

WE ARE

Fiscal Year 2024 Operating Budget Testimony

to the Maryland General Assembly

PRESENTED BY Bruce E. Jarrell, MD, FACS President, University of Maryland, Baltimore

February 2023





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 wellbeing 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 the Maryland General Assembly for their continued support of UMB as we strive to keep Maryland strong, and I look forward to working with Gov. Wes Moore.

In the pages that follow, you'll see some of the ways in which UMB is researching solutions, expanding efforts to train Maryland's workforce, invigorating its economy, and providing exceptional care and counsel to citizens across the state.

We remain eager to work with you in building Maryland's future — one shaped by knowledge, innovation, and, always, care for each other.

Sincerely,

Bruce E Janel

BRUCE E. JARRELL, MD, FACS *President*



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



15,883 JOBS CREATED

\$3.2 BILLION TOTAL UMB IMPACT ON MARYLAND'S ECONOMY

\$142.2 MILLION STATE AND LOCAL GOVERNMENT REVENUES

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

\$1.4 BILLION TOTAL UMB REVENUE

\$654.2 MILLION GRANTS AND CONTRACTS

\$1.4 MILLION GRANTS AND CONTRACTS PER CORE FACULTY MEMBER

69% SHARE OF REVENUE GENERATED BY ENTREPRENEURIAL ACTIVITIES

\$8 BILLION TOTAL IMPACT ON MARYLAND'S ECONOMY

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

FY22 Actual Budget, FY22 Grants and Contracts, and FY22 Economic Impact Report unless otherwise noted



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

UMB EDUCATES MARYLAND'S PROFESSIONAL WORKFORCE

In-state students comprise 67 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 ENROLLMEN	NT IN-STATE STUDENTS	
Dentistry—DDS	523	71%	
Law—JD	699	48%	
Medicine-MD	587	84%	
Nursing-BSN	920	94%	
Nursing Practice—DNP	624	87%	
Pharmacy—PharmD	372	76%	
Physical Therapy—DPT	207	88%	
Physician Assistant —M	ISPA 74	59%	
Social Work—MSW	606	83%	

UMB EDUCATES MARYLAND'S PROFESSIONAL WORKFORCE

BOOSTING THE NURSING WORKFORCE

The University of Maryland School of Nursing (UMSON) has dual-admission agreements in place with all 15 Maryland community colleges that offer an Associate Degree in Nursing, allowing students to transition seamlessly from their two-year program into UMSON's Bachelor of Science in Nursing program.

UMSON has operated the Governor's Wellmobile since its inception in 1994. The program recently added an additional vehicle and helped to distribute vaccines across the state.



With the support of a \$2.4 million grant from the Maryland Community Health Resources Commission, UMSON's RICH (Reducing Isolation and Inequities in Cardiovascular Health) Collaborative seeks to achieve positive health and social impact in UMB's West Baltimore neighborhood by bringing partner organizations together to advance common interventions for improving hypertension outcomes and social isolation.

GROWING MARYLAND'S PRIMARY CARE WORKFORCE

Even before the COVID-19 pandemic, it was predicted the United States would need as many advanced practice professionals in the workforce – e.g., nurse practitioners, physician assistants (PAs) – as we need physicians. Educating the next generation of advanced practice professionals has never been more important. To address the shortage in the workforce, UMB is increasing class sizes and leading innovative partnerships and workforce initiatives.

The Physician Assistant Leadership and Learning Academy (PALLA) supports the development of the PA faculty workforce across the state of Maryland. It works to develop a pipeline of diverse faculty who can prepare future generations of PAs to provide cutting-edge treatment and socially responsible care, advance clinical education to ensure future PAs are prepared with the technical and communication skills they will need in practice, support programs in quality improvement and compliance so that the programs can produce the best outcomes and stay accredited, and amplify the scholarly voices of PAs so they can share their knowledge with the world.

PALLA has developed 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 the University of Maryland Eastern Shore, Frostburg State University, Towson University, and the Community College of Baltimore County — we'll do more than increase Maryland's PA workforce. We'll also retain these professionals in high-need regions, because students trained in their home communities are more likely to practice there.

