

WE ARE UMB

FY 2020 Operating Budget Testimony to the Maryland General Assembly

PRESENTED BY
Jay A. Perman, MD
President

February 2019



The University of Maryland, Baltimore (UMB) is committed to improving the human condition through leadership in education, research, clinical care, and public service.

We train the professionals who secure the health and well-being of Maryland's citizens and who promote the rule of law. We create the knowledge that cures disease and strengthens communities, locally and globally. We develop the practitioners and innovators who drive discovery and fuel economic growth.

I am grateful to Gov. Larry Hogan and the Maryland General Assembly for their continued support of UMB as we strive to keep Maryland strong. In the pages that follow, you'll see some of the ways in which UMB is expanding efforts to train Maryland's workforce, care for its people, and invigorate its economy.

We remain eager to work with you in building Maryland's future — one shaped by knowledge, innovation, and, always, deep compassion.

Sincerely,

A handwritten signature in black ink that reads "Jay A. Perman". The signature is written in a cursive, flowing style.

JAY A. PERMAN, MD

President

University of Maryland, Baltimore

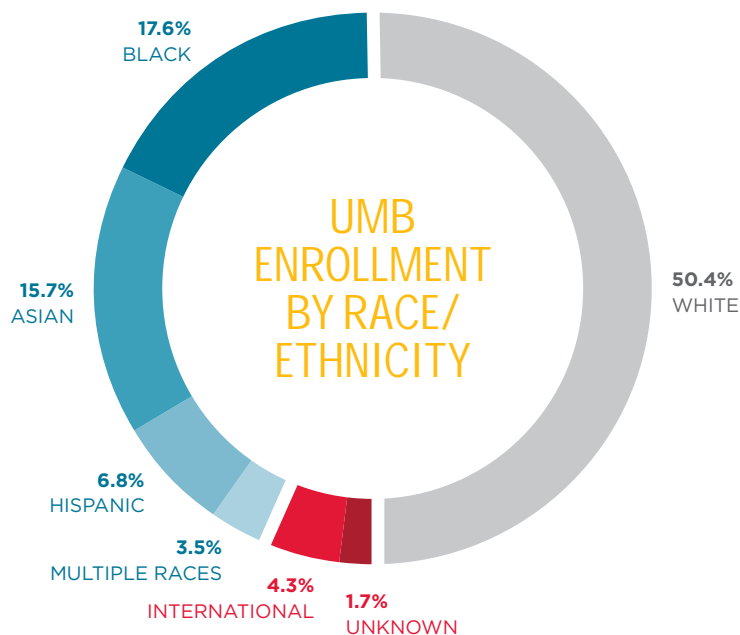
UMB is Maryland's public health, law, and human services university.

7 SCHOOLS

MEDICINE | LAW | DENTISTRY | PHARMACY | NURSING | GRADUATE | SOCIAL WORK



6,649 FACULTY AND STAFF
6,777 STUDENTS



74 DEGREE AND
CERTIFICATE PROGRAMS



76%

IN-STATE STUDENTS



44%

STUDENTS OF COLOR



53%

SHARE OF MARYLAND'S
PROFESSIONAL PRACTICE
DOCTORAL DEGREES
CONFERRED BY UMB

UMB is a powerhouse economic engine, returning \$13 to Maryland for every dollar of state support.

