INSPIRING DISCOVERY
Condensed Fiscal Year 2008 Annual Report

Developed by
The Research Statistics and Analysis Group
Norman Campus

OU Research Cabinet
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Cover photo: The BION art project was designed by Adam Brown, former associate professor of Art, and Andrew Fagg, associate professor of Computer Science. Each tooth-like object has biological sensors that communicate with the other objects when a visitor approaches the array. Blue diode lights indicate sensor activity. See http://symbioticmedia.ou.edu/bion.html for details.

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OU researchers develop new knowledge to solve challenging problems, create works of expression to stimulate and delight audiences, and work across generations and cultures to share ideas, debate issues and realize the boundless potential that resides within each of us. Whether developing ear implants, helping high school students understand environmental issues using digital games, or expanding capabilities in wind power, OU researchers are making a difference for Oklahoma, for our nation and for our world.

Technology born out of OU scholarship drives the creation of new companies that expand and diversify Oklahoma’s economy, improves the safety and health of its citizens, creates new high-technology jobs, and helps retain its best and brightest people. OU researchers are leading these efforts. Their purpose is practical and their worldview is wide. In the words of Thoreau, they are Oklahoma’s most engaged philosophers.

“To be a philosopher is not merely to have subtle thoughts, nor even to found a school, but so to love wisdom as to live according to its dictates a life of simplicity, independence, magnanimity, and trust. It is to solve some of the problems of life, not only theoretically, but practically.”

Henry David Thoreau, “Economy,” Walden
RESEARCH AND SPONSORED PROGRAM EXPENDITURES

WHAT DOES THIS CHART SHOW?
Total research and sponsored program expenditures, by Oklahoma fiscal year, for the Norman Campus (including related Programs at OU-Tulsa and the College of Continuing Education, also known as OU Outreach) and the Health Sciences Center (HSC) Campus

WHY IS IT IMPORTANT?
Because expenditures represent money that is actually spent during a given period of time, this metric provides a direct measure of research and sponsored program activity.

WHAT DO WE LEARN FROM IT?
Expenditures have grown steadily since 1999, increasing on average by 7.3% per year, outpacing the research and development (R & D) budgets of Federal science and engineering funding agencies, which grew on average by 4.2% per year during the same period with a few years of zero or negative real growth (taking inflation into account).
OU Research and Sponsored Program Expenditures, OU Fiscal Years 1999 - 2008
Norman Campus and Health Sciences Center

Norman Campus and Health Sciences Center

Expenditures ($ millions)

Fiscal Year


Source: OU Office of the Vice President for Research Quarterly Regents' Reports
FUNDING PORTFOLIO DIVERSITY

WHAT DOES THIS CHART SHOW?

Research expenditures from Federal agency funding, by Oklahoma fiscal year, for the Norman Campus and related programs at OU-Tulsa

WHY IS IT IMPORTANT?

As in personal and corporate investment, diversity in an institution’s research funding portfolio helps mitigate negative impacts associated with possible declines in funding by any given source. Diversity also is a measure of the breadth of scholarship sponsored by external sources. For example, research in the physical sciences and engineering typically is funded by government agencies and private industry, whereas private foundations frequently fund work in the arts and humanities.

WHAT DO WE LEARN FROM IT?

- More than half of Norman Campus research expenditures represent funding from Federal agencies. This is highly desirable because such funding is the foundation of basic and applied research in U.S. higher education, is extremely stable, and provides intellectual property and technology owned by OU that can be commercialized for economic development and used to support additional research.
- Funding from other sources, particularly industry, has been less regular but is becoming an increasingly important emphasis in the OU portfolio, especially as part of the Research Campus, which now houses nearly 300 private sector employees among a dozen high-technology companies.
Note: The increase in Federal funding (shown in blue above) in FY 2005 stems partly from a change in reporting of Federal Flow Through dollars (i.e. indirect Federal dollars), which were classified as non-Federal sources (State and Local Gov’t, Industry/Commercial, Other) before FY 2005.
**FEDERAL FUNDING**