EQUITY, DIVERSITY, AND INCLUSION

In 2021, UMB President Bruce E. Jarrell, MD, FACS, made a strong commitment to diversity by supporting the creation of a chief diversity officer and vice president role and the Office of Equity, Diversity, and Inclusion (OEDI). Since then, OEDI has worked to support and advance faculty diversity and development, inclusive hiring and training policies, inclusive pedagogy and student learning, and increased leadership engagement and accountability.

OEDI has established a data analytics platform that prepares the University to make decisions and take concrete actions to support and advance a diverse and talented workforce and student body to serve Maryland and beyond. The team is finalizing the first action and accountability plan as a road map to drive continued excellence at UMB in scholarship, teaching, research, and service. OEDI will assist UMB in preparing diverse and talented leaders to impact and transform the future of medicine, social services, and human services in Baltimore, Maryland, the United States, and across the globe. In addition, UMB has been recognized as one of America's Best Employers for Diversity in 2022 by *Forbes* magazine. UMB ranked No. 109 out of 500 overall employers and No. 6 out of 40 educational institutions on the list. The University of Maryland School of Nursing received the 2022 Health Professions Higher Education Excellence in Diversity Award from *INSIGHT Into Diversity* magazine, the oldest and largest diversity-focused publication in higher education. It was the fifth consecutive year that UMSON has been named a HEED Award recipient.

The University of Maryland School of Medicine and the University of Maryland, Baltimore County were awarded a five-year, \$13.7 million grant from the National Institutes of Health to enhance efforts at recruiting and training junior faculty from underrepresented groups in biomedical science. UMB also received the Indian Health Service Director's Award for COVID-19 Pandemic Heroism for its "unprecedented work to offer COVID-19 vaccines to American Indian/Alaska Natives living and working in and near the Baltimore and Washington, D.C., areas."

THE BEST EMPLOYERS FOR DIVERSITY

Forbes 2022

POWERED BY STATISTA

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

DENTAL CARE

In Fiscal Year 2022, faculty and student clinicians from the University of Maryland School of Dentistry (UMSOD) offered oral health services on a reduced-fee basis, treating more than 20,000 individual patients during nearly 90,000 patient visits.

This includes patients at the dental facility in the Biomedical Sciences and Engineering Education Facility at the Universities at Shady Grove in Rockville, Md., where a suite of 24 dental chairs and adjoining operatory facilities enable UMSOD to provide comprehensive dentistry for an expected 3,000 to 4,000 adults and children, with treatment by UMSOD postdoctoral dental residents, dental students, and dental hygiene students under faculty supervision. Additionally, UMSOD's Oral Health for Underserved Uninsured Children Program provided oral health care to 500 children last year.

MARYLAND POISON CENTER

The University of Maryland School of Pharmacy (UMSOP) celebrated the 50th anniversary of the Maryland Poison Center (MPC) in 2022. Serving 4.1 million Marylanders in 21 counties and Baltimore City, MPC is staffed 24 hours a day, 365 days a year by pharmacists and nurses who are certified specialists in poison.

MPC has been a public service through UMSOP since 1972 and has continued to grow. In its first year, the center managed 5,600 cases and kept paper records. In 2021, MPC managed over 37,000 cases, with more than 80 percent of the cases involving human exposure, using a sophisticated electronic system to track and manage calls.

SOCIAL WORK COMMUNITY OUTREACH SERVICE

For more than 20 years, the Social Work Community Outreach Service (SWCOS) of the University of Maryland School of Social Work has provided innovative social work practice in the Baltimore area. To date, close to 1,000 field placements have been developed and supported by SWCOS, which also is working to improve outcomes for child and youth victims of human trafficking in Maryland with the support of a \$2.5 million grant from the U.S. Department of Justice.

GREENEBAUM CANCER CENTER

The University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center (UMGCCC) is nationally recognized for its excellence in patient care and multidisciplinary translational research program.

As a result of Cigarette Restitution Fund (CRF) investment, cancer mortality in Maryland has declined from first in the nation in 1990 to 32nd. Maryland's CRF investment has been critical in building UMGCCC as a National Cancer Institute-designated comprehensive cancer center. University of Maryland Cancer Network research funding has increased more than fivefold since the start of CRF, from \$19.4 million to \$105 million, and CRF has resulted in more than \$1 billion in new funds for research, construction, and equipment. The UM Cancer Network cares for more than 8,000 new cancer patients each year, roughly one-quarter of all cancer patients in Maryland.