17,368 JOBS CREATED

\$3.0 BILLION TOTAL IMPACT ON MARYLAND'S ECONOMY

\$159.9 MILLION STATE AND LOCAL GOVERNMENT REVENUES

\$13 UMB'S RETURN ON INVESTMENT FOR EVERY \$1 OF STATE SUPPORT

\$1.2 BILLION TOTAL UMB REVENUE

\$667.4 MILLION GRANTS AND CONTRACTS

\$1.3 MILLION GRANTS AND CONTRACTS PER CORE FACULTY MEMBER

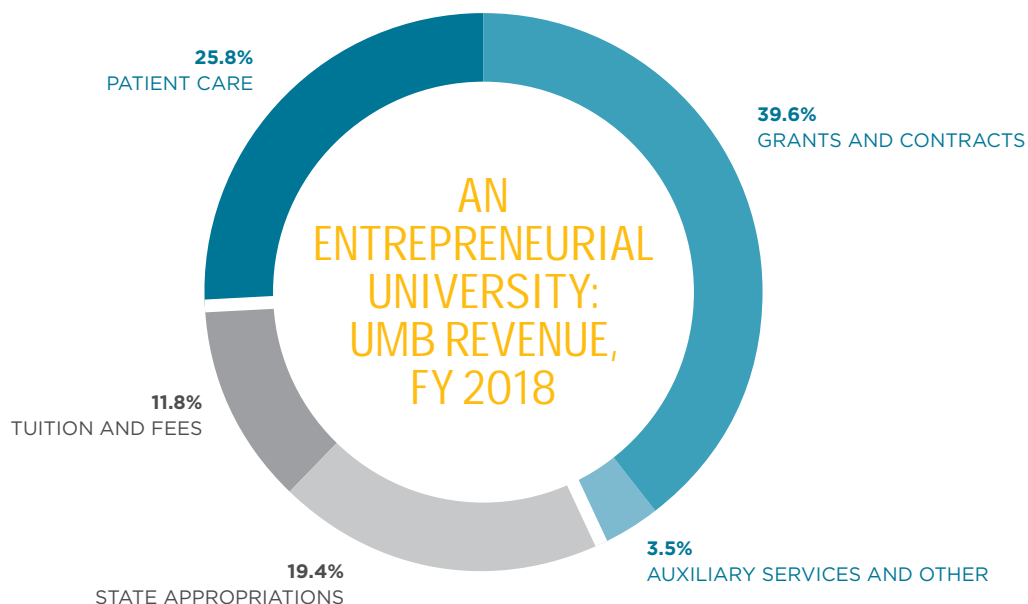
69% SHARE OF REVENUE GENERATED BY ENTREPRENEURIAL ACTIVITIES

\$7 BILLION TOTAL IMPACT ON MARYLAND'S ECONOMY

(with the University of Maryland Medical Center and affiliated physician practices)

All data: FY 2018

UMB generates 69 percent of its revenue through entrepreneurial activities: grants and contracts, patient care, and auxiliary services.



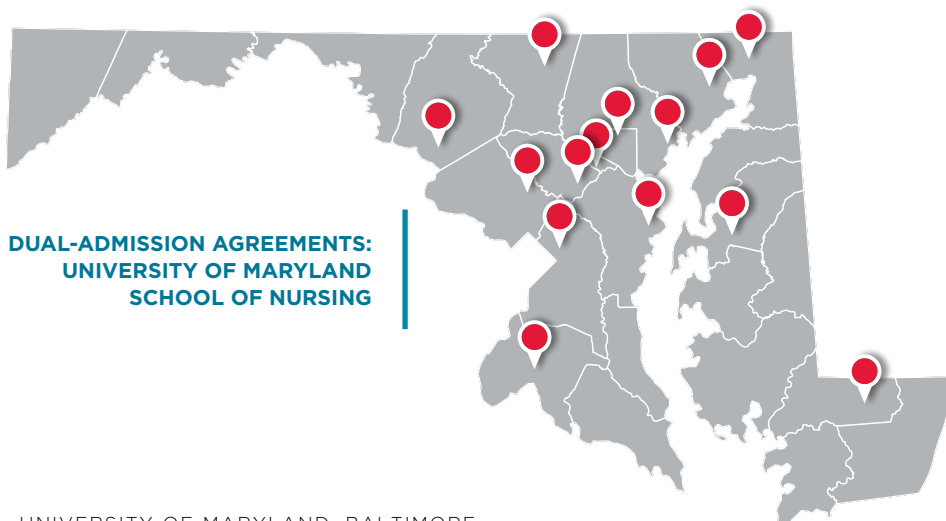
In-state students comprise 76 percent of UMB's overall enrollment. Many of our graduates are the state's front-line practitioners, tackling Maryland's greatest challenges in health, law, and human services.

