

RESEARCH INFRASTRUCTURE, PROGRAMS AND FACULTY

1. Notable Accomplishments

- A major issue addressed in the Research Subcommittee of the Decade Plan in 2003 was enhancing the support for research infrastructure and administration. In the ensuing four years, several key positions have been filled:
 - Assistant Dean for Research, who serves as Director of the Office for Research and administrator of the Research Advisory Committee (RAC, see below), oversees activities such as the summer research program for medical students (MSSRP), faculty nominations for fellowships and awards, and conflict-of-interest matters. The Assistant Dean works closely with the Directors of Space Management and of the Office of Grants and Contracts Administration in the School of Medicine.
 - Associate Dean for Basic Research, who enhances the resources and support for laboratory-based research. The Associate Dean works closely with the Director of Space Management to address space needs and inequities.
 - Director of Space Management, who represents the dean's office and SOM in renovation and construction projects for the SOM and "manages" the allocation and evaluation of use of current research space.
 - Associate Dean for Clinical Research, who enhances and accelerates development of clinical research in the SOM.
 - Director of the Office of Grants and Contracts.
- A School of Medicine Research Advisory Committee (RAC), consisting of faculty leaders in both basic and clinical research, has been formed and functions to advise the dean on faculty retention, evaluation and establishment of priorities for resource allocation and development of new policies and procedures. The RAC reviews the performance of the various cores and programs, and provides input to the dean's office with regard to appropriate funding of these facilities.
 - A space management program developed by the RAC generates data on research funding per square foot, on a yearly and three-year rolling average basis. A target of \$300/sq ft total costs has been set as the minimum for acceptable space utilization by each department or center for each year. Departments with greater than \$600/sq ft are given priority for new space requests. After data collection began in 2003, the policy was implemented in 2006, to ensure that no departments were below this minimum threshold. Through lending, rental, and reassignment of space, no departments will be under target space usage by December 2006.
 - Improved and reorganized Web sites for Office of Grants and Contracts Administration and Office for Research have been developed. These provide new and better-organized information for investigators on UVa and SOM policies, internal and external funding opportunities, compliance, negotiating university administrative offices, etc.

- Implementation of a translational research training program: The Coulter Foundation Translational Research Partnership is a 5-year program designed to fund and bring to market promising translational projects. The Foundation provides expert advice to this program working in collaboration with the UVa Patent Foundation and SOM investigators.
- Mechanisms for more rapid implementation of research technologies: A new position has been created in conjunction with the Coulter Foundation Translational Research Partnership to serve as a liaison to departments for the purpose of increasing awareness of intellectual property (IP) issues, identifying projects with the potential to yield IP, and facilitating the development of technology. The individual in this position will also serve as the Coulter Project Manager, working with the teams selected for funding from the Coulter Award.
- The administration of the SOM research core facilities has been centralized with a full-time administrator hired in 2005. An on-line ordering system is in place.
- Insufficient progress has been made toward the goal of increasing assistance to investigators for compliance. A Research Program Manager position is being created to assist faculty in improving their portfolios and the institution in obtaining multi-disciplinary grants.

2. Two-Year Goals and Metrics for Success

Models for all of US

- Create a unified research Web portal, encompassing the separate sites for the Research, Grants and Contracts, and Clinical Trials Offices.
- Develop a stable funding mechanism and policies and procedures for interim funding support for faculty.
- Enhance mentoring/training of junior faculty, especially for clinical research.
- Implement best practices to assist with successful grant applications.

Goals to improve rankings

- Increase the number of NIH grant submissions by 20 percent (in 2008 compared with 2006).
- Target development of research infrastructure to compete for R&D funding, by identifying specific contracts in areas where we have strengths and targeting development in these programs to specifically address the requirements of the contracts. Potential areas might include biodefense or cancer vaccines.
- Hire 10 to 15 new faculty researchers with the purpose of achieving program excellence. This target represents the first 10 to 15 of the 50 new faculty hires targeted as a five-year goal. New faculty will bring an increase in NIH grant submissions and corresponding grant funding.

- Hire new faculty in the following areas: Internal Medicine, Molecular Physiology and Biological Physics, Pharmacology, Microbiology, Neuroscience, Cell Biology, and Biochemistry and Molecular Genetics.
- Develop a Center for Human Genomics.
- Successfully compete for an NIH Clinical and Translational Science Award.
- Enhance pre- and post-award grant support through improvement of the SOM research website and hiring a research project manager.

