



EXTERNALLY FUNDED RESEARCH & PROJECTS REPORT
PREPARED BY THE OFFICE OF RESEARCH ADMINISTRATION
FISCAL YEAR (FY) 2016

Externally sponsored grants and contracts enhance the capacity for the University to achieve its mission through education, research, and service projects. External funding enables faculty and staff to address the needs of communities, schools, and businesses throughout southwest Missouri and beyond.

In 2015-2016, Missouri State University was awarded \$24,791,190 to support projects in research, education and service. **This awarded amount is the highest recorded in University history.** The number of proposals submitted is the second highest recorded (362). Approximately 16% of faculty were named investigators on awards.

2016	SUMMARY OF SPONSORED RESEARCH & PROGRAMS ACTIVITY		
	Key Indicators	FY2016 Activity	% Change from FY2015
	Proposal Submitted	362	-7%
	Funds Requested	\$54,552,271	4%
	Named Investigators	132	19%
	Grants & Contracts Awarded	288	-3%
	Funds Awarded	\$24,791,190	30%

FY 2016 PROJECT HIGHLIGHTS

Faculty and staff from across all areas of the University complete incredible and unique projects due in part to the external funding they receive. The following is a sampling of grants and contracts awarded in fiscal year 2016:

- An award from the Community Foundation of the Ozarks supports the Northwest Project, which helps families overcome the challenges that have kept them living in poverty and sustain their long-term success in emerging from those circumstances in northwest Springfield.
- An award from the National Science Foundation (NSF) funds a scholarship program that aims to attract and retain students interested in STEM fields, with a focus in computer science, engineering, mathematics, and physics at MSU.
- A cooperative agreement with the Department of Defense provides funds to safely develop and deploy nanoscale engineered technologies. This research is important for minimizing, mitigating,

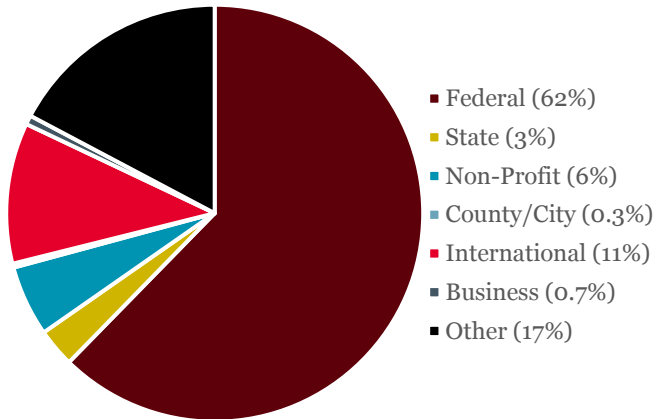
or even eliminating the human and environmental risks that may be associated with nanoscale engineered technologies.