PROFESSIONAL PROGRAM ENROLLMENT BY RESIDENCY

DEGREE PROGRAM	TOTAL ENROLLMENT	IN-STATE STUDENTS
Dentistry—DDS	522	75.1%
Law—JD	643	68.3%
Medicine—MD	650	83.8%
Nursing—BSN	849	95.4%
Nursing Practice—DNP	570	91.2%
Pharmacy—PharmD	596	82.9%
Physical Therapy—DPT	186	85.5%

UMB EDUCATES MARYLAND'S NURSING WORKFORCE

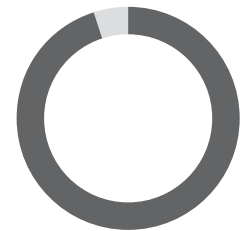
UMB's School of Nursing has dual-admission agreements with 13 of the 15 Maryland community colleges that offer an associate degree in nursing. Across the state, these dual-admission agreements allow students to transition seamlessly from their two-year program into the School of Nursing's BSN program.



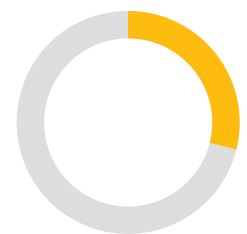
**PROFESSIONAL PRACTICE
DOCTORAL DEGREE:**
80.5% IN-STATE
TOTAL ENROLLMENT:
3,167



MASTER'S DEGREE
73.0% IN-STATE
TOTAL ENROLLMENT:
2,088



BACHELOR'S DEGREE
95.4% IN-STATE
TOTAL ENROLLMENT:
909



DOCTOR OF PHILOSOPHY
29.1% IN-STATE
TOTAL ENROLLMENT:
444

Every year, UMB provides \$40 million in uncompensated care and more than 2 million hours of volunteer service to citizens throughout Maryland.

SECURING MARYLAND'S NURSING WORKFORCE

Nurses make up the single largest segment of the U.S. health care workforce, and Maryland's demand for more (and more highly educated) nurses remains acute, at least in the short term: The state is one of 16 in the nation — and the only one in the region — projected to have a nursing shortage by 2025.

The Maryland Nursing Workforce Center, newly established in our School of Nursing, will collect and monitor comprehensive data regarding the state's nursing students, faculty, and providers. The data will inform state and local policies and programs to produce a nursing workforce adequate to care for Maryland's citizens.

OPENING ACCESS TO HIGH-QUALITY ORAL CARE

Our School of Dentistry partners with health care providers across the state to increase vulnerable residents' access to high-quality oral health services. Through these University/community partnerships, dental and dental hygiene students provide patients comprehensive, acute, and emergency oral health care under the direction of supervising faculty. The local health care organizations, meanwhile, provide the care facilities, equip the operatories, and employ non-clinical staff.

This collaborative care model now serves low-income, uninsured, and underinsured patients in Carroll, Frederick, Harford, and Montgomery counties.



NURSING STUDENTS AND FACULTY IN OUR CLINICAL SIMULATION LAB



DENTAL STUDENTS PROVIDE CARE TO A PATIENT AT RISK OF HOMELESSNESS.

UMB TAKES CARE OF MARYLAND



INTERPROFESSIONAL CARE MODELS
CAN REDUCE EMERGENCY ROOM VISITS
AND HOSPITAL READMISSIONS.

SERVING THE VULNERABLE IN PRINCE GEORGE'S COUNTY

UMB's Interprofessional Care Transitions Clinic (ICTC) serves Medicare, Medicaid, uninsured, and newly insured patients who are discharged from UM Capital Region Health facilities and who lack a primary care provider. The goal is to decrease hospital readmissions and emergency department visits by providing uninterrupted services to patients with complex health challenges as they undergo transitions in care.

A collaborative effort of UMB's schools of pharmacy and nursing, the ICTC connects patients to providers within the community and supplements access with UMB's e-Health Center. The clinic's pharmacists and nurses are joined by University law and social work faculty so that patients can access legal and social services that promote resilience and well-being.

