely, nursing, dental hygiene, and medical and research technology. The remaining 86 percent of students are in post-baccalaureate programs leading to licensure, including medicine (MD), law (JD), dentistry (DDS), nursing (clinical masters, DNP), pharmacy (PharmD), social work (MSW), public health (MPH), physical therapy (DPT), genetic counseling, preventive medicine, toxicology, and pathology among others.

The campus also offers the traditional research-based Doctor of Philosophy (PhD) and Master of Science (MS) degree programs in nursing, social work, pharmaceutical science, pharmaceutical health services research, oral pathology, and various biomedical science disciplines and interdisciplinary programs such as neuroscience. UMB's hands-on approach, with experiential training at the School of Medicine, School of Pharmacy, School of Social Work, and Carey School of Law, among others, simulation labs at the School of Nursing, a lab with over 200 mannequin heads at the School of Dentistry and more, allow students to learn by doing. Community outreach also adds to their skill set in a real-life setting. Team exercises, such as those on IPE Day, allow students to appreciate and trust their colleagues in other disciplines.

### CLINICAL CARE AND SERVICE

Because of its health schools' clinical departments and programs and its affiliated practice plans and hospitals, UMB is uniquely qualified within the public higher education sector in Maryland to offer students clinical richness and to transfer results from basic laboratory research to the patients' arena by developing new treatments for disease, and establishing best practices for clinical care. Moreover, the presence and active involvement of the Carey School of Law and the School of Social Work enable UMB faculty and students to investigate the interaction of health sciences with the law and human services, thereby advancing public policy and improving the health and welfare of the community and its members.

### BIOMEDICAL RESEARCH

UMB builds upon its excellence in basic science and biomedical/biohealth research to develop large, interprofessional projects of national and global stature. An illustrative, but not exhaustive list includes:

- neuroscience
- psychiatric disease
- obesity
- diabetes
- family welfare
- stem cell and regenerative medicine
- HIV/AIDS
- celiac and other autoimmune and inflammatory diseases
- global health
- cardiology and cardiovascular disease
- nanomedicine and cellular delivery
- infectious diseases
- cancer
- vaccinology
- genomics
- proteomics, and
- personalized medicine.

UMB combines cutting-edge biomedical research and exceptional clinical care. Each year, UMB’s faculty and students make several hundred trips to 100+ countries, where they teach, study, conduct research with their collaborators, and provide clinical care in underserved communities. For instance, UMB’s medical school has research and treatment facilities in more than 35 countries and carried out the very first clinical trials for an Ebola vaccine in the U.S. and co-led the first Ebola vaccine trials in West Africa in 2014-2015.

**UNIVERSITIES AT SHADY GROVE**

UMB is one of nine University System of Maryland institutions that offer programs at the Universities at Shady Grove (USG) in Rockville, Md., a convenient location in the high-tech corridor of Baltimore and Washington, D.C. More than 400 UMB students attend USG, where they are taught by 15 full-time faculty in residence and numerous others from the Baltimore campus through asynchronous distance learning. Nursing students in UMB’s BSN and RN-to-BSN programs have the ability to attend courses and complete their entire program at USG as do students in the PharmD (Doctor of Pharmacy) program at the School of Pharmacy. Most recently, in 2015, the School of Social Work was approved by the Maryland Higher Education Commission (MHEC) to offer a program at USG where students could satisfy all credit requirements for the Master of Social Work (MSW) degree. (Prior to obtaining MHEC full program approval, a limited number of MSW students took courses at USG.) This expansion of the MSW program at USG has resulted in an increase in courses offered at USG, an increase in the number of students taking classes at USG, and an increase in services for MSW students at USG. The first cohort of approximately 50 MSW students completing their degree requirements at USG was admitted in the fall semester of 2015 and it is expected that a second cohort of 50 students will be admitted in fall 2016.

USG, as a UMB additional location, provides a full complement of centralized on-site student, academic, and administrative services.