In May 2022, ground was broken for a nine-story patient care tower — the Roslyn and Leonard Stoler Center for Advanced Medicine — that will become the new home of UMGCCC. The \$219 million tower will enable UMGCCC to provide the most technologically advanced, integrated care to cancer patients throughout Maryland and the region well into the future.

CENTER FOR VIOLENCE PREVENTION

UMB launched the Center for Violence Prevention (CVP) in September 2022. CVP will seek to intervene, reduce, and respond to violence in the city of Baltimore, bringing together the expertise of the R Adams Cowley Shock Trauma Center at the University of Maryland Medical Center and the University of Maryland schools of medicine, social work, and law.

The center seeks to bridge the activities of those across UMB and in the community in an interdisciplinary, collaborative fashion to conduct community-based participatory research, provide creative and impactful education, and inform and advocate for policies that strengthen communities to prevent violence and trauma.

ROAR CENTER

The Rebuild, Overcome, and Rise (ROAR) Center at UMB is a "one-stop-shop" in the city of Baltimore where victims of crime, whom we call survivors, can access wraparound services including legal, social work, nurse care management, and therapy. The center assists people of all ages, races, gender identities, and income levels.

The ROAR Center aims to co-create with survivors a community where people who experience crime or systemic injustice are empowered to achieve their own sense of justice, healing, and well-being. Administered by the University of Maryland Francis King Carey School of Law, the ROAR Center is a collaborative project established to build upon the vast expertise and deeply rooted community connections of UMB through collaboration with the six UMB professional schools — dentistry, law, medicine, nursing, pharmacy, and social work — and community-based organizations to provide expertise and services to the clients of the ROAR Center and broader Baltimore City communities. In 2022, ROAR served 272 Baltimore residents, 123 of whom were first-time clients. Services included 128 legal matters and 219 supportive services matters that included therapy, nurse care management, and case management. In 2022, ROAR experienced an increase in gunshot wound victims seeking services, with the number of new clients who experienced non-fatal shooting more than doubling since 2021.

LOW INCOME TAXPAYER CLINIC

The University of Maryland Low Income Taxpayer Clinic (LITC), operated within the Francis King Carey School of Law, provides free, independent legal representation to low-income taxpayers who are in disputes with the Internal Revenue Service. After the Maryland General Assembly passed Senate Bill 480 and House Bill 421 in 2021, LITC can now assist with state-specific tax issues as well. The program has worked on 66 cases with state-specific tax issues, bringing 22 of them to resolution so far. LITC has held 19 outreach events and attempted outreach via email, phone calls, and flyer distributions on 118 occasions to spread the word about its services. LITC serves clients across the state of Maryland.

VACCINE OUTREACH PROGRAM

The University of Maryland School of Medicine's (UMSOM) Community-Based Workforce for COVID-19 Vaccine Outreach program is a multi-state program funded by a \$7.8 million award from the U.S. Health Resources and Services Administration (HRSA). It builds upon community work already underway by UMSOM that is funded by the Maryland Community Health Resources Commission and aims to reach individuals in vulnerable communities at the grassroots level across the state.

More than 12,000 COVID-19 vaccinations have been administered in Maryland, Delaware, Virginia, and West Virginia. The program hired 269 community health workers and has educated more than 14 million people in communities in all four states, which includes media outreach in these communities. In West Baltimore, HRSA efforts through the UMB Community Engagement Center yielded 425 vaccinations among our West Baltimore neighbors.

EASTERN SHORE INITIATIVES

In 2022, UMB celebrated the opening of the Phillips Packing House in Cambridge, Md. The revitalized canning facility will serve as a community engagement hub. The building will serve as the Department of Housing and Community Development's (DHCD) new Eastern Shore satellite office and Community Engagement Center. UMB is contributing \$750,000 to the DHCD office in Cambridge to assist its economic development activities and collaborations with University System of Maryland institutions.

