

MISSION ENHANCEMENT AT THE UNIVERSITY OF MISSOURI

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At last year's Merrill Advanced Studies Center conference on "Mobilizing for Research Opportunities in the Next Century," I proposed a strategy of *collaboration and focus* to advance the research goals of mid-sized universities like those in Kansas, Nebraska, Iowa, and Missouri. This theme, echoed in Michael Crow's keynote address, plays on our regional strengths and opportunities to excel in selected areas consistent with the missions and heritage of our public universities. In this paper, I will describe how the University of Missouri (MU) is attempting to implement this strategy through a program called *Mission Enhancement* funded over four years by the General Assembly of Missouri.

The Goals of Mission Enhancement at MU

- Increasing research productivity and extramural funding;
- Achieving national prominence and improved program rankings in selected academic areas;
- Improving graduate program quality;
- Enhancing service to the state of Missouri; and
- Improving undergraduate program quality with enhanced undergraduate research experiences and exposure to more senior faculty in the classroom.

We have completed the first year of Mission Enhancement and have approved programs for the second year that began on July 1, 1999. To date, about 125 new faculty positions have been approved for hiring. Our first "crop" of Mission Enhancement faculty will begin their teaching and research duties at the university for the Fall 1999 semester.

Four broad areas of academic enhancement were chosen consistent with MU's Strategic Plan and based upon extensive discussions with faculty leaders and focus groups. These Mission Enhancement areas are termed *Life Sciences*, *Connections*, *Quality of Life*, and *Global Information Access*.

Examples of enhanced programs within these categories are given in Table 1. They were selected using faculty committees to review proposals following a general campus solicitation. It is believed that Mission Enhancement will build upon an already strong base and raise these programs to world-class stature. We are focusing funding in selected areas with strong research and collaboration potential (across campus and the nation).

Table 1. Examples of Mission Enhancement Areas & Programs

<i>Life Sciences</i>	<i>Connections</i>	<i>Quality of Life</i>	<i>Global Information Access</i>
Cardiovascular Health	Biological Sciences	Addictive Behaviors	Network Learning Systems
Crop Genomics	Science Education	Gerontology	Spatial Analysis
Radiopharmaceutical Science	Communications	Dispute Resolution	Knowledge-Based Health Care
Biophysics	Math & Math Education	Public Policy	Computational Mathematics
Neural Basis of Behavior	Theatre & Writing		Electronic Commerce

The first enhancement area is the “Life Sciences” which has a strong history of excellence and interdisciplinary research at MU. A new Center for Crop Genomics was created last year with several new faculty positions from Mission Enhancement, remodeled laboratories from state and federal funding, and over \$11 million in multiyear grants in maize and soybean genomics from the National Science Foundation (NSF) plant genome project. Similarly, we formed a new Center for Radiopharmaceutical Science which takes advantage of the nation’s largest university research reactor (a 10 megawatt facility) on the MU campus. The reactor generates short-lived (days to a week) radioisotopes used in the treatment and research of cancer. Over the next few years, MU will seek designation as a Comprehensive Cancer Center by the National Institute of Health’s National Cancer Institute. The Reactor and Radiopharmaceutical Science Center along with the Ellis Fischel Cancer Center and the Schools of Medicine, Nursing, and Veterinary Medicine will form the core for our proposal to become a National Cancer Institute Cancer Center.

“Connections” is the second enhancement area with a principal goal to improve student education through direct exposure to research across the

academic disciplines and through exposure to more senior faculty in the undergraduate classroom. As can be seen from Table 1, a wide range of academic areas are participating in this enhancement, particularly from the sciences and the humanities. For example, creative linkages between the Department of Mathematics and the College of Education will be used to design new approaches to Math Education in the public schools, supplemented by a major grant from the NSF. Similarly, a new Center for Literary Arts is being created that will combine the talents of faculty in English, Classical Studies, and Theatre to offer a new range of writing options for our students.

“Quality of Life” is a broad-based program intended to address socially-relevant research in areas such as tobacco and alcohol abuse, and dispute resolution in national and international arenas. Once again, these programs are highly collaborative and join together teams, for example, in Medicine and Psychology, and in Law and Political Science. One such innovative program involves new approaches to research in gerontology, an issue of great importance to the aging rural population of the Midwest. TIGR Place will create a new center for the treatment and research of an aging population using federal funding, new faculty positions from Mission Enhancement, and industry collaborations. It is a joint project between Nursing, Medicine, and Psychology.

The fourth Mission Enhancement area is “Global Information Access.” It encompasses computers, computer networks, and the Internet as forces that are rapidly generating new approaches to learning, research, and access to the marketplace in a global information age. Research in computer science, computational mathematics, and geographic information systems are prominent in this area. In addition, an exciting new multi-disciplinary program in Electronic Commerce is being created. It brings together faculty in business, law, journalism, political science, and apparel management to address the explosion of E-commerce on the world-wide web, both as a platform for student learning and as potential intellectual property development for faculty researchers.

The Heartland Research Consortium

As a final example of the collaboration and focus strategy, I will describe an exciting new consortium formed last year here in the “heartland.” It is composed of the chief research officers of 10 Midwestern research universities including Illinois, Washington University, MU, Iowa, Iowa State, Kansas, Kansas State, Nebraska, Oklahoma, and Oklahoma State.

The goals of the Heartland Research Consortium include:

- Stimulate new research collaborations between the Heartland universities;
- On-going discussions of issues of common regional interest;
- Learn from one another in addressing challenges of research administration.

The consortium meets twice per year. The fall meeting is at the annual conference of the National Association of State Universities and Land Grant Colleges. The spring meeting alternates between hotels near the St. Louis and Kansas City airports. Our discussions have resulted, in part, in helping to stimulate new collaborations and funding on swine genomics (Iowa State and MU) and in medicine.

The first major initiative of the Consortium is sponsorship of an international conference on *Genetically-Modified Organisms* in Fall 2000. We have garnered co-sponsorship of this conference by the American Association for the Advancement of Science and we are currently seeking external funding. All ten universities are participating in the planning with university teams consisting of scientists, humanists/ethicists, and administrators. This conference is an excellent example of multi-institutional collaboration that will bring international attention and leadership to our region in an area of emerging research excellence for the Heartland universities.