**WHAT DOES THIS CHART SHOW?**
Research expenditures, by Oklahoma fiscal year and Federal agency funding source, for the Norman Campus and related programs at OU-Tulsa

**WHY IS IT IMPORTANT?**
Successful research universities build their research foundation on a diverse array of grants and contracts from Federal agencies. Associated outcomes lead to additional Federal funding, to technologies and processes that can be licensed commercially, and to start-up companies in which the University might take an equity position. All of these activities feed the innovation engine of our economy, resulting in job growth – especially in technology sectors, increased investment by external sources, and greater retention of Oklahoma graduates.

**WHAT DO WE LEARN FROM IT?**
- Roughly one-third of Norman Campus research expenditures are associated with grants from the National Science Foundation (NSF), which supports the bulk of non-medical basic research in the U.S. Over a 10-year period, OU ranked in the upper third among Big 12 institutions in NSF proposal success rate but slightly below the national average.
- Approximately one-quarter of Norman Campus research expenditures are funded by the U.S. Department of Commerce, mostly associated with weather-related research, operations and support activities in National Oceanic and Atmospheric Administration (NOAA) organizations in the National Weather Center.
Federal Research Expenditures by Agency for OU Fiscal Years 1999 - 2008
Norman Campus and Norman Campus Programs at OU-Tulsa

Expenditures ($)

Fiscal Year

Source: Norman Campus Office of Sponsored Program Services
TOTAL RESEARCH EXPENDITURES FOR BIG 12 INSTITUTIONS

WHAT DOES THIS CHART SHOW?
Research expenditures, by Federal fiscal year, for all campuses of Big 12 institutions

WHY IS IT IMPORTANT?
Although Big 12 institutions are not necessarily peers in the context of research and sponsored programs, they represent a natural cohort for comparison.

WHAT DO WE LEARN FROM IT?
Since 2000, three distinct groupings of Big 12 institutions have emerged in both total amount and rate of increase in research expenditures. The top cohort comprises four Carnegie Very High Research institutions: Colorado, Texas A&M, Nebraska, and U of Texas-Austin. All have evidenced growth at twice the rate of the nearest cohort that includes OU, but for different reasons:

University of Colorado
• More than 90% of Colorado’s expenditures are from Federal sources, and the bulk of its growth has been in health-related research.
• On the Boulder Campus, seven research institutes that employ hundreds of non-faculty researchers account for approximately one-half of all research expenditures.

Texas A & M University
• The biggest driver of A & M’s growth has been the addition of nearly 450 new faculty lines between 2002 and 2008.

University of Texas–Austin
• A significant driver of UT’s increase in research expenditures is larger-than-expected activity associated with one of its classified research centers.
• The NSF awarded a $60 million grant to establish the Texas Advanced Computing Center (TACC), which has had a significant and sustainable impact on research expenditures.

University of Nebraska
• Nebraska has been awarded several large center grants, including an NSF Material Research Science and Engineering Center (one of which also exists at OU), two significant biomedical research grants, biodefense grants, and two Department of Defense Multidisciplinary University Research Initiative (MURI) grants.
Research Expenditures* for Big 12 Institutions for Federal Fiscal Years 1996 - 2006

Norman Campus (including NC programs at OU-Tulsa) and Health Sciences Center

Expenditures ($ thousands)

Fiscal Year

*Does not include outreach activities such as College of Continuing Education grants and contracts.

This chart expresses data reported to the National Science Foundation by the Norman Campus Office of Financial Support Services.
WHAT DOES THIS CHART SHOW?

Research expenditures in 2008, per full time faculty member and full-time non-faculty researcher holding a doctoral degree, on main campuses only (i.e., excluding medical campuses) for all Big 12 institutions.

WHY IS IT IMPORTANT?

The amount of money expended on research depends upon many factors. In order to account for differences in headcount (faculty and research staff), removing the advantage of size, we show 2008 expenditures per capita. The chart provides a sense of productivity in research grants and is a bulk measure of the competitiveness of OU faculty and researchers with their Big 12 counterparts.