PROTECTING MARYLAND'S UNDOCUMENTED RESIDENTS

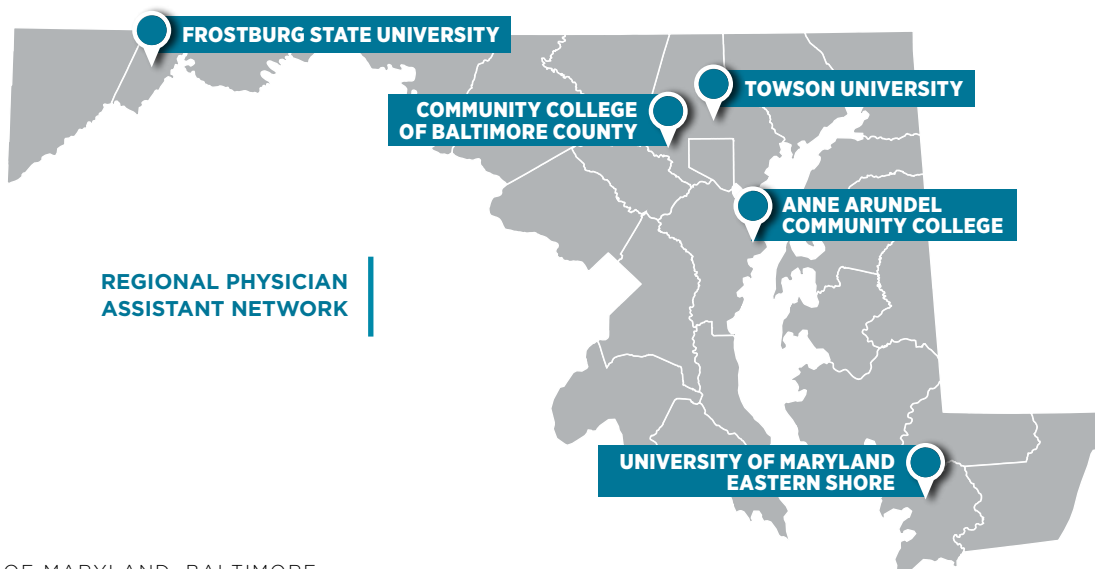
With the U.S. Department of Justice accelerating its prosecution of illegal immigrants and a commensurate rise in the detention and deportation of undocumented residents, our Carey School of Law has expanded its Immigration Clinic, making it possible to help a larger number of people in urgent need of assistance.

Under the supervision of licensed attorneys, students in the clinic represent individuals fleeing persecution in their homelands and seeking asylum in the U.S., those in danger of being deported because of criminal convictions, and those who have been victims of domestic violence or other crimes.

GROWING MARYLAND'S PRIMARY CARE WORKFORCE

Within the next few years, it's predicted the U.S. will need as many advanced practice professionals in the workforce — e.g., nurse practitioners, physician assistants (PAs) — as we need physicians.

UMB is therefore developing a regional PA training network to serve the Eastern Shore, Western Maryland, and Central Maryland. By partnering with local programs in these areas — including those in planning with UMES, Frostburg, Towson, and the Community College of Baltimore County — we'll do more than increase Maryland's PA workforce. We'll retain many of these professionals in high-need regions, for students trained in their home communities are more likely to practice there.



REGIONAL PHYSICIAN
ASSISTANT NETWORK

EXPANDING ACCESS TO SOCIAL SERVICES

The Social Worker in the Library program was launched in 2017 at four Enoch Pratt Free Library branches in Baltimore City. The program opens residents' access to government services that can alleviate such challenges as poverty, food insecurity, homelessness, and addiction. Under

faculty supervision, graduate social work interns provide one-on-one counseling to library patrons, train library staff in such areas as crisis management and positive engagement, and construct needs assessments with the local community.

After serving more than 600 patrons in its first year, the program has expanded from four city library branches to seven.



CAREY SCHOOL OF LAW STUDENTS

SERVING BALTIMOREANS WITH CHRONIC DISEASE

The JACQUES Initiative in the School of Medicine's Institute of Human Virology uses a holistic care delivery model to address the HIV and hepatitis C epidemics in Baltimore City. JACQUES conducts outreach in non-medical settings to increase residents' access to screenings, prevention strategies, same-day connections to care, and support services.