UMB's initial activities at the Packing House include the Agriculture Law Education Initiative, where legal specialists and agriculture extension specialists help farmers (including aquafarmers) understand and comply with state, federal, and local laws and regulations, as well as engaging other universities and health care entities in the Packing House.

UMB also supports the Eastern Shore through a Health Resources and Services Administration grant that supports a University of Maryland School of Medicine residency program in rural Eastern Shore, as well as the Eastern Shore Mobile Care Collaborative, a mobile system designed to provide state-of-the-art treatment for opioid disorders for those in need in the region.

MARYLAND E-NNOVATION: RECRUITING AND RETAINING TOP EXPERTISE

UMB received \$2.5 million in awards to fund research professorships through the Maryland E-Nnovation Initiative Fund. UMB raised private funds for each chair, with the Department of Commerce approving matching grants to support the endowments.

Matthew B. Frieman, PhD, was named the Alicia and Yaya Viral Pathogen Research Professor in Microbiology and Immunology at the University of Maryland School of Medicine (UMSOM). Frieman is an internationally recognized virologist and specializes in highly pathogenic coronaviruses including SARS, which emerged in 2003; MERS, which emerged in 2012; and SARS-CoV-2, which emerged in 2019.

The William E. and Sally H. Brown Professorship in Parkinson's and Movement Disorders also was established. It will allow UMSOM to recruit an internationally recognized physician-scientist who specializes in neurodegenerative disorders such as Parkinson's or Alzheimer's.



UMB PRESIDENT BRUCE JARRELL TALKED ABOUT THE UNIVERSITY'S INVESTMENT IN THE PHILLIPS PACKING HOUSE IN CAMBRIDGE, MD., AND TOURED THE FORMER CANNING FACILITY IN JUNE 2022.



In Fiscal Year 2022, UMB was awarded \$654 million in grants and contracts — money that funds our research, training, and service activities.



UMB/UMCP: A POWERFUL RESEARCH COLLABORATION

The UMB/University of Maryland, College Park (UMCP) research enterprise has expanded its broad impact in recent years through the University of Maryland Strategic Partnership: *MPowering the State (MPower)*. Established in 2012 and formalized by the Maryland General Assembly in 2016, *MPower* has aligned not only research initiatives between the institutions, but also leadership.



DRESIDENT FOR RESEARCH AT UMB AND THE UNIVERSITY OF MARYLAND, COLLEGE PARK

In 2022, Gregory F. Ball, PhD, was named vice president for research for UMB and UMCP. In his role, Ball oversees the joint research enterprise at the two institutions, a collaboration that garners a combined \$1.3 billion in research awards annually.

MPOWER PROFESSORS

Fourteen professors — seven from UMB and seven from UMCP — have been named MPower Professors. This annual recognition is designed to accelerate the pace of research and impact on the lives of Marylanders. Each MPower Professor is awarded \$150,000 over three years to recognize, enable, and foster strong collaborations among faculty who work together on the most pressing issues of our time. The professors include leaders recognized for their significant collaborations in the fields of arts and humanities, behavioral and social sciences, computer science, dentistry, engineering, medicine, nursing, pharmacy, and public health.

UNIVERSITY OF MARYLAND INSTITUTE FOR HEALTH COMPUTING

UMB and UMCP, in partnership with the University of Maryland Medical System, Montgomery County, Md., and collaborators at the Universities at Shady Grove and the University of Maryland, Baltimore County, announced a transformative new medical research and academic institute that will use artificial intelligence (AI), virtual reality, and other emerging technologies to improve health care in Maryland. The new institute will leverage recent advances in AI and computing to create a premier learning health care system that evaluates both de-identified and secure digitized medical health data to diagnose, prevent, and treat diseases in patients.

The University of Maryland Institute for Health Computing, is the latest strategic initiative of *MPower*, which brings together the complementary strengths of UMB and UMCP to strengthen Maryland's innovation economy, promote interdisciplinary research, and create more educational opportunities for students.

The institute will catalyze a clinical data science ecosystem in North Bethesda, Md., and attract Food and Drug Administration and National Institutes of Health investigators; UMB and UMCP faculty, medical bioinformatic educational programs, and students; and industry partners, allowing for the expansion of computational "dry" laboratories, virtual meeting rooms, and classrooms. The institute is expected to open in leased space in early 2023, with final completion of laboratory and office space at a location near the North Bethesda Metro station in 2028.