**SHADY GROVE ENROLLMENT BY DEGREE PROGRAM**

Degree Program	Students Enrolled
Nursing	290
Pharmacy	120
Social Work	89
<b>Total</b>	<b>499</b>

**UNIVERSITY OF MARYLAND BIOPARK**

The University of Maryland BioPark is a privately developed biomedical research park on UMB’s campus. The mission of the BioPark is to support UMB’s efforts to commercialize breakthrough therapies, diagnostics, and devices and to bring community-friendly economic development to the Westside of Baltimore. Eleven years ago, the site of the BioPark was vacant land and dilapidated buildings in one of the poorest communities of Baltimore City. Today, the BioPark is the largest biotech cluster in Baltimore City, with three dozen tenants, including early-stage bioscience companies based on technologies developed at UMB and other universities; research and development facilities of international pharmaceutical companies and clinical research organizations; translational research and clinical centers of UMB; and degree programs for bioscience (AA) and business (MBA). More than 700 workers are employed at the BioPark and over 800 community residents receive training for entry-level jobs in biomedical laboratories throughout the region. Currently, the BioPark consists of four buildings, totaling 595,000 square feet, and \$400 million in capital investment. When the BioPark is complete, it will grow to 2 million square feet, over \$1 billion in capital investment, and more than 2,500 jobs. The BioPark has been developed in full consultation and with the full support of the community.

In addition to creating jobs and improving public safety, the BioPark has invested over \$2 million in community priorities, including local organizations, training programs, public schools, community parks, and streetscape.

**CURRENT BIOPARK STATISTICS**

**Jobs:** 700      **Square Feet:** 595,000

**Capital Investment:**  
\$400 million

**PROJECTED BIOPARK STATISTICS**

**Jobs:** 2,500      **Square Feet:** 2 million

**Capital Investment:**  
\$1 billion

**CARNEGIE CLASSIFICATION**

UMB is one of 27 U.S. public institutions whose official Carnegie Classification is “Special Focus Institution — Medical Schools and Medical Centers.” This classification is used for institutions that include a medical school and other health-related professional schools, and do not have large comprehensive undergraduate programs. Other examples include the University of California, San Francisco; Oregon Health Sciences University; University of Massachusetts, Worcester; and University of Texas Health Sciences Center, San Antonio. Within the Middle States region, only

three other schools, SUNY Downstate Medical Center, SUNY Upstate Medical University, and the University of Puerto Rico (UPR) Medical Sciences Campus, share this designation (see table below).

**SPECIAL FOCUS INSTITUTION – MEDICAL SCHOOLS AND MEDICAL CENTERS**

Classification	Category
Level	4 year or above
Control	Public
Student Population	6,329
Basic	Special Focus: Medical Schools & Center
Undergraduate Instructional Program	Special Focus Four-Year Colleges and Universities
Graduate Instructional Program	Research Doctoral: STEM-dominant
Enrollment Profile	Majority graduate
Undergraduate Profile	Four-year, medium full-time, inclusive, higher transfer-in

**SPECIAL FOCUS INSTITUTIONS IN MSCHE REGION**

Institution	Enrollment/Headcount	Schools
SUNY Downstate Medical Center	1,865	Medicine, Nursing, Graduate, Public Health, Other health professions, e.g., PT
SUNY Upstate Medical University	1,514	Medicine, Nursing, Graduate, Other health professions, e.g., PT
UPR Medical Sciences Campus	2,221	Dentistry, Law, Medicine, Nursing, Pharmacy, Public Health, Social Sciences (i.e., Social Work and Psychology)
UMB	6,329	Dentistry, Law, Medicine, Nursing, Pharmacy, Social Work, and other health professions, e.g., PT

## NOTABLE DEVELOPMENTS SINCE 2006 SITE VISIT

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### STRATEGIC PLANNING

UMB has a long, illustrious history of achieving excellence and providing benefit to the state. However, the University, like all institutions of higher education, finds itself in challenging times. Yet these challenges also provide great opportunities. The University's strategic plan is designed to take advantage of these opportunities. UMB created its strategic plan in careful alignment with the USM Board of Regents' strategic plan. The plan was created from the work of more than 140 faculty, staff, students, partners, and friends who dedicated tremendous time and energy to its completion. Hundreds more participated in town halls, interactive feedback sessions, focus groups, surveys, and online feedback. The participation was exceptional, but perhaps more impressive is the genuine enthusiasm at all levels for moving the University forward. Eight themes were identified as major areas of focus for the strategic plan. Work groups consisting of faculty, staff, and students from across the University, with input from town halls, online surveys, and community focus groups, developed the goals and tactics for each theme. The themes are as follows:

- Achieve Pre-Eminence as an Innovator
- Promote Diversity and a Culture of Inclusion
- Foster a Culture of Accountability and Transparency
- Excel at Interdisciplinary Research and Interprofessional Education, Clinical Care and Practice, and Public Service
- Develop Local and Global Initiatives that Address Critical Issues
- Create an Enduring and Responsible Financial Model for the University
- Drive Economic Development
- Create a Vibrant, Dynamic University Community

The implementation of the strategic plan is guided by the following core values, as defined during the planning process:

- **Accountability:** The University is committed to being responsible and transparent.
- **Civility:** The University expects interactions to be professional, ethical, respectful, and courteous.
- **Collaboration:** The University promotes teamwork that fosters insightful and excellent solutions and advancement.
- **Diversity:** The University is committed to a culture that is enriched by diversity and inclusion, in the broadest sense, in its thoughts, actions, and leadership.
- **Excellence:** The University is guided by a constant pursuit of excellence.
- **Knowledge:** The University's industry is to create, disseminate, and apply knowledge.
- **Leadership:** The University continuously strives to be a leader and to develop leaders.

In January 2016, the president named the co-chairs for the 2017-2021 Strategic Plan and launched the formal planning process. The planning process will occur over six months, and the strategic plan will be adopted by the Executive Cabinet in June 2016.

### **MPowering THE STATE**

University of Maryland: *MPowering the State* is a special working relationship between the University of Maryland, Baltimore (UMB) and the University of Maryland, College Park (UMCP) that promotes innovation and impact through collaboration. Launched in 2012, it leverages the sizable strengths of both universities to advance interdisciplinary research, create new opportunities for students, and solve important problems for the people of Maryland and the nation.

In 2011, the Maryland General Assembly charged the University System of Maryland Board of Regents and thus both its founding campus and its flagship institution — UMB and UMCP, respectively — with developing a plan to have an even greater impact on the state, its economy, the job market, and the next generation of innovators. The universities are committed to this charge, and work together to craft a plan, implement it, and assess its effectiveness. The new working relationship demands teamwork and collaboration; joint efforts are championed and supported at the highest levels of the academic structure.

In fewer than four years, *MPowering the State* has transformed the way UMB and UMCP approach research, education, and service in the state. It is the vehicle that joins the complementary resources of two great universities — their leadership, faculty, researchers, and students — to boost joint research, inspire education programs that enrich, challenge, and attract the best and the brightest, spur technology transfer, and drive economic development. *MPower* is a model of what committed collaboration can achieve. With its shared vision, *MPowering the State* is advancing Maryland's competitiveness and reputation as a national leader.

Among *MPowering the State's* initiatives are:

- a Center for Health-Related Informatics and Bioimaging (CHIB), which joins researchers in computer science and engineering at UMCP with experts in genomics and clinical medicine at UMB
- an Agriculture Law Education Initiative (ALEI), which gives state farmers expanded access to resources from UMB, UMCP, and University of Maryland, Eastern Shore
- the SAFE (Support, Advocacy, Freedom and Empowerment ) Center for Human Trafficking Survivors, which draws on the combined resources and disciplines of both universities to address human trafficking
- the Institute for Bioscience and Biotechnology Research (IBBR), which helps cross-disciplinary team approaches to scientific challenges, tech development, and education flourish by leveraging the research strengths in biological and quantitative sciences, medicine, and engineering at both universities
- new courses and programs for students such as MLAW, which offers joint undergraduate courses and experiential opportunities that are unique in the U.S.
- seed grants (26 thus far) that promote cross-university research by creative teams of investigators extending boundaries
- UM Ventures, the joint technology transfer operation of UMB and UMCP that has catalyzed commercialization of university inventions
- the Maryland Center of Excellence in Regulatory Science and Innovation (M-CERSI), an initiative funded by the Food and Drug Administration (FDA) that joins UMB and UMCP researchers with FDA staff to improve the ways drugs and medical devices are evaluated

The oversight of *MPowering the State* is vested in a joint Steering Committee, whose members have been appointed by the presidents of UMCP and UMB. The Steering Committee reports to the two presidents, who report to the chancellor and the Board of Regents.

