Research Funding in Texas

Why is research important at the higher education level?

Scientific research conducted at higher education institutions is vital for identifying and developing new knowledge that leads to ground-breaking innovations that drive the state’s economy and improve quality of life. High-quality, effective, and efficient research efforts require the appropriate level of funding, particularly from the federal government – the major source of research funds. Strong programs at all levels – basic research, applied research, and technology transfer – build on one another, so all are paramount to a strong economy. They also provide state-of-the-art educational opportunities for college students and attract the best faculty for our institutions of higher education.

What are the research goals of Closing the Gaps by 2015?

Obtaining more federal funds is the expressed research goal in Closing the Gaps by 2015. It states:

By 2015, increase the level of federal science and engineering research and development obligations to Texas institutions to 6.5 percent of obligations to higher education institutions across the nation.

- Increase federal science and engineering obligations to Texas universities and health-related institutions from 5.5 percent of the obligations in 2000 (or $1.1 billion in 1998 constant dollars) to 6.2 percent in 2010, and to 6.5 percent of obligations to higher education by 2015.
- Increase research expenditures by Texas public universities and health-related institutions from $1.45 billion to $3 billion by 2015 (approximate 5 percent increase per year).

How is Texas currently doing in the research field?

In 2008, Texas institutions of higher education ranked fifth in federal obligations for science and engineering research and development. Texas ranked fourth in federal research expenditures for 2009. The National Institutes of Health provided Texas higher education institutions with 65 percent of the federal research support for science and engineering received in 2008. Other sources include the Department of Defense, the National Science Foundation, and the National Aeronautics and Space Administration (NASA).

Federal Obligations for Research (FY08)* Federal Research Expenditures (FY09)*

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<tr>
<th>State</th>
<th>Obligations (FY08)</th>
<th>California</th>
<th>New York</th>
<th>Pennsylvania</th>
<th>Massachusetts</th>
<th>Texas</th>
<th>California</th>
<th>New York</th>
<th>Maryland</th>
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<th>Pennsylvania</th>
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<td>California</td>
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*Funds obligated in any given year may be expended over a number of years. Expenditures occur in one or more years after funds are obligated.
Maryland had the highest growth rate for federal research expenditures increasing by 10.3 percent from 2008 to 2009. None of the other top five states saw double-digit increases: California had the next highest rate with 4.4 percent; Texas’ rate was 3.0 percent.

Bringing more federal research dollars to Texas remains a critical priority to keep Texas competitive with other large states and to develop an appropriate leadership role in research projects in the United States.

All figures in this section are from National Science Foundation, WebCASPAR Database System.

What is retention of the overhead portion of research grants?

Prior to the 79th Texas Legislature, Texas public universities were permitted to retain only 50 percent of the amounts they received for “overhead” – primarily administrative costs – in research grants from external sources. However, since 2003, the Legislature has allowed institutions to retain all of their overhead funds as recommended in Closing the Gaps by 2015. This allows institutions to increases their ability to engage in research projects. Since FY 2004, this change has resulted in an estimated $590 – $650 million of additional research investment.

Which research programs does the state of Texas employ?

Texas employs multiple programs and strategies to increase research activity, including the highly competitive Norman Hackerman Advanced Research Program, retention of the overhead portion of research grants, the Research Development Fund, the Texas Research Incentive Program, the National Research University Fund, the Research University Development Fund, the Texas Emerging Technology Fund, the Competitive Knowledge Fund, the Cancer Prevention and Research Institute of Texas, and the Academy of Medicine, Engineering and Science of Texas.

What is the Norman Hackerman Advanced Research Program (NHARP)?

In 1987, the Texas Legislature established the Advanced Research Program, renamed in October 2007 to the NHARP.

The NHARP focuses on basic research and provides competitive, peer-reviewed grants to researchers designed to enhance research activities at all Texas public and private general academic and health-related institutions. Benefits include state-of-the-art educational opportunities for college students, seed money for efforts to raise more research funds from external sources, and the program’s attraction to the best faculty that the state must recruit and retain.

Since its inception, NHARP has provided research opportunities to more than 4,800 undergraduate students, more than 7,600 graduate students, and more than 90 high school science and math teachers, and has generated more than 5,400 refereed (peer-reviewed) papers.

How is the NHARP funded?

For several biennia the NHARP was funded through state appropriations of approximately $20 million. The funding level for NHARP for the 2006-2007, 2008-2009, 2010-2011, and 2012-2013 biennia was $8.4 million, $16.7 million, $16.7 million, and $1 million, respectfully.
What is the Research Development Fund (RDF)?

In 2001, the Texas Legislature created the Texas Excellence Fund and the University Research Fund to enhance research. In 2003, the Texas Legislature combined the two funds to establish the RDF, effective September 1, 2005, for FY 2006. The RDF supports increased research capacity at eligible public universities (all public institutions, except UT- Austin, Texas A&M University, and Prairie View A&M), distributing funds by a set allocation formula to faculty for individual projects, such as laboratory and equipment upgrades and graduate student tuition. For the 2006-2007 biennium, $42.8 million was appropriated, and then funding was increased to $80.9 million for each of the 2008-2009 and 2010-2011 biennia. For the 2012-2013 biennium, $65.3 million was appropriated.