HERD SURVEY RANKING

The UMB/UMCP joint research enterprise ranked 17th overall and 10th among public institutions in the National Science Foundation's Higher Education Research and Development (HERD) survey, which is widely recognized as the preeminent national university ranking for higher education institutions engaged in sponsored research. The most recent ranking, based on Fiscal Year 2021 research and development spending, continues the state of Maryland's inclusion in an elite group of six states with more than one research institution at or above \$1 billion.

No.10 UNIVERSITY OF MARYLAND'S RANKING AMONG PUBLIC INSTITUTIONS FOR RESEARCH AND DEVELOPMENT SPENDING IN FISCAL YEAR 2021 \$1.3 billion UMB/UMCP COMBINED RESEARCH EXPENDITURES In Fiscal Year 2022, UMB's technology transfer and commercialization engine — known as UM Ventures accelerated the translation of research into market-ready technologies and therapies that improve health, wellness, safety, and productivity.

UMB'S COMMERCIALIZATION ENTERPRISE: FY22

60 NEW PATENT FILINGS **38** NEW LICENSE AGREEMENTS

NEW STARTUPS 2 STARTUPS ACQUIRED BY LEADING GLOBAL COMPANIES

UMB LICENSING REVENUE

\$3.4 million IN GROSS REVENUE (FROM LICENSING, PATENTS, AND ROYALTIES)



Baltimore-based startup **Breethe** was acquired by Abiomed for its innovative respiratory device, the first portable artificial lung system. The sophisticated engineering underlying Breethe's novel integrated oxygen concentrator potentially eliminates the need for patients to rely on large, cumbersome oxygen tanks. Since the acquisition, the device has received U.S. Food and Drug Administration 510(k) clearance. In 2022, Johnson & Johnson acquired Abiomed to strengthen its medical device unit. This deal should offer additional commercialization support for the Breethe technology.



CoapTech, a medical device startup, is developing the PUMA-G System, the world's first and only ultrasound gastrostomy system, allowing physicians to place gastronomy tubes at the point of care using solely ultrasound imaging. The PUMA-G System is now being sold and utilized at multiple sites in the United States and Europe. Results from a recent study demonstrated substantial length of stay and hospital cost reductions with the use of the PUMA-G System when compared to usual care. Additionally, a clinical trial for a pediatric version of the system has been initiated.

UMB's 14-acre BioPark, Baltimore's biggest biotechnology cluster, fuels the commercialization of new drugs, treatments, and medical devices. The nearly three dozen tenants — including industryleading global firms such as Pharmaron, Illumina, BD, and Catalent, next-gen ventures, university spinouts, distinguished research organizations, cutting-edge clinical care, and contemporary workforce training programs — employ more than 1,000 people.

As demand for a dynamic innovation district keeps growing, so does the BioPark. The newest development project, 4MLK, broke ground in October 2022. The eight-story, 250,000-square-foot building will provide critical wet laboratory space for researchers and companies, flexible lab and office/support space for startups, and Class A office space, along with areas for convening and a conference center.

At full buildout, the BioPark will consist of 12 buildings totaling 2 million square feet, parking garages, landscaped parks, and \$1 billion of capital investment.



The Center for Maryland Advanced Ventures provides tailored funding and education programs to strengthen the commercialization of highpotential discoveries within University System of Maryland (USM) institutions. Additionally, the center provides incentives and resources to encourage university-created or -sponsored technology companies to locate in the city of Baltimore.

MARYLAND MOMENTUM FUND

A \$16 million early-stage investment program investing in USM-affiliated companies, the Maryland Momentum Fund has invested \$10.6 million in 28 companies with \$91.1 million in matching funds from more than 150 co-investors. Five UMB-affiliated companies have received investment: NextStep Robotics, NeoProgen, Veralox Therapeutics, KaloCyte, and ARMR Systems.

BALTIMORE FUND

The Baltimore Fund has encouraged the expansion and location of 41 companies in qualifying areas, creating or retaining more than 640 jobs. In addition, this fund provides subgrants to support early stage entrepreneurial programming at the University of Baltimore, Coppin State University, and Morgan State University.

