

Higher Education Research

Mission

To create and disseminate knowledge across all academic disciplines.

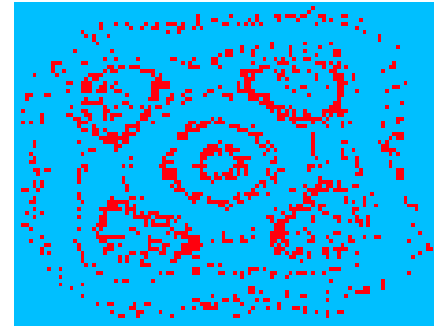
Summary of Activities

Indiana's public universities are engaged in a vast array of research activities across all fields of inquiry. Some research is sponsored directly by the universities or their academic departments, while other research is funded by the state, agencies of the federal government, foundations, or corporations. Indiana is relatively unique among states with similar population size in that it supports two major public research universities as well as a major medical school. Together, **Indiana University** and **Purdue University** received over \$450 million in external research support in FY 2000.

In addition to research funded in a general sense through state operating appropriations to the universities, the state funds a number of specific research activities directly. These state-supported activities are directed at issues with immediate application to the health and welfare of the citizens of Indiana and often include a substantial public service component. Among these activities are spinal cord and paralysis research, the work of the Indiana Geological Survey, veterinary research, support for Internet2, and support for the Indiana Institute on Disability and Community.

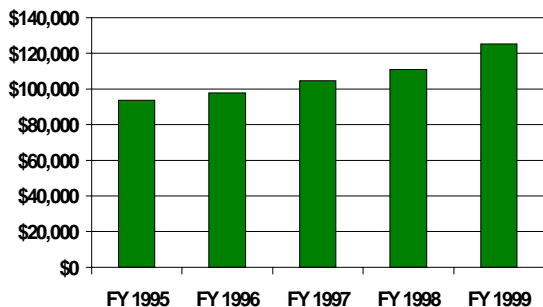
External Factors

The most significant external factors affecting research at universities are the recent growth in federal funding for health-related research and the competitive environment for research dollars nationwide. For example, National Institute of Health support for Indiana institutions increased from \$93.6 million in FY 1995 to \$125.3 million in FY 1999.



Chaos and resonances in dynamical systems: Longitudinal and Transverse beam dynamics

NH Support to Indiana Institutions

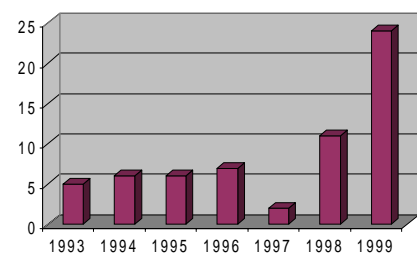


While growth in funding has presented universities with new opportunities, competition for research funding has also increased nationwide. To ensure that Indiana institutions can compete effectively for external grant funding, Governor O'Bannon proposed the creation of the 21st Century Research and Technology Fund in 1999. The fund, which received a \$50 million appropriation from the 1999 General Assembly, leverages external funding opportunities and encourages collaboration between Indiana's universities and the private sector.

Evaluation and Accomplishments

While much research may be "pure" in the sense that it is undertaken to extend the boundaries of knowledge alone, a great deal of research conducted at Indiana universities is "applied" -- its results have direct applications in improving Hoosiers' quality of life and developing Indiana's economy. For example, research at Purdue University often leads to inventions and processes that are ultimately licensed for commercial use, and Purdue has been active in licensing to Indiana companies and start-ups in the state. Some of the new companies resulting from research at Purdue include SSCI; Endocyte, Inc.; Cook Biotech, Inc.; Optolynx, Inc.; SpectraCode; and Advanced Process Combinatorics.

Purdue University Licenses to Indiana Companies



In a similar vein, Indiana University's Advanced Research and Technology Institute (ARTI) and Information Technology organizations foster technology business development and infrastructure. Among the companies facilitated by ARTI are WisdomTools, which creates customizable web-based learning tools for corporate training and higher education, and CyberLearning Labs, which provides course management and Internet portal solutions to the distance learning community.

The economic benefits of research extend beyond new products and services; Indiana University estimates that its 1999-00 level of research and development spending supported over 9,000 jobs. Indiana University's total sponsored research increased from \$205.1 million in fiscal year 1997 to \$309 million in fiscal year 2000.

Plans for the Biennium

- ◆ Spinal cord stem cell research and research on treating injured spinal cords and peripheral nerves with Polyethylene glycol and Ryanodine at the Indiana University Neurosurgery Spinal Cord and Head Injury Research Center.

- ◆ Development, trial, and demonstration of next-generation operational and quality of service networking capabilities at the Abilene Network Operations Center.

- ◆ The Indiana Geological Survey is working with the Department of Energy in collaboration with the Laboratory for Computational Geodynamics to model fractured natural gas reservoirs basins and to develop "Next General Fracture Detection Technologies."



- ◆ Indiana University's Indiana Pervasive Computing Research Initiative—funded by a \$29 million grant from the Lilly Endowment—will pursue research in some of the key software and advanced telecommunications technologies that will underpin the pervasive computing environment of the future. The IPCRS will create new technologies and stimulate the growth of new technology ventures within the State of Indiana.

<i>Program: 0115</i>	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
Appropriation (All Funds)	\$34,051,334	\$38,188,138	\$39,296,252	\$37,714,286	\$37,612,566
Expenditures	\$34,454,188	\$37,896,079	\$39,690,546		

**Sources of Funds
FY 2001 (Approp)**

■ General ■ Dedicated ■ Federal ■ Other

98% 2%

**Uses of Funds
FY 2001 (Approp)**

■ Personal Services ■ Distributions ■ Capital ■ Other

97% 3%