Operational goals

- Working with the Office of the Vice President for Research and Graduate Studies, develop a comprehensive listing and source of information on post-doctoral fellow benefits, fair and equitable treatment and rank of all fellows regardless of funding source; development of a council across grounds to discuss policy issues surrounding fellows.
- Complete the Carter-Harrison Building, with 102,000 net square feet to house basic research in cancer, infectious diseases, and immunology.
- Complete the ART Building, providing 18,000 net square feet for the Departments of Internal Medicine and Radiology.
- In conjunction with the VP for Research, create an environment of teamwork and support and establish the Integrated Research Initiative to streamline Human Investigation Committee, Animal Care and Use Committee, and Conflict of Interest Committee submissions and deliberations.
- Create core resources to provide support in study design/biostatistics and for the development confidential database management systems for clinical research.
- Evaluate most important common infrastructure needs of researchers for cores and facilities and coordinate future development, merging, and prioritization.

3. 5-Year Goals and Metrics for Success

Models for all of US

- The Virginia Institute for Clinical and Translational Research (VICTR) will be the home of clinical and translational research activities in the SOM and across the Grounds of the University. VICTR will have its home in the Ivy Foundation Translational Research Building, which will be completed by 2010. The programs of VICTR will promote and enhance interactions of SOM faculty with colleagues in Arts and Sciences, Nursing, Darden, Law and Engineering. Functions will include training in innovation and technology transfer. The infrastructure for this Institute will be developed by year 2, with the full program of in place by year 5.
- Initiate construction of a mouse facility to relieve pressure on existing vivaria associated with individual research buildings, perhaps at the UVa North Fork Research Park.

- Implement a transportation solution for researchers working at the Fontaine site.
- Develop telemedicine as an effective clinical research tool.
- Create a dean's office funding reserve for pilot projects, new investigators and bridge funding.
- The Office for Clinical Research should be fully functioning, with research cores for study design and statistics, human genomics, human proteomics, and human metabolomics.

Research Goals:

The School of Medicine has current strength in investigations of diseases and physiological systems such as cancer, endocrinology, cardiovascular, addiction, neurosciences, digestive health, and biodefense. We are also strong in basic science disciplines such as cell signaling, inflammation, morphogenesis and regenerative medicine, imaging, epigenetics, and structural biology. It is critical to foster these strengths, and enhance the environment for faculty by investments in fundamental infrastructure, school and across-Grounds facilities, and strategic recruitments. During the next five years, we will focus on overarching, multi-departmental efforts adding expertise in Personalized Medicine using the power of genetics, genomics, proteomics, bioinformatics and systems biology, and fundamental mechanisms and diseases of aging. We will develop the Virginia Institute for Clinical and Translational Research to complement our strong basic science accomplishments.

Improve rankings

- Provide research infrastructure and new programs to result in 20 percent increase in NIH funding (2011 compared with 2006).
- Continue hires of new faculty to produce 35 of the projected 50 new hires in the Decade Plan. If each new faculty hire succeeds in securing \$500,000 in yearly NIH funding, reaching the top 25 in NIH funding is attainable.
- Fund-raising for research enterprise and programs – research education (students and fellowships), fostering of young faculty, and rewarding current faculty in mid-career.

Operational goals

- Develop new Cancer Center space for clinical trials, cores for preclinical studies, and tumor and tissue collection.
- Identify funding for additional 60,000 net square feet of research space.
- Implement wireless access in all clinical research areas.
- Re-evaluate space metrics and revise, if necessary; i.e., \$300 per square foot will not likely be applicable.

4. Resources Needed and Barriers to Success

There exist both intrinsic and extrinsic barriers to accomplishing these goals. Money and space are critical elements, for example, in creating research cores for the Office for Clinical Research, development of new research facilities and mouse facility, etc.

Because federal indirect costs comprise a large portion of the SOM budget, it is critical that the level of NIH funding be either maintained or enhanced; further erosion of pay lines may jeopardize this goal. Erosion of funding is likely to decrease faculty morale. Without Development and central support for research education, fostering young faculty and rewarding mid-career faculty, our research enterprise will be eroded.

Lack of space flexibility does not allow best clustering or change in clustering of scientists to address specific problems or to form new collaborative groups without departmental barriers.