LIFE SCIENCES IP FUND

The Life Sciences IP Fund has assisted 26 earlystage technologies, including 10 device and 11 therapeutic technologies, in moving toward commercialization. Five UMB startups — Isoprene Pharmaceuticals, Protaryx, GEn1E Lifesciences, E-connect and RenuBioMed — have been formed as a result of the program.

Life Sciences IP Fund investments have led to an additional \$15 million in catalyzed (third-party) capital, a 15-to-1 return on investment.

Established in 2000, the Universities at Shady Grove (USG) offers select degree programs from nine public Maryland universities on one convenient campus in Montgomery County, Md. At USG, UMB offers a BS in Nursing, BS/MS Dual Degree Clinical Dental Hygiene Leader Track, MS in Medical Cannabis Science and Therapeutics, MS in Pharmaceutical Sciences, Master of Social Work, Doctor of Nursing Practice/Family Nurse Practitioner, and Post-Baccalaureate Certificate in Oral Health Science. There are 998 UMB students enrolled at USG.

DENTISTRY

The Clinical Dental Hygiene Leader Program (CDHL) is the only Master of Science (MS) degree in dental hygiene in the state. Through this two-year, dualdegree program, qualified college graduates can obtain both a second Bachelor of Science degree and an MS, producing dental hygienists who can assume key leadership roles in a variety of clinical, educational, public health, and health care settings. The Post-Baccalaureate Certificate in Oral Health Science is for non-dental health care professionals who want to build core oral health competencies to better respond to patients' needs and more holistically manage patient care.

The recently opened Biomedical Sciences and Engineering Education Facility at the USG campus is home to a state-of-the-art dental health facility. There, the University of Maryland School of Dentistry's (UMSOD) Shady Grove Health and Dental Services Facility offers quality dental care in an educational environment. At this community-based site, dental students provide services under the close supervision of experienced UMSOD faculty dentists. The providers are leaders in their fields and collectively offer extensive knowledge in every facet of oral health care. Students conduct a thorough evaluation to diagnose each patient's needs and develop a comprehensive treatment plan before beginning treatment.

MEDICAL CANNABIS

Launched in August 2019, the University of Maryland School of Pharmacy's Master of Science in Medical Cannabis Science and Therapeutics is the first graduate program in the country dedicated to the study of medical cannabis. It aims to meet the needs of all individuals interested in advancing their knowledge about medical cannabis including health care professionals such as physicians, nurses, and pharmacists; scientists and regulators; growers and dispensary owners; and policy and industry professionals. The program's second class of 207 students graduated in 2022. The program provides students with the knowledge and skills needed to support patients and the medical cannabis industry, add to existing research in the field, and develop well-informed medical cannabis policy. Based at USG, the two-year program is designed for any individual who has completed an undergraduate degree and is interested in pursuing a career in the medical cannabis industry.

NURSING

The University of Maryland School of Nursing (UMSON) established a Bachelor of Science in Nursing (BSN) program at USG when it opened in 2000. Since then, the school's educational offerings have expanded greatly including a Registered Nurseto-BSN degree and the Doctor of Nursing Practice Program's Family Nurse Practitioner specialty.

As an outgrowth of the enrollment increase at USG, the school is engaged in renovating a building dedicated solely to UMSON at USG, with an expected completion of spring 2023. The renovation of this space will allow for the significant expansion of the simulation labs, create a student success suite, and provide an administrative suite.

INSTITUTE FOR BIOSCIENCE AND BIOTECHNOLOGY RESEARCH

The Institute for Bioscience and Biotechnology Research (IBBR) is a partnership among UMB, the University of Maryland, College Park , and the National Institute of Standards and Technology. IBBR leverages state-of-art integrative methods for the bioanalytical, biophysical, and structural characterization and biomanufacturing of pharmaceuticals to support the accelerated delivery of safe and effective medicines to the public.

IBBR contributes to the state of Maryland by being an international leader in the use of state-of-the-art analytical and structural biology instrumentation including cryogenic electron microscopy, together with high-end computation, to accelerate the discovery, development, and manufacturing of therapeutics, modern medicines, and vaccines for patients in Maryland and throughout the country and the world.