- Funds from the U.S. Department of Education (ED) support activities focused on improving student achievement by providing resources allocated and aligned to the Missouri Education Standards and evidence-based research on transition, dropout prevention, and effective teaching strategies – especially for students with disabilities.
- An award from the National Institute of Justice supports a comprehensive multi-site examination of veterans treatment courts through an implementation and intermediate impact evaluation.
- A NSF award supports the purchase of a calibrated screw Burris gravimeter. The gravimeter will be used in undergraduate and graduate geological courses, undergraduate and graduate research projects, and in collaborative research within the United States and worldwide.
- The U.S. Department of Agriculture funds help address food security through improvements in meat goat production and marketing and outreach efforts by enhancing research and outreach capacities of a collaboration of universities.
- A grant from the NSF provides funds each summer to 12 talented undergraduate students from across the country to come to Missouri State to have the opportunity to be involved in high-quality research projects in different areas of pure and applied mathematics.
- An ED grant enables the continuation of a program to provide intensive summer school opportunities to a population of migrant students to focus on English language proficiency, foundation skills in mathematics for the elementary students, and the PASS course in American Government for high school students.
- The Missouri Department for Social Services supports a project to prepare youth for personal success in employment, education, healthy life styles and self-sufficiency through mentoring support.
- The Wabash Center provides funds to develop a new curriculum, allowing for a capacity to teach about the many ways that religion and health intersect, and build meaningful interdisciplinary collaborations between Religious Studies and Health programs at Missouri State University.
- Funds from the Taiwan Foundation for Democracy support the examination of prospects for a continuation of the diplomatic truce between Taipei and Beijing after the Democratic Progressive Party (DPP) returned to power on May 20, 2016.
- The National Writing Project supports the development of leadership opportunities for underserved teachers. Sustained access to strong communities of practice and effective teacher networks can help improve the abilities of teachers to support young people in achieving college, career, and community ready standards.
- Funding from the U.S. Department of Health & Human Services enables a collaboration to provide services and supports programs that help people take control of their lives. Missouri State's primary role is to facilitate successful implementation of Family Group Conferencing with clients and their families/support system.
- The NSF provides research funds to enhance construction decision-making accuracy by reducing uncertainties through the seamless integration of process-level data into decision-making. The results of this research will tremendously benefit the U.S. economy and society since it leads to better decision-making which results in reducing waste, rework, cost, time, and ensures safety.

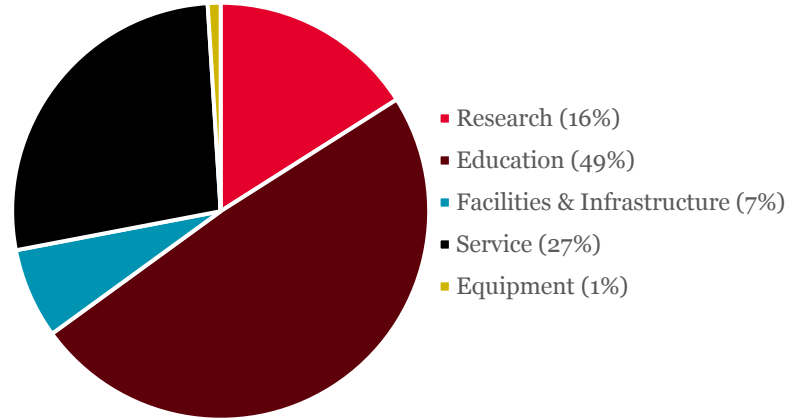
FY 2016 EXTERNAL FUNDING SUMMARY & TRENDS

In FY2016, federal agencies remain the leading source of grants and contracts. International and Other types of sponsors provide the next largest sources of funding. Education projects make up approximately half of the awards that Missouri State receives.