## INTERPROFESSIONAL EDUCATION

Interprofessional education (IPE), a priority at UMB since the arrival of Dr. Perman as president, reached new heights in 2013 with the formation of the Center for Interprofessional Education. The center, which serves as a resource and as a connector for IPE initiatives across UMB, is headed by Jane M. Kirschling, PhD, RN, FAAN, who, in addition to being the center's director and University director of IPE, is dean of the School of Nursing. The center advances President Perman's vision for preparing all UMB students to provide high-quality, affordable health care and human services within a team-based model. Formation of the center was announced at IPE



Day in April 2013. During this event, 309 health and human services students and 114 faculty gathered to form multidisciplinary teams to tackle complex scenarios such as “Crossing the Line,” a case staged at the School of Dentistry in which a child’s broken teeth may be a clue to child abuse. Since then, health fairs and Interprofessional Critical Care Simulation exercises have emerged, as well as an enhanced annual Interprofessional Patient Management Competition, where teams of students representing UMB’s schools pool their knowledge to devise a treatment strategy for a hypothetical patient whose case presents complex medical as well as legal issues. A national leader in interprofessional education, UMB teaches future physicians, lawyers, dentists, nurses, pharmacists, social workers, and biomedical scientists to work together for optimal patient and client care. President Perman more than theorizes on the importance of IPE. He demonstrates it with a weekly President’s Clinic where Dr. Perman, a pediatric gastroenterologist, joins rotating groups of students selected to represent all the schools in treating young University of Maryland Medical Center patients.

IPE also has been emphasized to the UMB students studying at the Universities at Shady Grove (USG) in Rockville, Md. During the 2015-2016 academic year, USG’s Committee for Interprofessional and Interdisciplinary Education Strategies (CIPES) held interprofessional courses and events involving nearly 300 students. UMB’s nursing, pharmacy, and social work students participated in “Preparing for Tomorrow: Healthcare Workforce Pipeline Project,” “Interprofessional Clinical/Rotation Experience at Mercy Health Clinic,” and “Poverty Simulation” projects. And Heather Congdon, PharmD, BCPS, CDE, the School of Pharmacy’s assistant dean at Shady Grove and an original co-director of UMB’s Center for Interprofessional Education, gave a presentation on “Development & Implementation of an Interprofessional SOAP Note Grading Tool.”

## ACADEMIC TRANSFORMATION

In fiscal year 2014, the General Assembly approved UMB’s plan to invest \$1.8 million from the fund balance in new funding for academic enhancements. That funding is already paying dividends by transforming UMB’s academic programs, supporting student success, and expanding the health care workforce. For example, a new program has been added to respond to the need for more primary care clinicians, a need well-documented both nationally and in Maryland. Physician assistants are trained to work with a physician to deliver team-based care, which can extend the reach and productivity of physician providers. In December 2010, Anne Arundel Community College (AACC) approached UMB about developing a Master of Science in Health Sciences (MSHS) degree program. This was the result of changes in the credential recognized for entry into the Physician Assistant profession and health policy changes occurring at the state and national levels. In collaboration with faculty from AACC, UMB faculty from multiple disciplines designed the framework for the MSHS, which is delivered completely online. In addition, course redesign initiatives that incorporate technology to enhance teaching and learning are underway in the Graduate School as well as in the schools of Nursing, Pharmacy, and Social Work.

## COMMUNITY ENGAGEMENT

The University has a long and distinguished history of engagement spanning several decades, particularly in the West Baltimore communities. During the past five years the University has moved to bring about better cohesion and coordination of its many disparate initiatives to maximize their collective impact. In 2013, President Perman created the Center for Community-Based Engagement and Learning to better coordinate faculty scholarship and service learning that improves the health and welfare of UMB’s neighbors. The center has undertaken such initiatives as mapping UMB’s