This includes an enhanced effort toward team-based research to combat COVID-19, accelerate how we address future pandemics, and help direct how we use state-of-the-art science in the discovery and production of medicines for treating infectious disease, cancer, memory disorders, and many other diseases that negatively impact human health.

IBBR also contributes to developing standards and regulatory processes to more quickly deliver therapeutics and vaccines, a service that is needed by our industry partners in the I-270 corridor and throughout the state of Maryland.

UMB CURE SCHOLARS

The UMB CURE Scholars Program is a long-term, intensive mentoring program designed to excite West Baltimore middle and high school students about science, technology, engineering, and math (STEM) and prepare them for rewarding careers in research and health care.

In 2022, the first cohort of scholars graduated from this groundbreaking pipeline program, and a graduation ceremony was held to commemorate the accomplishments of these exceptional students.

The UMB CURE Scholars Program began as a groundbreaking STEM mentoring program in a partnership with the National Cancer Institute. It was the first program of its kind to begin academic enrichment for students as young as sixth grade. The program creates a mentorship pipeline that follows the students from middle school through high school to ensure that they have the resources to pursue lucrative careers in STEM, health care, and cancer research, with the end goal of increasing the number of STEM and health care professionals from underrepresented populations and reducing racial health disparities.

The Class of 2022 began its mentoring program as sixth-graders. The scholars' individual drive and ambition coupled with the support of their mentors resulted in the students collectively receiving more than 140 college acceptance letters.

⁶⁶The UMB CURE Scholars Program has impacted my life in many ways. It has exposed me to things that the average student in Baltimore wouldn't see — things that have prepared me for the real world of education and working. While attending UMB CURE, I have been molded to be a professional, act with energy, understand my worth, and know that when I walk into a room, I belong there.³³ — COURTNEY JACOBS III



STRENGTHENING BALTIMORE



LIVE NEAR YOUR WORK

UMB's Live Near Your Work (LNYW) Program is a homebuying assistance benefit for University employees that offers money toward the down payment and closing costs of homes in select West Baltimore neighborhoods, including the purchase of a home requiring major renovations.

UMB contributes \$16,000 per eligible participant. In addition, participants will be eligible to receive a matching grant of up to \$2,500 from the Baltimore City LNYW Program. In five years, the UMB LNYW Program has surpassed the \$1 million mark in grants, helping nearly 70 University employees purchase homes in West Baltimore neighborhoods. In August 2022, Upton was added to the list of neighborhoods, which includes Barre Circle, Druid Heights, Franklin Square, Heritage Crossing, Hollins Market, Mount Clare, Pigtown/Washington Village, Poppleton, and Union Square.

COMMUNITY ENGAGEMENT CENTER

The Community Engagement Center (CEC) is the cornerstone of UMB's Community Campus, a location and concept that demonstrate a deep commitment to strengthening West Baltimore in collaboration with the neighbors who live there. The CEC is where UMB works hand in hand with neighbors to support them in achieving their career goals and give children a safe place to learn and play. With this renovated space, the center is even better equipped to partner with the community to reach the common goals of health and well-being. The new space is roughly seven times larger than the original CEC. This major expansion was in response to more than 40,000 recorded visits from men, women, teens, and children who engaged with its services and programming since it opened in 2015.

The CEC offers a range of free opportunities for community members, students, and staff including fitness classes, movie nights, art classes, a makerspace, and Workforce Wednesdays, where job seekers can get help finding a job or job training. The CEC also offers important services like the Health Suite, the JustAdvice Project Legal Clinic, and the CASH Campaign of Maryland, all geared toward helping members of the community.

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 United States offered at a university. PAL works to prevent juvenile crime by building positive relationships among children, police officers, and the community.

The UMB PAL Program provides free mentoring and enrichment for youth in grades 3 to 8 with mentors from the UMB Police Department. The program offers participants opportunities to learn and play through games and fun activities. Youth also build relationships with UMB police and security officers and gain a better understanding of what it takes to serve the community. This year, PAL hosted 46 virtual and in-person sessions, 31 students are attending PAL at the UMB Community Engagement Center, and the program has distributed 138 lunches to PAL students and their families. UMB is committed to Baltimore, especially our West Baltimore neighborhood, and we are proud to be an anchor institution in the city of Baltimore. We are committed to our community's well-being and seek to be a trusted partner. In addition to many of the programs outlined above like CURE Scholars, the School of Dentistry's Oral Health for Underserved Uninsured Children program and the Community Engagement Center, below are just a few programs that provide support to our city.