AWARDS BY SPONSOR TYPE

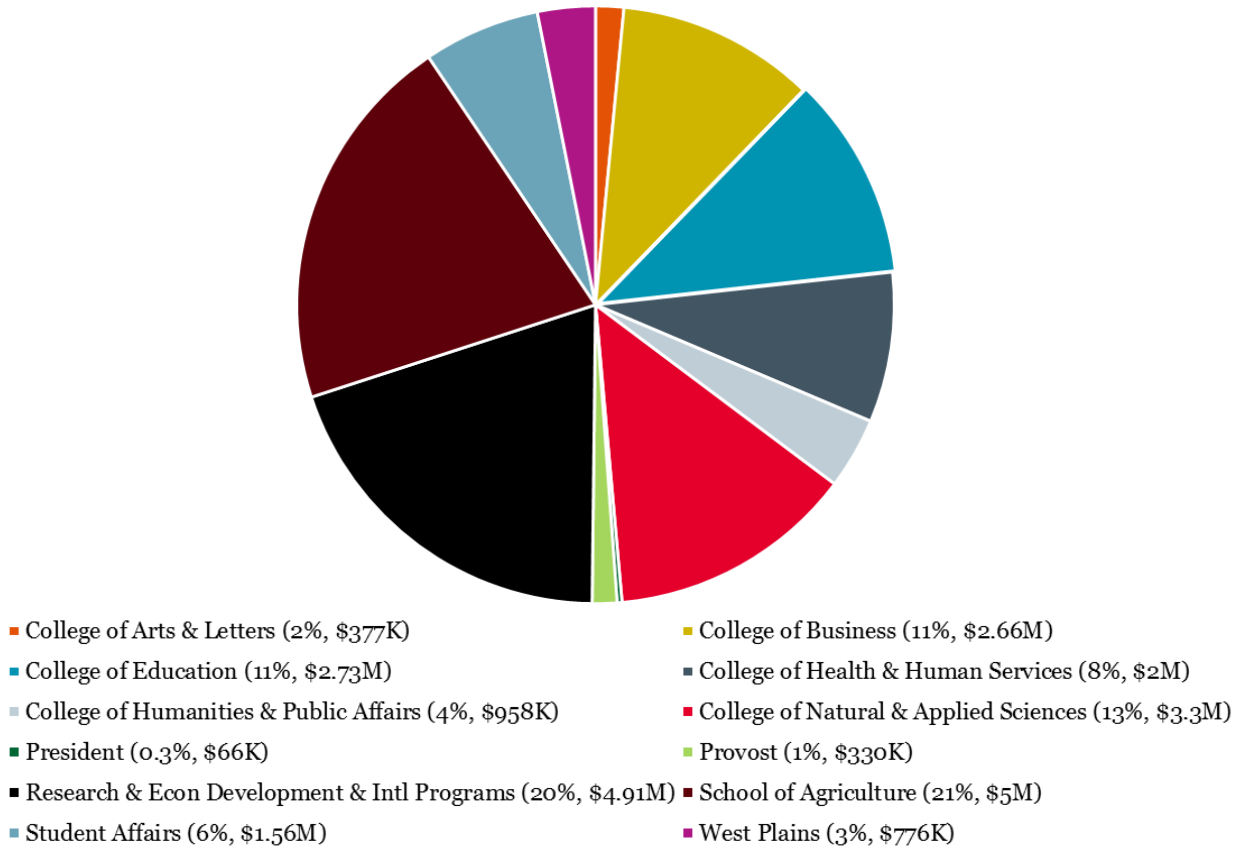


AWARDS BY PROJECT TYPE



Seven of Missouri State's major units exceeded \$1 million in annual award funding, and University centers continue to be instrumental in acquiring external funding, with approximately \$11.2 million (45.6%) of the total funds awarded in FY 2016.