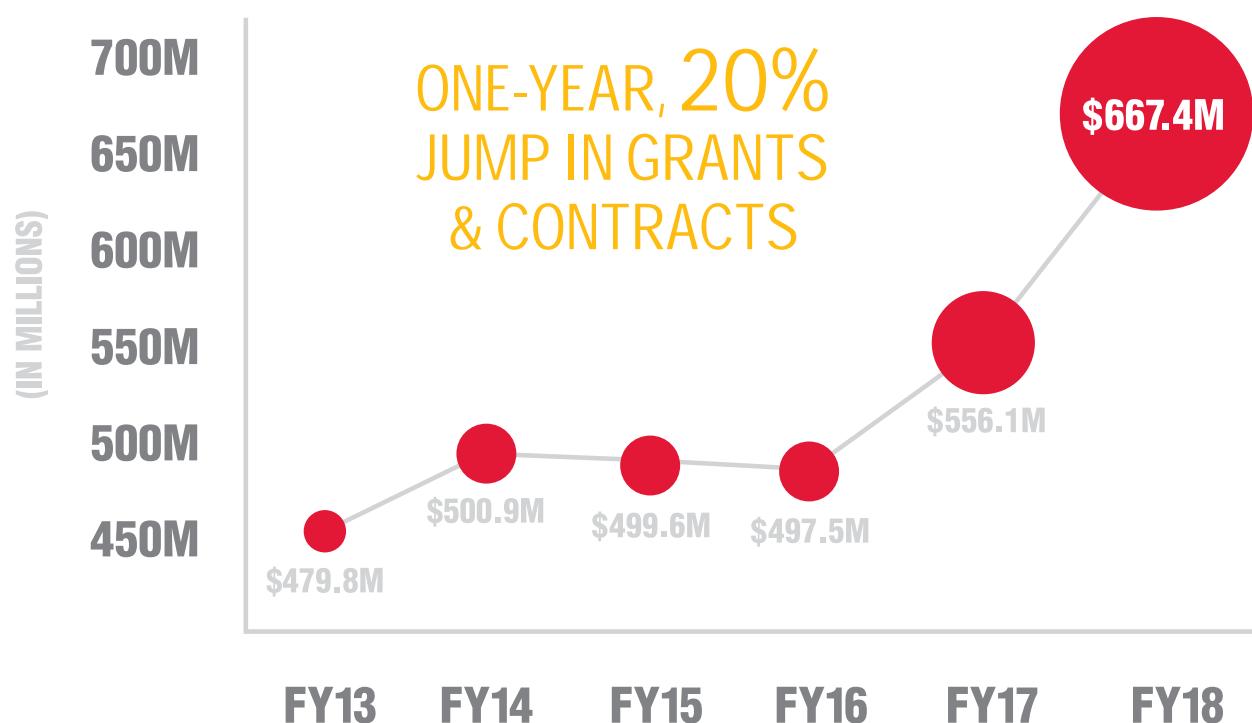
In fall 2018, JACQUES opened its Journey Center, a new 7,300-square-foot headquarters offering walk-in HIV and hepatitis C testing, peer support groups, navigation to prevention services, LGBTQ+ and youth programming, computer and financial literacy courses, and a community workspace.



SOCIAL WORKER IN THE LIBRARY PROGRAM

UMB IS A RESEARCH POWERHOUSE

In FY 2018, UMB won a record-shattering \$667.4 million in grants and contracts — dollars that fund our research, training, and service activities. That sum is a 20 percent jump over FY 2017, and is the highest total ever recorded by a USM institution.



THE SCHOOL OF MEDICINE'S INSTITUTE OF HUMAN VIROLOGY

is leading a **\$100 million** PEPFAR-sponsored project to measure the reach and impact of HIV prevention and treatment programs in Nigeria. It's the largest population-based HIV survey ever conducted in a single country.

In FY 2018, UM Ventures — the joint technology transfer enterprise of UMB and the University of Maryland, College Park — accelerated the translation of research into market-ready technologies and therapies that improve health, wellness, safety, and productivity.

At UMB, we're aggressive in moving our science out of the lab and into the marketplace. We commercialize dozens of inventions each year, and launch startups that bring revolutionary ideas to life.