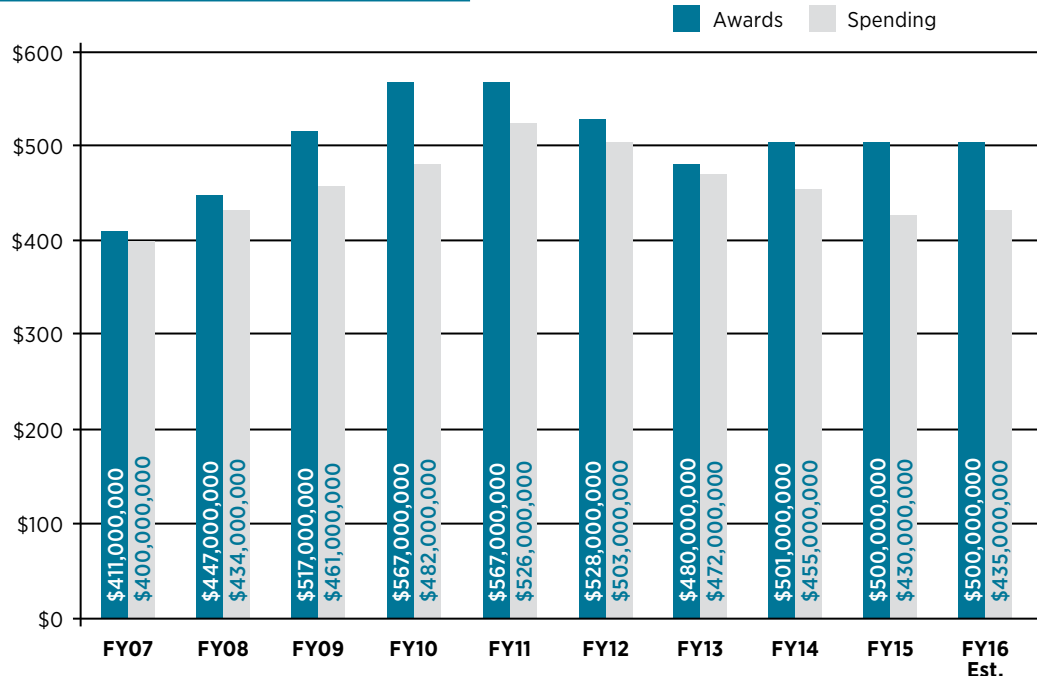
extensive service-learning activities to enhance collaboration; coordinating violence prevention initiatives with the Baltimore City Health Department; and mentoring student groups involved in community engagement. Each year, the center supplies grants for community-engaged faculty projects, and its Faculty Fellows Program has developed a network of faculty, staff, and students committed to advancing social justice by sustaining close working partnerships with West Baltimore residents and organizations. In 2014, President Perman established the Office of Community Engagement to coordinate UMB's abundant school-led, student-led, and employee-led outreach; to more aggressively move the needle on community health, wealth, and social indicators; and to hold the University accountable for doing so. The office introduced a "place-based" community engagement strategy to bring more robust and better aligned services to UMB's neighbors, and to more clearly articulate to students, faculty, and staff where community-based service and scholarship might

have the greatest impact. The University has identified 1 square mile surrounding the campus as the focus of its activities, where neighborhood performance in every critical domain — health, education, employment, income, and safety — lags far behind the citywide average. This focus resulted in the fall 2015 opening of the UMB Community Engagement Center in West Baltimore, a space where the University provides services to nearby residents and works with them to strengthen schools, create jobs, and drive neighborhood development.

**CHANGES IN RESEARCH FUNDING**

The University's entrepreneurial revenues are derived from federal and state research grants and contracts, awards from foundations and corporations, and patient care. Leading up to FY10, UMB saw tremendous growth with double digit yearly increases. Beginning in FY10, revenue from contract and grant awards declined from previous years, particularly in National Institutes of Health (NIH) funding.

**UMB OVERALL RESEARCH FUNDING**



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Since these declines affected both direct and indirect cost recoveries, they put substantial pressure on the University’s budget to fund the largely fixed expenses related to facilities and infrastructure for research. Multiple approaches were taken to counteract these effects, including decreases in costs, prioritized reallocation of internal resources, and diversification of funding sources. Additional efforts were placed on attracting corporate sources of basic science funding, including the establishment of several major corporate relationships, such as a new MedImmune partnership. Efforts were made to streamline the clinical research process at all steps, including corporate contracting and Institutional Review Board review, while maintaining quality and compliance. The faculty was urged to increase the number of research grant submissions. Emphasis was placed on identifying and competing for larger grants such as program projects and “U” awards from the NIH.