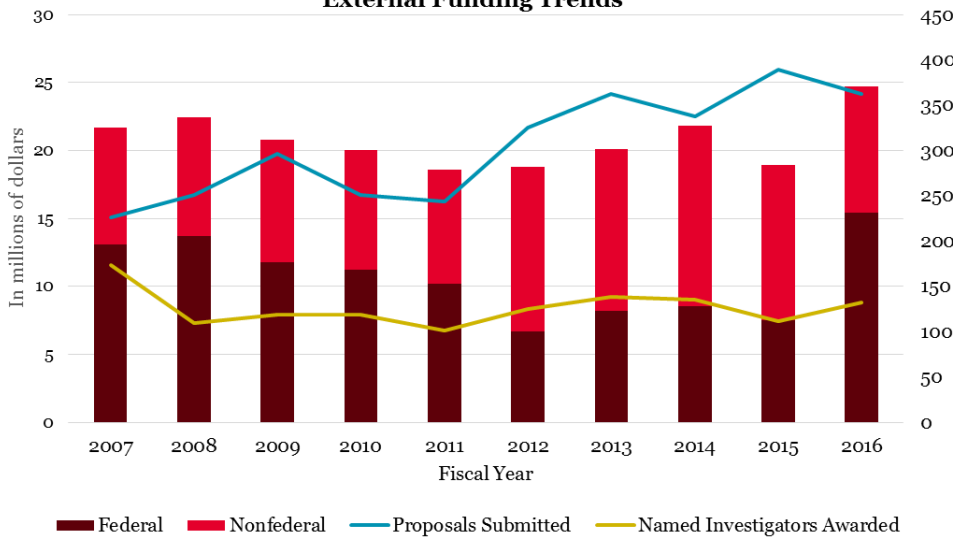
AWARDS BY UNIT



Missouri State University had a record year for awards, receiving \$24,791,190 in external funding. This awarded amount is \$2.3 million more than fiscal year 2008, which previously held the record for the most awarded funds (\$22.4 million). Over the last 4 years, over 280 awards have been obtained annually, and faculty and staff have consistently submitted more than 300 proposals annually.

HISTORY OF SPONSORED RESEARCH & PROGRAMS ACTIVITY					
Fiscal Year	Proposals Submitted	Named Investigators Awarded	Total Awards	Total Requested (millions)	Total Awarded (millions)
2007	226	173	154	\$41.2	\$21.7
2008	251	109	141	\$32.1	\$22.4
2009	296	119	196	\$48.3	\$20.9
2010	251	119	184	\$71.8	\$20.1
2011	244	101	153	\$65.7	\$18.7
2012	325	125	245	\$38	\$18.9
2013	362	138	289	\$32.4	\$20.1
2014	338	135	289	\$33.5	\$21.9
2015	389	111	297	\$52.7	\$19
2016	362	132	288	\$54.5	\$24.7

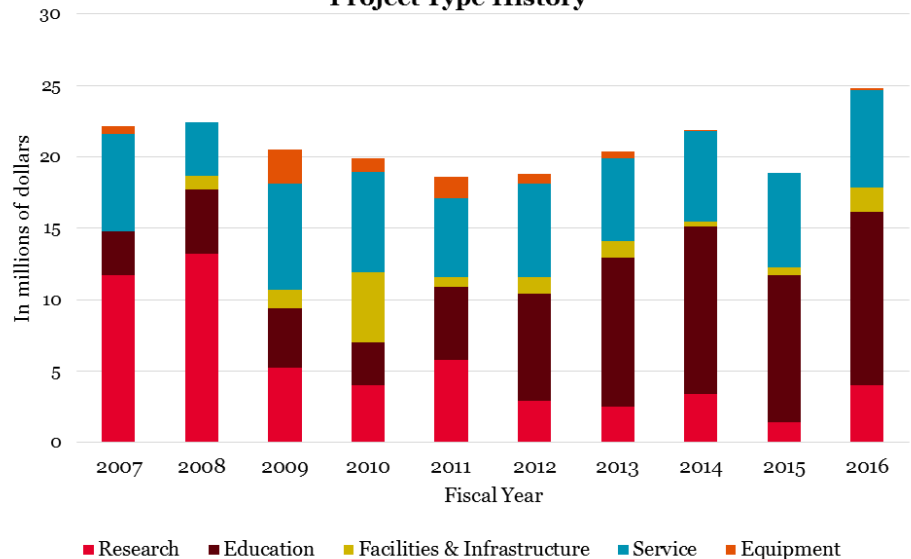
External Funding Trends



In addition to the most overall awarded dollars recorded, Missouri State received the most federal funds (\$15.45M) in its history.

The number of named investigators and proposals submitted remains high, although not record-setting for FY2016.

Project Type History



Over the course of 10 years, Missouri State has increased the number of dollars awarded for education-related projects. For example, the Viticulture & Enology Science & Technology Alliance (VESTA), funded by NSF, is a MSU-led consortium which aims to ensure that the technical workforce in grape and wine industry has the requisite knowledge and skills to enter and advance in a rapidly-changing climate and workplace.