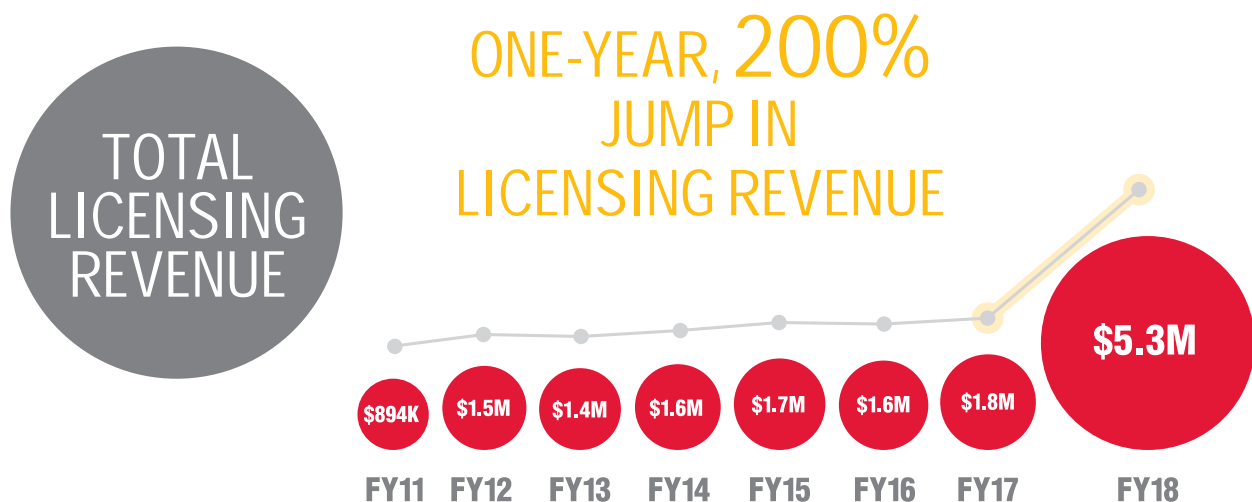
UMB'S COMMERCIALIZATION ENTERPRISE: FY 2018

145
NEW INVENTION
DISCLOSURES

43
NEW LICENSE
AGREEMENTS

8
NEW
STARTUPS

3
STARTUPS ACQUIRED
BY LEADING
GLOBAL COMPANIES



UMB-invented technologies are central to advancing human health and well-being, across the state and around the world.



Harpoon Medical was acquired by Edwards Lifesciences, a leader in treating structural heart disease. Shortly before the acquisition, Harpoon announced that its pioneering device to repair heart valves had been found to be safe and effective in clinical trials.



Remedy Pharmaceuticals sold its Phase 3-ready novel drug, CIRARA, to Biogen for \$120 million. CIRARA is a therapeutic candidate to treat a deadly form of stroke, one with a mortality rate of up to 80 percent.



PaxVax began selling UMB-invented Vaxchora, the only U.S. approved vaccine for protection against cholera. In spring 2017, the CDC recommended that adults traveling to cholera-affected areas get vaccinated with Vaxchora.

The University of Maryland BioPark is Baltimore's biggest biotechnology cluster, with three dozen biotech companies, research institutes, and clinical facilities sharing the 12-acre park and actively building the city's science community.

Our BioPark advances the commercialization of new drugs, diagnostics, and devices by giving more than 1,000 scientists and entrepreneurs the space to create and collaborate.

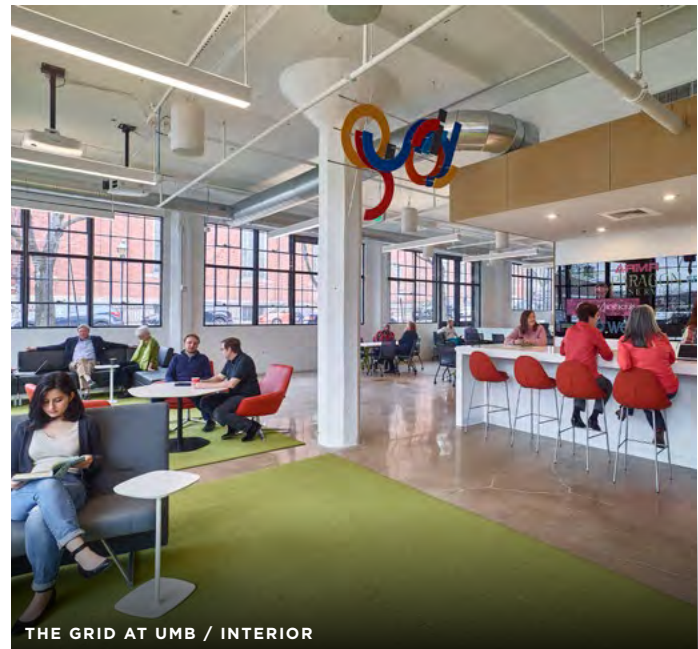
As demand for a dynamic innovation district keeps growing, so does the BioPark. At full build-out, the BioPark will house 2 million square feet of lab, office, clinical, and classroom space and bring needed retail properties and landscaped parks to West Baltimore.