PLEASE NOTE: Other university personnel (e.g. researchers without a doctorate) participate in funded projects, and many faculty do not have to seek external funding to conduct their research.

WHAT DO WE LEARN FROM IT?

- OU ranks eighth in the Big 12 in the total number of faculty and non-faculty researchers.
- OU ranks ninth in the Big 12 (excluding Baylor, which is predominantly a medical school) in research expenditures per capita.
- No direct correlation is apparent between per capita expenditures and researcher headcount. For example, the Universities of Nebraska and Missouri rank second and third, respectively, in per capita research expenditures but are in the lower half of the Big 12 in researcher headcount.
Expenditures Per Researcher at Big 12 Universities in 2008*
Counting Full-time Faculty and Full-time Doctoral degree-holding
Non-Faculty Research Staff
Main Campuses Only

*Sources: Expenditure data from Carnegie Foundation, 2008 Carnegie Classification tables; full-time faculty counts from 2007-2008 Common Data Sets for each institution. Baylor was not included due to its significantly smaller size relative to the institutions shown here.
Among recent actions taken, three in the past year and six in the past couple of years, are the following:

**University-wide Research Cabinet**, chaired by Dr. Paul Risser, that enables leadership of all three campuses to collaboratively facilitate research excellence and productivity, particularly in those instances in which multi-campus participation results in an institutional value and competitive advantage for the University.

**Research External Review**, coordinated by the Research Cabinet, to be conducted in late August, 2009. The blue ribbon panel, comprising seven eminent leaders in higher education research, will review and provide advice to University leadership on vision, direction, organization and support, and productivity and opportunities associated with research support programs within and across all three campuses.

**Multi-Disciplinary Strategic Initiatives** in areas of existing strength that, with substantial investment over several years, are now growing to international prominence. Four initiatives are underway, the first beginning in 2003: Weather Radar, Integrative Life Sciences, Applied Social Research, and K-20 Education and Community Renewal.

**Research Statistics and Analysis Group (RSA)**, within the Norman Campus Office of the VP for Research, gathers, analyzes and makes recommendations using quantitative data in order to improve research competitiveness. Information contained in this document, and in the 2008 Annual Report, was prepared by RSA.
Excellence in Proposals peer mentoring pilot program in which faculty having strong records of success in obtaining externally-funded grants mentor their early-career colleagues through the entire process of developing and submitting an actual proposal.

Strategic Plan for Research, which will be developed during the fall 2009 semester. It will set bold but achievable goals that build upon existing strengths, identify and support new initiatives, and provide an overarching framework for prioritizing investments and pursuing unexpected opportunities.

Commerce Information and Venture Opportunities (CIVO) office facilitates especially large, long-term research and development projects with private industry and government, especially in defense, aerospace, energy and other high-technology sectors.

Norman Campus VP for Research Advisory Committee consists of faculty from all colleges on the Norman and Tulsa Campuses to advise the VP for Research on policy, budget, and related matters.

Creation of a Research Communications Office that promotes OU’s research capabilities to the local, national and international community via press releases, online services including social networking sites, and radio and television productions.

Faculty Scholarship and Proposal Development Center, now in the early planning stages, that will result in the submission of more competitive proposals within and across all disciplines at OU. A key component of the center will be personalized assistance with proposal development, and its focus eventually will broaden to include topics such as leadership and management, mentor training, preparation of manuscripts and strategies for working with publishers, and communication of research outcomes to non-technical audiences.
The mission of the Office of the Vice President for Research, Norman Campus, is to facilitate faculty and staff scholarship in all disciplines represented on the Norman Campus and Norman Campus programs at OU-Tulsa.

The University Research Cabinet serves as a consistent, continuing and timely mechanism to enable the leadership of all three campuses to collaboratively facilitate research excellence and productivity, particularly in those instances in which multi-campus participation results in an Institutional value and competitive advantage for the University of Oklahoma.