Missouri State University FY2016 Grant/Contract Activity by Unit

The numbers of faculty and staff applying and awarded grants and contracts by each unit is presented below. The College of Natural and Applied Sciences had the largest number (44) of faculty apply for external funding, while the College of Health and Human Services had the largest number (54) of actual awards, based on credit sharing values. The Mid-America Viticulture and Enology Center, in the School of Agriculture, obtained the highest value of funding (\$4.3M) of any center, department, or unit.

Unit	# Applying		# Awarded		Credit Share*			Actual**		
	Staff	Faculty	Staff	Faculty	Grants / Contracts		Award	Grants / Contracts		Award
					Submit	Awards	\$	Submit	Awards	\$
Admin & Info Services	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Arts & Letters	3	3	3	1	22	17	\$ 286,811	13	11	\$ 286,811
Center for Dispute Resolution	0	1	0	1	5	5	\$ 90,553	5	5	\$ 90,553
College of Business	0	2	0	2	5	5	\$ 2,630,196	5	5	\$ 2,630,196
Center for Project Innovation & Management	0	1	0	1	3	1	\$ 27,000	3	1	\$ 27,000
College of Education	4	7	4	7	28	29	\$ 1,336,879	27	27	\$ 1,409,735
Institute for Play Therapy	0	0	0	0	0	0	\$ -	0	0	\$ -
Institute for School Improvement	0	0	0	0	0	0	\$ -	0	0	\$ -
Southwest Regional Professional Development Center	1	1	1	1	7	7	\$ 1,425,680	6	6	\$ 1,320,183
College of Health & Human Services	5	27	6	21	59	54	\$ 2,065,188	45	38	\$ 2,013,435
Center for Research & Service	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Humanities & Public Affairs	0	10	0	9	10	9	\$ 874,733	6	7	\$ 874,733
Center for Archaeological Research	0	1	2	1	4	6	\$ 72,207	4	5	\$ 72,207
Center for Community Engagement	0	1	0	0	1	0	\$ -	1	0	\$ -
Center for Economic Research	0	1	0	1	1	1	\$ 7,533	1	1	\$ 7,533
Center for Social Science & Public Policy Research	0	1	0	1	3	3	\$ 3,718	3	3	\$ 3,718
College of Natural & Applied Sciences	3	44	1	23	106	40	\$ 1,806,150	70	30	\$ 1,819,418
Bull Shoals Field Station	1	1	1	1	7	5	\$ 42,355	6	5	\$ 42,355
Center for Resource Planning & Management	3	1	3	1	20	15	\$ 532,100	12	9	\$ 532,100
Ozark Environmental Water Research Institute	1	1	1	1	18	19	\$ 893,366	14	15	\$ 914,366
Diversity & Inclusion	0	0	0	0	0	0	\$ -	0	0	\$ -
Graduate College	0	0	0	0	0	0	\$ -	0	0	\$ -
Library	3	2	0	0	7	0	\$ -	4	0	\$ -
President	3	0	0	0	3	1	\$ 66,084	2	1	\$ 66,084
Provost	2	1	3	1	8	6	\$ 30,079	6	6	\$ 30,079
Ozarks Public Health Institute	0	1	0	1	7	8	\$ 273,294	6	8	\$ 300,092
Research & Economic Development	5	0	4	0	30	25	\$ 2,055,914	26	23	\$ 2,055,914
Center for Applied Science & Engineering	5	0	4	0	19	11	\$ 1,012,294	12	7	\$ 1,012,294
Center for Biomedical & Life Sciences	0	1	0	1	13	9	\$ 109,100	13	9	\$ 109,100
International Leadership & Training Center	1	0	1	0	4	4	\$ 352,300	4	4	\$ 352,300
Jordan Valley Innovation Center	1	0	1	0	9	9	\$ 874,235	9	9	\$ 874,235
Small Business Development & Technology Center	2	0	1	0	8	8	\$ 236,672	8	8	\$ 236,672
Southwest Missouri Area Health Education Center	2	0	2	0	7	7	\$ 272,984	7	7	\$ 272,984
School of Agriculture	3	11	2	7	28	19	\$ 715,168	18	15	\$ 738,497
Center for Grapevine Biotechnology	0	1	0	1	3	2	\$ 48,084	3	2	\$ 48,084
Mid-America Viticulture & Enology Center	1	1	1	0	6	5	\$ 4,310,504	6	5	\$ 4,310,504
Student Affairs	1	0	2	0	2	4	\$ 1,563,378	2	4	\$ 1,563,378
West Plains	4	6	4	3	17	12	\$ 776,629	15	12	\$ 776,629
TOTAL	54	127	47	86	470	346	\$ 24,791,190	362	288	\$ 24,791,190