The *MPowering the State* initiative also has yielded new funding opportunities and awards (see tables below). Through *MPowering the State*, UMB has established a joint research and innovation seed grant program to promote research and collaboration across disciplinary boundaries with UMCP. To date, 26 joint research and innovation seed grants have been awarded to more than 50 researchers.

There has been significant recovery of extramural funding, but UMB still remains highly focused on these additional efforts. This current level of stabilization is encouraging although there is clearly a need to strengthen UMB’s current programs and further diversify its revenue funding streams.

**MPOWERING THE STATE RESULTS IN RESEARCH FUNDING**

	Total FY12	Total FY13	Total FY14	Total FY15	Total FY12-15
<b>Joint Proposals Submitted</b>	4	68	114	112	298
<b>Joint Proposals Awarded</b>	1	18	26	36	81
<b>\$ Awarded</b>	\$2,949,998	\$14,552,295	\$27,090,060	\$26,178,105	\$70,770,458

**MPOWERING THE STATE RESULTS IN TRANSLATING RESEARCH**

	2011	2012	2013	2014	2015
<b>Invention Disclosures</b>	206	265	264	366	306
<b>Startups</b>	5	7	11	8	10
<b>Licenses</b>	28	34	41	51	56

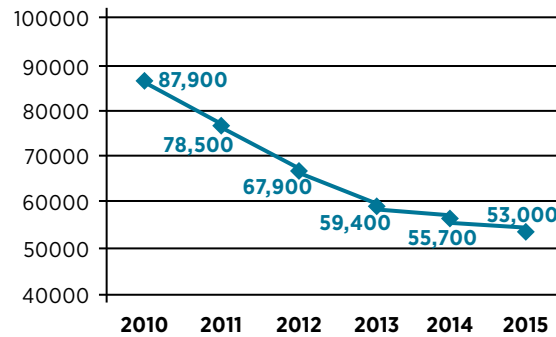
**LAW SCHOOL ENROLLMENT**

The national trend in declining enrollments facing law schools also has impacted the Francis King Carey School of Law at UMB. The collapse of the job market for law school graduates has persuaded many potential students not to apply for law school. The University has created a multi-year plan to rebalance and revitalize this important school. UMB is funding this transformation by utilizing its existing resources, increasing efficiency, and by supporting the diversification of the school’s revenue streams. The Carey School of Law has pursued diversification of its revenue streams by attracting new segments of the population with initiatives such as a Master

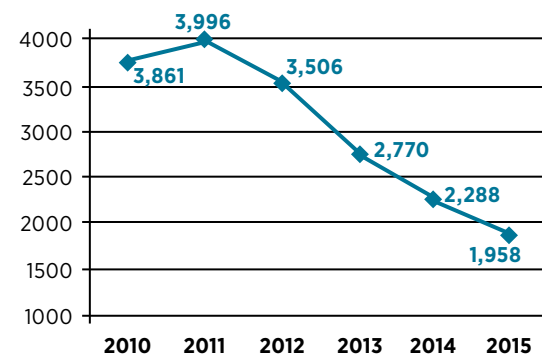
of Science in Law (MSL) program providing new skills for experienced professionals, a renewed commitment to public service, empowering women in law, a business law program focusing on fundamentals, and other current topics such as cybersecurity, intellectual property, environmental law, and the school’s Center for Health and Homeland Security. The inaugural entering class of 29 MSL students began their coursework in fall 2015. Projected enrollment for the program is an entering class of 50 each year for a total enrollment of 100 students at any given time. The law school expects to return to stability, albeit with smaller class sizes in the JD program and expansion of new master’s level programs, by the beginning of the 2017-2018 academic year.