The Center for Maryland Advanced Ventures (CMAV) provides funding and programs to strengthen the commercialization of high-potential discoveries within USM institutions. Plus, CMAV incentives and resources encourage university-created or university-sponsored technology companies to locate in Baltimore City.



THE GRID AT UMB / EXTERIOR



THE GRID AT UMB / INTERIOR

THE BALTIMORE FUND encouraged the expansion or location of 13 companies in qualifying areas, creating or retaining more than 200 jobs.

THE MARYLAND MOMENTUM FUND, a \$10 million program for early-stage ventures, has invested more than \$1 million in four USM-affiliated companies. One of these companies, NextStep Robotics (based on UMB IP), has developed a personalized robotic therapy to relieve “foot drop” syndrome in recovering stroke patients.

THE LIFE SCIENCES IP FUND provided nine early-stage technologies more than \$600,000 in proof-of-concept funding to accelerate tech commercialization at UMB and the University of Maryland, College Park. One of these technologies was licensed for commercialization with a corporate partner in early FY 2019.

THE GRID is a centralized location that promotes student entrepreneurship, houses early-stage companies, and offers tech transfer and business assistance services through UM Ventures.



The largest building ever constructed within USM, Health Sciences Research Facility III is 439,000 square feet of state-of-the-art space dedicated to biomedical research, innovation, and discovery.

The building grows the School of Medicine's academic and research footprint by 20 percent. It's expected to house more than 400 personnel and generate an additional \$100 million in annual research funding. The building's construction was supported with \$240 million in state funds — more than three-quarters of its total cost — and was formally opened in fall 2018.

As one of Baltimore's most powerful anchor institutions, UMB uses its influence, assets, and expertise to effect real and lasting change in the city — improving health, creating wealth, and advancing social justice.

UMB CURE SCHOLARS

UMB CURE Scholars is a long-term, intensive mentoring program that excites West Baltimore middle and high school students about science and prepares them for rewarding careers in research and health care.

The program inducted its fourth cohort of scholars in fall 2018 and now enrolls 100-plus students. More than 250 mentors — UMB students, faculty, staff, and friends — work with the scholars each week on science projects, homework help, and enrichment activities.

PROMISE HEIGHTS

Our School of Social Work operates Promise Heights, a network of wraparound services that help stabilize and strengthen families in one of West Baltimore's highest-need neighborhoods. In summer 2018, Promise Heights won a \$30 million grant from the U.S. Department of Education to expand its work in Upton/Druid Heights and support the community's children, cradle to career.



PROMISE HEIGHTS EXECUTIVE DIRECTOR
BRONWYN MAYDEN, MSW, WITH
CHILDREN IN UPTON/DRUID HEIGHTS





RENDERING OF THE NEW UMB COMMUNITY ENGAGEMENT CENTER IN SOUTHWEST BALTIMORE



UMB PAL PROGRAM

UMB COMMUNITY ENGAGEMENT CENTER

At the UMB Community Engagement Center (CEC) in Southwest Baltimore, University faculty, staff, and students provide neighbors vital programming, such as job training and placement services, after-school activities, free legal advice, a fresh food market, and fitness classes. It's there that we partner with the community in neighborhood-strengthening advocacy and projects.

With the current center at capacity — logging 27,000 neighbor visits in under three years — UMB has purchased a 20,000-square-foot building to renovate as its permanent CEC home.

UMB PAL PROGRAM

In spring 2018, UMB launched a Police Athletic/Activities League (PAL) program for children in West Baltimore, one of just two PAL programs in the U.S. offered at a university. PAL works to prevent juvenile crime by building positive relationships among children, police officers, and the community. UMB PAL activities include physical fitness, science experiments, career exploration, community service, the arts, and field trips within the city and beyond.

UMB sits on 72 acres in downtown Baltimore. Just blocks away are the city's harbor and sports stadiums, as well as a growing arts and entertainment district.





UNIVERSITY
of MARYLAND
BALTIMORE

umaryland.edu