



UNIVERSITY OF MARYLAND

MPOWERING THE STATE

Overview

The University of Maryland has developed an impressive list of accomplishments over the past decades. Its College Park and Baltimore campuses have accrued nationally known thought leaders and problem solvers, grown powerful research engines, spun off successful businesses, and positively influenced the wellbeing of our state and nation. We are proud of this progress, yet we know that it is urgent that we do more. The Maryland state legislature charged the Board of Regents and thus both universities with developing a plan to have an even greater impact on the state, its economy, the job market, and the next generation of innovators. We are committed to this charge, and have devoted the past seven months to crafting a plan. In essence, we envision a new working relationship between the two universities - a relationship that demands teamwork and collaboration, with joint efforts championed and supported at the highest levels in our academic structure. We expect these changes to have a profound effect on our productivity, on the economy, and on the very fabric of higher education. The programs outlined below are only the beginning. This is the blueprint to reinvent ourselves.

Governance

The Board of Regents has tasked the University of Maryland, Baltimore (UMB) and the University of Maryland, College Park (UMCP) with establishing a special new working relationship that is designed to promote innovation and impact through collaboration. Through a set of formal actions referred to as the University of Maryland Initiatives, the two campuses will leverage their considerable strengths to attract exceptional faculty, better serve students, and position the state in a new economic reality. The responsibility for achieving those actions will be the responsibility of the Steering Committee, whose members will be appointed by the presidents. However, this leadership model may evolve once greater experience has been gained. The Steering Committee will report to the two presidents jointly on progress of initiatives and will implement new initiatives at the direction of the presidents. The presidents will report to the Chancellor and the Board of Regents on progress of the new activities. Each of the initiatives described below will require an investment of funds from a variety of sources.

A New Academic Vision for the University of Maryland in Montgomery and Surrounding Counties

UMB and UMCP propose a major academic initiative at the Universities at Shady Grove (USG). In this initiative, we will combine our research efforts at the Institute for Bioscience and Biotechnology Research (IBBR) with new educational programs in health, law, and human services (UMB) and STEM, business, and the social sciences (UMCP) that we develop at USG.

This will allow us to create an academic focus on higher education in Montgomery County, bringing with it all of the discovery and economic advantages present in Baltimore and College Park. We propose to offer programs for our undergraduates in their third and fourth years, graduate students, and our full range of professional students. A key requirement for creating our academic environment is the joint appointment of a senior academic leader (dean). This individual will lead IBBR, organize our USG geographically based faculty, expand technology transfer and commercialization activities in the region, act as the University of Maryland point of contact at USG, expand collaboration among academic programs, and support the home campus deans in fulfilling their requirements for accreditation. This leader will be charged with creating a strong collaborative relationship with the USG's Executive Director.

We are highly committed to the continued success of USG and its mission. Our students will complement and be fully integrated with the existing undergraduates enrolled in USM programs at USG, thus providing, for all USG students, a rich and diverse environment typical of a large research university. We will aim to integrate fully with the existing USG infrastructure, its Executive Director, and its governing and advisory boards. We will work with the Executive Director, the Governing Council and Advisory Board to further interactions with Montgomery College, local corporations, and other regional interests to understand their educational and economic needs with the goal of creating new and improving existing programs. We envision a new phase in the maturation of USG as a regional center.

University of Maryland Collaborative School of Public Health

We propose to create a Collaborative School of Public Health spanning both the College Park and Baltimore campuses of the University of Maryland. This will allow us to combine the currently accredited Master of Public Health (MPH) Program in the School of Public Health at College Park and the currently accredited MPH Program at Baltimore, resulting in a single MPH Program. This will be accomplished through an MOU in conformance with the accreditation requirements. Accreditation of the Collaborative School is expected to be granted upon receipt of a letter of intent to form the school and will be reviewed formally by the accrediting agency within two years. The Chair of Epidemiology and Public Health will represent UMB in an administrative capacity to ensure provision and exchange of information required for the accreditation of the MPH degree. The leadership of the MPH program at UMB will not report to the UMCP dean in a supervisory relationship, and each university will retain autonomy in terms of decision-making for other activities. They are linked in a joint partnership to oversee the MPH degree and to extend and expand collaborative efforts in public health teaching, research, service, and workforce development. Faculty at both campuses will be expected to participate as appropriate and in an agreed-upon manner on joint committees established based upon mutually agreeable collaborations. Research dollars originating on each campus will not be commingled although they will be reported together as required by the accrediting body. The MPH degree program will be overseen by a joint Intercampus Collaboration Committee, which will focus on academic integrity, comparability of course offerings, admissions policies, student research opportunities, and other operation policies. The Collaborative School will: 1) improve the quality of the educational program through mutually

