A GUIDE TO
ACCEL-Med
Accelerating innovation AND DISCOVERY IN MEDICINE

University of Maryland
School of Medicine
The ACCEL-Med Initiative was launched in late 2013 at the inaugural Festival of Science, an annual, full-day symposium highlighting groundbreaking research being done by School of Medicine faculty members.

The first Festival's keynote address was given by the Director of the National Institutes of Health, Francis Collins, MD, PhD. Dr. Collins praised the work being done at the University of Maryland School of Medicine, and applauded this type of ongoing evaluation of our research portfolio.

The day's topics included research in genomic medicine, neuropharmacology, oncopharmacology, stem cell biology and treatments and advances in transplant science. These topics were critiqued by the School of Medicine’s Scientific Advisory Council (SAC), composed of five pre-eminent biomedical researchers and physician-scientists.
Scientific Advisory Council

A cornerstone of the ACCEL-Med Initiative is the meeting of our external Scientific Advisory Council (SAC) at the annual Festival of Science. The SAC members have agreed to serve three-year terms. The SAC provide critical advice on our research portfolio, programs, and plans, as well as guidance and support for faculty presenters. At the Festival in 2013, Council members spent time with the School of Medicine leadership team, the SOM Research Affairs Advisory Committee, and was tasked with evaluating the Festival’s featured research programs.

The SAC members include:

- **Rita Colwell, PhD:** Distinguished Professor at both the University of Maryland, College Park and at the Johns Hopkins Bloomberg School of Public Health; Senior Advisor and Chairman Emeritus of Canon US Life Sciences, Inc.; President and Chairman of CosmosID, Inc.; Former Director, National Science Foundation; 2006 National Medal of Science recipient; and Member of the Institute of Medicine of the National Academy of Sciences.

- **Carol Greider, PhD:** Daniel Nathans Professor and Director of the Department of Molecular Biology and Genetics at the Institute of Basic Biomedical Sciences in the Johns Hopkins University School of Medicine; Winner of the 2009 Nobel Prize for Physiology or Medicine; and Member of the Institute of Medicine of the National Academy of Sciences.

- **Philip Needleman, PhD:** SOM graduate, Class of 1964; Former President of Searle R&D; Member of the Institute of Medicine of the National Academy of Sciences; Member of the Washington University Board of Trustees, the St. Louis Science Center, the Plant and Life Sciences Coalition, and the Board of Trustees of the Donald Danforth Plant Science Center and Research Advisor to the President at Ben-Gurion University, Israel.

- **Ralph Snyderman, MD:** Member of the Institute of Medicine of the National Academy of Sciences; Chancellor Emeritus, Duke University; James B. Duke Professor of Medicine at the Duke University School of Medicine; and former Chair, Association of American Medical Colleges.

- **Elias Zerhouni, MD:** Former Director of the NIH; President of Global Research & Development and Member of the Executive Committee for Sanofi; and Member of the Institute of Medicine of the National Academy of Sciences.
Interdisciplinary Research

One of the major recommendations made by the distinguished Scientific Advisory Council was for the School of Medicine to continue its emphasis on interdisciplinary science, and ensure that programs and policies are in place to encourage this collaborative effort.

THEMATIC RETREATS

These retreats will bring together the leaders in discrete research areas, and will allow us to coordinate tactics, set funding goals and measure progress, while providing high-level oversight and some degree of specificity. Focused thematic retreats will also serve to promote innovation.

The following thematic retreats have been proposed:

- Cancer
- Diabetes and Cardiometabolic Disease
- Genome/Microbiome Science
- Heart and Vascular Disease
- HIV/AIDS
- Neuroscience

RESEARCH CONSORTIUM UNITS

To improve alignment of research ongoing in the basic and clinical departments, as well as to promote a robust transdisciplinary effort, we will establish a number of Research Consortium Units, or “RCUs,” which include senior basic and clinical faculty with a common goal to answer “big science” research questions in key disease areas. We will leverage existing research interest groups within the School, encouraging continued collaboration and providing support. The first SOM RCU has already been established: the Brain Science Research Consortium Unit will conduct large-scale, multidisciplinary studies on brain function and dysfunction.

The Brain Science RCU is led by BANKOLE JOHNSON, DSC, MD, MB, CHB, MPHIL, Professor and Chair of the Department of Psychiatry and Behavioral Science.
DEAN’S CHALLENGE AWARDS
This new seed funding program is meant to encourage senior School of Medicine scientists to bring together their respective expertise, and work collaboratively across departments, centers, institutes and programs in order to tackle the toughest "big science" questions in medicine today.