* **Credit Share** - divides the proposals/awards between the PI's, therefore proposals/awards may be reflected in the totals more than once.

** **Actual** - proposals/awards will only be shown in the originating unit.

FY2016 OFFICE OF RESEARCH ADMINISTRATION (ORA) HIGHLIGHTS

The ORA continues to support faculty and staff in their pursuit of external funding, in addition to considering ways to improve their support of faculty and staff. The ORA endeavored to increase the monetary support for travel in 2016 to send more faculty and staff to conferences focused on grant writing and grant getting, legislative visits, and meetings with federal and private agencies and program officers. During FY2016, faculty members were supported to attend the NSF Grants Conference and NEH Regional Workshops. In addition, multiple investigators went to Washington DC to visit with legislators and programs officers, with help from the ORA. In collaboration with the Provost and Colleges of Arts and Letters and Humanities and Public Affairs, the ORA hosted a two-day humanities-focused grant writing conference for faculty and staff. It is the intent of the ORA that these funds are a small investment to more proposals being submitted and hopefully funded in the future.

Starting in June 2016, the Graduate College and ORA initiated a pilot program to provide summer graduate assistantships to assist faculty members with completing their research during the summer months. By providing an additional semester of support for GAs, more graduate students receive summer support and researchers can increase their research productivity which may allow for faster time to publications, data for grant proposals, and then grant proposal submissions and awards. This program will be formalized over the Fall semester and offered across all units for the summer 2017.

The ORA is also responsible for research compliance in the areas of human subjects research, animal subjects research, radiation safety, biosafety, export control, responsible conduct of research, conflict of interest, and research misconduct. The following are highlights from a few of the compliance areas:

- In December 2016, the Nuclear Regulatory Commission (NRC) completed an unannounced inspection of Missouri State University's radiation safety program and laboratories. The inspection concluded with no citations.
- In May 2016, Missouri State's NRC license was due for renewal. The license was updated and submitted for renewal – approval is still pending.
- In July 2015, March 2016, and April 2016, the US Department of Agriculture (USDA) completed unannounced inspections of Missouri State's animal research facilities and animal research program. No non-compliant issues were reported by the USDA.
- In July 2015, the new online human subjects research application and review system, *Cayuse IRB* (Institutional Review Board), was piloted. Over the course of the year, the system was introduced to the units on campus, and the system is now being used campus-wide. Paper applications are no longer being accepted as of July 1, 2016.
- In July 2015, the Research Involving Human Subjects (IRB) policy (Op.4.01-6) was updated, reviewed, and approved.
- In March 2016, the Research Misconduct policy (Op.4.01-7) was updated, reviewed, and approved.

The research compliance committees, Institutional Review Board (IRB) and Institutional Animal Care and Use Committee (IACUC), are responsible for reviewing and approving human subjects and animal subjects research, respectively. In FY2016, the IRB reviewed 572 applications and the IACUC reviewed 38 new applications. Both IRB and IACUC submissions increased from FY2015. The following charts provide information on submissions that occurred in FY2016, in addition to the totals from FY2015, for comparison.