What is the Texas Emerging Technology Fund (TETF)?

In 2005, the Texas Legislature appropriated $200 million to establish the TETF. Additional appropriations for the 2008-2009, 2010-2011, and 2012-2013 biennia were $117 million, $203 million, and $141 million, respectively. A 17-member advisory committee of high-tech leaders, entrepreneurs and research experts reviews potential projects and recommends funding allocations to the governor, lieutenant governor and speaker of the House. This fund supports emerging technology activities that create high quality new jobs or have the potential to result in medical or scientific breakthroughs. There are three major areas of investment: 1) increasing research and commercialization collaboration between public and private sector entities and to developing new products marketed by new firms, 2) matching research grants provided by federal and private sponsors to help innovators acquire the capital they need to develop their ideas, and 3) attracting more top research teams from other universities throughout the nation to help put Texas universities on the cutting edge of technology research and development. As of August 2012, the TETF has allocated more than $194 million in funds to 136 early stage companies, and nearly $194 million in grant matching and research superiority funds to Texas universities.

What is the Competitive Knowledge Fund?

In 2007, the Competitive Knowledge Fund (restricted to UT- Austin, Texas A&M University, the University of Houston, Texas Tech University, and UT- Dallas) was established to enhance the support of faculty for the purpose of instructional excellence and research. The Texas Legislature appropriated $93.2 million for the 2008-2009 biennium, $126.2 million for the 2010-2011 biennium, and $93.5 million for the 2012-2013 biennium.

What is the Texas Research Incentive Program (TRIP)?

In 2009, the Texas Legislature created the TRIP to provide matching funds to assist emerging research universities in leveraging private gifts for the enhancement of research productivity and faculty recruitment. Matching funds are awarded based on how much an institution raises in private gifts and endowments to enhance research activities. From FY 2010 through FY 2012, $65.3 million in matching funds has been provided to eligible public institutions.

What is the National Research University Fund (NRUF)?

In 2009, the 81st Texas Legislature established the NRUF "to provide a dedicated, independent, and equitable source of funding to enable emerging research universities in this state to achieve national prominence as major research universities."
Eligibility to receive funding is based on an institution meeting benchmarks in the following categories, identified in the legislation or developed by the Coordinating Board:

- Designated as an emerging research university in the Coordinating Board's accountability system;
- Expenditures of at least $45 million in restricted research for the past two years;
- Institution must meet four of the six criteria:
  - Endowment fund in excess of $400 million;
  - Award 200 or more Ph.D.'s annually;
  - Entering freshmen class of high academic achievement;
  - Recognition of research capability and scholarly attainment;
  - High quality faculty;
  - High quality graduate education programs.

In 2012, the Coordinating Board analysis determined that Texas Tech University and the University of Houston met the criteria to receive distributions from the fund. Both universities received $7.9 million in FY 2012.

What is the Research University Development Fund (RUDF)?

In 2009, the Texas Legislature established the RUDF to provide funding to research and emerging research universities for the recruitment and retention of highly qualified faculty and the enhancement of research productivity. Distributions would be based on the average amounts of total research funds expended by institutions during the three most recent state fiscal years. The rates are defined as:

1. at least $1 million for every $10 million of the average annual amount of those research funds expended by the institution, if that average amount for the institution is $50 million or more; and
2. at least $500,000 for every $10 million of the average annual amount of those research funds expended by the institution, if that average amount for the institution is less than $50 million.

Funding has not been appropriated by the Legislature to support the program.

What is the Cancer Prevention and Research Institute of Texas?

In November 2007 Texas voters passed an amendment to the Texas State Constitution creating the Cancer Prevention and Research Institute of Texas (CPRIT). The amendment sets the total bond amount at $3 billion dollars with a $300 million limitation each year for ten years. The institute is tasked with implementing the Texas Cancer Plan, aimed towards finding a cure for cancer. Grants are distributed to learning institutions and advanced medical research facilities to research the causes of and cures for cancer, provide cancer research facilities, research therapies, protocols, and treatments for the cure or substantial mitigation of cancer, and develop cancer prevention and control programs. Recipients of those bond proceeds must already have funds equal to one-half of the amount of the grant dedicated to research that is the subject of the requested grant. The first grants became available in 2010, and funding is eligible to continue until August 31, 2020. These projects are operating in virtually all regions of the state with Texas-based employees.

What role do special item appropriations play in funding research?

Texas uses a formula funding system to allocate resources to public colleges and universities. The Texas Legislature may also authorize additional direct appropriations to a specific institution for special items, which are funds to support a specific program or activity. For the 2012-13
biennium, appropriations for special items related to research activities totaled approximately $230 million. Examples of such items are the McDonald Observatory at UT-Austin and the Superconductivity Center at the University of Houston.

**What is the Academy of Medicine, Engineering and Science of Texas?**

The Academy was created to improve the state’s position as a research leader, to develop the next generation of scientists, and to increase awareness and communication among the state’s scientific researchers. The Academy includes ten Texas Nobel Laureates and 240+ members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

**For more information:** Office of External Relations
Texas Higher Education Coordinating Board
er@theceb.state.tx.us
www.theceb.state.tx.us/Agency/Topics.cfm
512/427-6111