The Dean’s Challenge Awards will do the following:
- They will fund new collaborations between established funded faculty members from different academic units
- They will provide the support needed to generate pilot data for new and ambitious research projects, which are positioned to acquire a large federal funding base
Center for Innovative Biomedical Resources (CIBR)

A key objective of the ACCEL-Med Initiative is to significantly and measurably increase the pace and scope of scientific discoveries and innovations. This cannot be achieved without cutting-edge technologies and equipment, and the most knowledgeable staff to guide, teach and, in some cases, lead these pursuits.

Our new "CIBR program" will bring together most of our core and resource technologies into a single, centralized facility, on the 7th floor of the Bressler Research Building, and on the 6th floor of Howard Hall and Health Sciences Facility I.

The CIBR facilities serve as a center of excellence for state-of-the-art technologies, equipment, and expertise that supports biomedical research, clinical practice and health care in the state of Maryland and the region. The new facilities give faculty greater access to sophisticated instrumentation, as well as highly-trained technical staff who can offer support to faculty on experimental design, data analysis and interpretation, and provide training for graduate and medical students, postdoctoral fellows, and faculty.

THE CIBR SPACE WAS DEDICATED ON NOVEMBER 22, 2013

During a ceremony held prior to the start of the inaugural Festival of Science, Dr. Francis Collins, UMB President Dr. Jay Perman, the School of Medicine's distinguished Scientific Advisory Council members, and Dean Reece unveiled the new CIBR facilities.
Foundations of Research and Critical Thinking

The Class of 2017 is the first class to take part in this new, required course for all medical students, called Foundations of Research and Critical Thinking (FRCT). The goals of the FRCT course are to stimulate critical thinking, enhance intellectual acuity and inquisitiveness in our medical students, and to foster excellence in the development of clinician scientists, as well as skilled clinician educators and physician investigators. Because the future of medicine will focus less on a vast fund of knowledge, and more on excellent analytic and critical thinking skills, the FRCT course will establish an early research culture in medical students, serving as a basis for these skills.

The FRCT consists of didactic sessions with several days of lectures, multiple small-group meetings during the year, and completion of a scholarly research project under the mentorship of an experienced and well-funded SOM faculty member.

< GEORGE FANTRY, MD, Assistant Dean for Student Research and Education, is one of the co-directors of the FRCT course.
UM Medicine Funding Goals

With the dramatic federal funding cuts to NIH, and in order to continue UM Medicine’s amazing success over the past several years, we will need to significantly increase the amount of research and federal funding we receive, as well as the number and percent of faculty engaged in federally funded research.

Our goals include the following:
- Increase the SOM overall federal funding by ≥5 percent annually
- Achieve ≥25 percent of full-time faculty in clinical departments with federal funding
- Achieve ≥90 percent of full-time faculty in basic science departments, centers and institutes with federal funding
- Increase grant applications across all academic units by 50 percent or more
- Increase the total Program Project Grants, Center Grants, or the equivalent by 100 percent

SOM 7-Year Research Growth Plan
(Federal and Federal Equivalent Awards)

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*CAGR = 4.36%
Dean’s Call to Action

To make our ACCEL-Med initiative a success, everyone in the School of Medicine must play an active part. With that in mind, Dean Reece is asking everyone to consider these “calls to action” in their daily work routines:

- **Think collaboratively** across disciplines, and focus on “Big Science.”
- Approach problems in **new and creative ways**.
- Share your good news and accomplishments with our Office of Public Affairs and Communications.
- Utilize **shared resources** such as the Center for Innovative Biomedical Resources.
- Pursue internal and external **seed grants**.
- Aggressively increase grant applications by 50 percent, and grant funding by ≥25 percent, in every academic unit.

“**BIG SCIENCE**”
SOM Research Building (HSFIII) Unveiled

The new School of Medicine Research Building, Health Sciences Facility III (HSFIII), will allow us to accommodate the accelerated pace and scope of innovation and discovery. This state-of-the-art facility will house our most well-funded investigators working to answer “big science” research questions using a multidisciplinary approach. One of the first collaborative programs we hope to house in the HSFIII will be the partnership of the Institute for Genome Sciences and the Program in Personalized and Genomic Medicine, bringing together a large conglomerate of programs, to advance medicine beyond our imagination.

The ground breaking ceremony for HSFIII was held on September 17, 2013 with Maryland Governor, Martin O’Malley.

For more information on our ACCEL-Med program visit www.medschool.umaryland.edu/ACCEL-Med