POSITIVE SCHOOLS CENTER

The Positive Schools Center (PSC) creates positive, supportive, and mindful learning communities where students and school staff connect, develop, and grow. We partner with schools and districts to address punitive discipline and dysfunctional school climates. PSC supports 30 Baltimore City Public Schools (BCPS) and is lead agency for 12 community schools. PSC provided regular training and coaching for 900 teachers and staff who were responsible for educating more than 8,200 students, or about 10 percent of all BCPS students. Eighty percent of school partners saw their attendance improve by an average of 4 percent.

SCHOOL MENTAL HEALTH PROGRAM

The University of Maryland School of Medicine's (UMSOM) School Mental Health Program (SMHP) team serves 25 schools in Baltimore City. SMHP aims to positively impact schools by building its capacity to support social emotional wellness. Main methods include strengthening the school climate and teachers/administrators' abilities to serve students with mental health concerns, as well as offering effective prevention, intervention, and treatment services to students and families.

The program has conducted 4,852 teacher consultations, 667 school team meetings, and 1,220 other prevention activities. For intervention, there have been 6,239 fee-for-service clinical sessions. The team has seen reductions in depression symptomatology in student reports, reductions in reported attention-deficit/ hyperactivity disorder symptoms based on teacher and parent reports, and reductions in student and parent reports of student emotional and behavioral problems.

FAMILY CONNECTIONS BALTIMORE

Family Connections Baltimore (FCB), a program of the University of Maryland School of Social Work's Ruth H. Young Center for Families and Children, develops, implements, and tests communitybased family strengthening services that empower vulnerable families to achieve their safety, wellbeing, and stability. FCB has provided services to 1,094 families including at least 3,276 children, and has had 213 graduate- level social work interns including Title IV-E students, placed at the program.

UMB POLICE DEPARTMENT COAST PROGRAM

UMB Police Department COAST Program The Community Outreach and Support Team (COAST) builds positive relationships between the UMB Police Department (UMBPD) and the communities we serve in West Baltimore. COAST has become a nationwide model for outreach and crisis intervention efforts. In 2019, COAST won the Governor's Award for Outstanding Proactive Crime Prevention Programs in Maryland. COAST services include Law Enforcement Assisted Diversion, Crime Prevention Through Environmental Design, Police Athletic/Activities League, homeless outreach, comfort K9, and the Community Engagement Academy. COAST has engaged over 850 unsheltered individuals, provided 430 service provider referrals, conducted welfare checks, and trained officers in homeless outreach and mental health crisis intervention.

MINI-MED SCHOOL

Offered as a community health public service, Mini-Med School is a tuition-free interactive lecture series provided annually by University of Maryland School of Medicine (UMSOM) faculty, with the goal of educating the local community about health and disease and ultimately improving the wellbeing of our residents. The lectures are designed to be casual, fun, and informative while focusing on health care issues that are important to everyone.

Since the program's inception, there have been 8,000 adult and 400 child participants from the local community. In a 2022 survey, 100 percent of the participants said they would attend in the future and would recommend it to a friend or family member, and 92 percent said they learned lifestyle changes to improve their health or had acquired new information in a medical subject matter.

THE JACQUES INITIATIVE

The JACQUES Initiative is a program of UMSOM's Institute of Human Virology offering HIV and Hepatitis C testing, prevention, education, linkage to care, and supportive services. The JACQUES Initiative partners with the clinical THRIVE Program, which provides treatment for HIV and other infectious diseases, as well as pre-exposure prophylaxis and post-exposure prophylaxis prevention services.

The JACQUES Initiative partners with Morgan State University, Baltimore City Community College, BD Health, the University of Baltimore, the Black Nurse Association of Baltimore, Paul's Place, the UMB Community Engagement Center, and the YMCA (Druid Hill and Stadium Place).





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