agreed-upon shared resources, collaboration in course offerings, and development of new MPH concentrations, joint degree programs, and entrepreneurial programs for pre- and in-service professionals; 2) contribute to inter-professional education in public health among all health related students; and 3) facilitate collaboration in research and public service. The combination of the strengths of these two programs will propel the University of Maryland's Collaborative School into national prominence.

University of Maryland Ventures (UMV)

A joint institute will be formed to promote tech transfer and commercialization through collaborative leadership and a unified set of services and programs. UMV will be headed by a director who will report jointly to the Vice Presidents for Research (VPR) at UMB and UMCP. An UMV Council will provide oversight and guidance. Membership on the Council includes the two VPRs and two deans from each campus. UMV, on behalf of both universities, will oversee 1) patent submission and processing through a joint Intellectual Property (IP) committee; 2) technology transfer and commercialization including licensing and interactions with the venture capital community; 3) the Small Business Development Center; 4) commercial outreach and economic development activities at Shady Grove; 5) seed grant program for translational research; and 6) efforts to identify problems that can be addressed by applied research through "fund and facilitate" teams to work on solutions through the Maryland Innovation Initiative. It will coordinate expansion of the Maryland Technology Enterprise Institute (Mtech) and the Dingman Center for Entrepreneurship to Baltimore and Shady Grove; develop a common website to serve as a portal for outreach to the venture capital community; develop a common, simplified IP policy; serve as an interface for faculty who are interested in developing their IP; coordinate business roundtable discussions with the bioscience and biotechnology community; and, as funding becomes available, start new business initiatives, run business plan competitions, and develop a venture accelerator.

Bioengineering and the Health Sciences

UMB health sciences and UMCP bioengineering already have a rich collaborative relationship in both research programs and graduate student programs. Major areas of partnership between the School of Pharmacy at UMB and the Fischell Department of Bioengineering at UMCP include jointly taught graduate courses, joint faculty, research collaborations, and creation of the FDA/UM Center of Excellence in Regulatory Science. We propose to further this relationship using several mechanisms arising from the University of Maryland Initiatives. We will create new joint appointments for faculty in the health-related professional schools, the UMB Center for Biomedical Engineering and Technology (BioMet), a center created by the Regents from UMBI elements, and the Fischell Department of Bioengineering. We will develop formal mechanisms to incorporate the many UMV programs with bioengineering and the health science faculty to explore joint degrees and to develop new collaborative research programs and transform them into commercial ventures. This will supplement the already rich research environment.

Center for Biomedical Informatics and Imaging – UMIACS Collaborative: applying advanced computer science to health-related information

A new center, the Center for Biomedical Informatics and Imaging (CBII), will be established within the existing framework of the internationally recognized University of Maryland Institute for Advanced Computer Studies (UMIACS). We propose initially that the CBII will be led by the current UMIACS director and a vice director whose primary appointment is at UMB. A joint university scientific committee will guide CBII activities. In recognition that our understanding of life is rudimentary and that the frontiers of biosciences will only be pushed back by cutting edge interdisciplinary collaboration, the CBII will support projects that apply major advances in computing to enable mining, organizing, and analyzing massive data sets from the vast trove of data available at the molecular, genetic, and cellular levels; from imaging at the level of single-molecules to the level of the organism; and from patient data and clinical expertise, with the goal of improving health. The Center will take a comprehensive view of health care from fundamental science to patient care, and address grand challenge problems including large-scale genome analysis, large-scale longitudinal imaging, and the integration of medical records. It will bring together and leverage the extensive expertise in clinical, biological, imaging, and bioinformatics from the two campuses. With sufficient funding for infrastructure, modest space, and new base funding, in five years the Center will establish five or more significant joint research programs that will advance our nation's health. CBII will incentivize researchers to transition their research into practice through the facilitation of start-up companies. It will strengthen partnerships with NIST, NIH, and the Smithsonian as well as engage key Maryland companies with interest in bioinformatics and imaging technologies. CBII plans to provide a broad suite of bioinformatics and imaging analysis services, to develop joint education programs, and to train over 100 graduate students in the latest advances and bioinformatics, computing, clinical practices, and imaging. This will prepare them to lead scientific thought in biomedical informatics for the future.