**LAW SCHOOL APPLICATIONS IN CONTEXT**

**NATIONAL APPLICANTS**



**MARYLAND LAW APPLICANTS**



**MARYLAND LAW ADMISSIONS PICTURE**

Entering Class	2015	2014	2013	2012	2011
<b>Applications</b>	1,958	2,288	2,770	3,506	3,996
<b>Change from Prior Year</b>	-14%	-17%	-21%	-12%	+3%
<b>Offers of Admission</b>	1,054 54% Admitted	1,072 47% Admitted	1,229 44% Admitted	1,176 33.5% Admitted	1,458 36.5% Admitted
<b>Class Size</b>	204 175 Day/29 Night	202 176 Day/26 Night	206 173 Day/33 Night	264 219 Day/45 Night	294 222 Day/72 Night
<b>Yield</b>	19.4%	18.8%	16.8%	22.4%	20%
<b>Scholarship Spending</b>	\$1.3M	\$1.02M	\$0.93M	\$1.7M	\$0.65M
<b>LSAT</b>	157	159	159	162	162
<b>GPA</b>	3.46	3.50	3.53	3.65	3.60

### **THE DEATH OF FREDDIE GRAY AND THE APRIL 2015 BALTIMORE PROTESTS**

On April 19, 2015, a 25-year-old man from West Baltimore named Freddie Gray died from injuries sustained in police custody. In the days following Gray's death and funeral, Baltimore saw a wave of both peaceful demonstrations and violent unrest. The protests provided added urgency to the University's community engagement efforts. An initiative, UMB Responds, was formed shortly after the violence to coordinate Universitywide activities ranging from collecting goods, recruiting volunteers, to joining broad engagement efforts such as #OneBaltimore. As part of UMB Responds, the School of Nursing deployed one of the Governor's Wellmobiles, a mobile health clinic, to an area where the local pharmacy had been destroyed. Residents were encouraged to get referrals to needed health services by entering the van. Additionally, the Rite Aid Corp. made a \$10,000 gift, upon reopening a store that had been destroyed, to a Baltimore public school. The grant application was co-authored by the program director of the School of Social Work's Promise Heights program, which works to improve the lives of Baltimore children.

On campus, the University created a space for its members to openly discuss the events. At a forum in May, students, faculty, and staff spoke candidly about their experiences with race on and off campus and called for action on the part of the UMB administration to explore and address issues of career advancement among employees of color; cultural competency among students, faculty, and staff; and the University's engagement with the community. In July, a second forum shared specific recommendations made by the Diversity Advisory Council (DAC) in these three areas. President Perman supplied further updates in his December newsletter and a spring 2016 update is planned.

Also, an ad-hoc committee of UMB staff and faculty got together to publicize, campuswide, their personal availability to discuss the campus climate after the protests with a particular emphasis on supporting students of color. During this time, admissions officers also worked to assure prospective students of their safety on campus. Campus police and public safety conducted an "after action" review and have used the results to bolster their planning for the upcoming trials of the police officers charged in Mr. Gray's death.

Additionally, more than a dozen Carey School of Law faculty designed an eight-week course — Freddie Gray's Baltimore: Past, Present and Moving Forward — that explored the causes of, and possible solutions for, the unrest and ways in which students could become engaged. The commitment to this course and the speed with which it came together was exemplary, attracting 70 law students, 15 social work students, and several community members in fall 2015. The course is again offered this spring at UMB and the University of Maryland, College Park. Also offered for the first time this spring is a tuition-free, 1-credit Social Justice in Our Community course available to all students. Students will receive hands-on, professional experience with community health programs by working with partner organizations in the community surrounding UMB. Through service learning, students will learn how community health programs are developed, organized, implemented, and evaluated as well as how interprofessional teams successfully function, how to interact with individuals and groups living in UMB's community, and how to report on their observations to peers and supervisors.

## NOTABLE ACCOMPLISHMENTS

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### FACULTY ACTIVITIES

The new UMB Center to Advance Chronic Pain Research is directed by Susan Dorsey, PhD, RN, FAAN, in the School of Nursing and Joel Greenspan, PhD, in the School of Dentistry. The center brings together pain experts and research from different disciplines so that UMB might fulfill the most basic promise of clinical care — to relieve patients' pain and unburden them of suffering.

The School of Social Work is a leader in the Community Schools movement, fast becoming the standard model for urban schools, which must address complex community trauma like regular exposure to violence and loss. Community Schools wrap their students and families in a safety net of services that ultimately enables success.

Robert Ernst, PhD, in the School of Dentistry and David Goodlett, PhD, in the School of Pharmacy are using mass spectrometry to create a bacterial library so that physicians can more quickly and accurately diagnose a patient's infection. Fast and accurate pathogen identification is sorely needed in hospitals and clinics with patients who have potentially deadly infections. A library of chemically bar-coded bacteria will make diagnosis quicker, cheaper, and better.

Sunjay Kaushal, PhD, MD, in the School of Medicine discovered robust regenerative capacity in the cardiac stem cells of infants with congenital heart disease. In rodent models, the cells sped recovery and strengthened heart function. Now Dr. Kaushal's team has gotten FDA approval to transplant the cells he harvests back into the hearts of his young patients, the first clinical trial with children. Ultimately, Dr. Kaushal hopes the procedure will delay the need for more surgeries.

The Carey School of Law is teaming up with the School of Social Work to tackle long-standing issues of social justice in our homes, our communities, our schools, our prisons. By combining social work and legal expertise, the schools aim to dramatically improve the delivery of services to those suffering injustice and to effectuate groundbreaking policy reforms at the state and national levels.

Eleanor Peretto, PhD, MS, in the School of Pharmacy has joined a national project focused on improving patient value in the delivery of health care. By combining large amounts of genomic data with data on the environments in which patients live and receive their care, Dr. Peretto and her colleagues can begin to understand how the interplay of a patient's genetics and behaviors can inform interventions that support precision medicine — getting the right treatment to the right patient at the right time.

The scholarship and activism of Danielle Citron, JD, in the Carey School of Law is poised to change the way we look at cyber harassment and abuse. She's working with national leaders to strengthen legislation and law enforcement around aggressive cyber behavior and to promote greater privacy protections online. Ms. Citron visits the country's biggest technology companies — Google, Facebook, Microsoft — and talks about the challenges of harnessing media that hold so much promise and yet often cause so much pain.

The School of Medicine's Institute for Global Health is at work around the world to prevent, control, and eradicate diseases of global impact. Its Center for Vaccine Development carried out the very first clinical trials for an Ebola vaccine in the U.S. and co-led the first Ebola vaccine trials in West Africa. The school's Institute of Human Virology has treated 1 million patients with HIV/AIDS in several African and Caribbean nations, and 6,000 patients back home in Baltimore.

**ENTREPRENEURIAL ACTIVITIES**

UMB is aggressive in moving science out of the lab and into the marketplace, where it can have a meaningful impact on human health and well-being. Nearly 100 UMB inventions are pushed to the marketplace each year, and new startup companies — launched with UMB's intellectual property — are raising private capital to accelerate the transition from idea to innovation to impact.

Harpoon Medical is commercializing a device for minimally invasive heart surgery. The image-guided surgical tool allows repair of the heart's mitral valve without opening the patient's chest or stopping the heart. The technology was invented in the Division of Cardiac Surgery in the School of Medicine.

Analytical Informatics is a startup whose software improves health care quality and operational efficiency by aggregating huge quantities of health care data and giving providers real-time access to it. The software was developed — and the company founded — by faculty researchers in the School of Medicine.

Breeth, Inc. is developing the world's first portable artificial lung. It's a wearable device for patients suffering respiratory failure and cardiopulmonary collapse, the first such out-of-hospital device in the commercialization pipeline. The technology was invented in the School of Medicine's Program in Lung Healing.

Tokai Pharmaceuticals raised \$97 million in a fall 2014 initial public offering, and began Phase III clinical trials on a drug to treat prostate cancer in summer 2015. The drug candidate was developed by faculty in the School of Medicine.

Profectus BioSciences raised \$50 million in 2014 to develop its Ebola vaccine candidate. In spring 2015, the vaccine was shown to be effective and safe in non-human primates. Profectus is now producing the vaccine material for an HIV/AIDS vaccine that began Phase I clinical trials at UMB in fall 2015. Profectus was co-founded by the director of the School of Medicine's Institute of Human Virology.

**SUMMARY**

At a time when the state of Maryland and our nation grow ever more dependent on the health, law, and human services workforce UMB educates; on the innovation economy UMB

nurtures; and on the research, care, and service UMB provides, the University is poised to do all it can to serve its mission as a public institution.