New Educational Offerings between UMCP and UMB

One of the most active and exciting initiatives is the development of new educational offerings and other educational activities. We are finding that there are many student opportunities consistent with University of Maryland Initiatives themes. Our overall plan is to enrich student experiences between the two universities and to provide them with skills that will better equip them to succeed in an innovation society. We expect this initiative to eventually include all schools at UMB and most, if not all, at UMCP, and to result in seamless joint courses and degrees. The initiatives include:

- **University of Maryland Scholars.** The University of Maryland Scholars program will enable outstanding UMCP undergraduates to become engaged in research led by top UMB faculty, allow outstanding UMB graduate students to spend time training in laboratories of top UMCP faculty, and provide opportunities for UMB law students to work at law clinics at UMCP. The program will also include housing.

- **A Health Professional Panel: Windows into the Future Health Professional Team.** The panel will inform UMCP students and faculty about the collaborative work of health care professionals, the broad array of career opportunities in the health professions, and the details of UMB programs.
- **Law School Intellectual Property Clinic (MIPLRC) and Clark School of Engineering.** The MIPLRC, located at UMCP in the Technology Advancement Program (TAP) incubator, will help law students provide legal services to incubator tenants, university entrepreneurs, and start-up companies.
- **School of Nursing and UMCP 2 + 2 Program.** A University of Maryland committee has been established to share advising and better advance and promote the program, ease the transition, and to reinstate pre-nursing as an interest area at UMCP.
- **Schools of Engineering, Pharmacy, and Medicine** graduate and other educational programs.
- **UMB Graduate School connection to UMCP undergraduate schools.** A strong link has been created to bring more UMCP students into the graduate programs in life sciences at UMB.
- **Pipelines** for students to enter the Law School without the requirement of the LSAT (law school boards).
- **Programs to advance students from diverse backgrounds,** starting at high school and progressing to UMCP and to the UMB Law School.
- **Early UMCP student engagement** in UMB legal clinics.
- **An inter-professional LLM course offering** for students with a JD who are interested in topics related to the environment, public health, public policy, cyber security, and others.
- **A linkage** between undergraduates at UMCP with the MD/PHD program at UMB.
- **An educational program** between the School of Law and the College of Information Studies at UMCP.
- **Strengthening and formalizing the pipeline** between kinesiology at UMCP and Physical Therapy at UMB.
- **A variety of other new initiatives,** such as the development of shared graduate certificates, the development of student leadership courses, health literacy competency workshops, a University of Maryland Initiatives Legal Scholars pipeline, a clinical exercise training and research internship for UMCP students at UMB, and the appointment of a UMCP coordinator for students interested in the health professions at UMB.

Seed Grant Program

Building on the very successful seed grant program in basic and early translational research, which has resulted in over \$4M in joint research awards, IBBR, a component of the University of Maryland Initiatives, has announced a new seed grant program in complex therapeutics, and a seed grant program to promote innovative methodologies and prototypes suitable for commercialization is planned.

Joint Appointments, Joint Grants Management, and Shared Library Resources

Two areas that have plagued collaboration are joint appointment and joint grant submissions. Guidelines for joint appointments have been developed. A process for centrally managing joint grants has also been proposed based on the common software both institutions utilize for grant management. Funds will be necessary for its implementation. There is very little overlap in electronic databases and journals available at the libraries of the two institutions, but access across institutions is necessary for strong collaborations in research and development of joint programs. An approach for individuals to have access across campuses has been developed. A joint collections management committee will be created, and a pilot program to approach vendors for reduces rates is outlined.

Strategic Communications Plan

A multifaceted marketing and communications strategy to shape expectations about how the University of Maryland Initiatives will work and what it will accomplish in the near and longer terms has been developed. The communications personnel at each institution will work together to refine a vision statement and have recommended a logo and tag line. There will be a carefully planned public rollout of the new University of Maryland Initiatives accompanied by a detailed implementation plan.