



EXTERNALLY FUNDED RESEARCH & PROJECTS REPORT
PREPARED BY THE OFFICE OF RESEARCH ADMINISTRATION
FISCAL YEAR (FY) 2019

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 2018-2019, Missouri State University was awarded a record **\$32,802,989** to support projects in research, education and service. A total of 336 proposals were submitted.

2019

SUMMARY OF SPONSORED RESEARCH & PROGRAMS ACTIVITY		
Key Indicators	FY2019 Activity	% Change from FY2018
Proposals Submitted	336	28%
Funds Requested	\$48,007,205	-7%
Named Investigators	106	6%
Grants & Contracts Awarded	292	35%
Funds Awarded	\$32,802,989	26%

FY 2019 PROJECT HIGHLIGHTS

Faculty and staff from across many 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 2019:

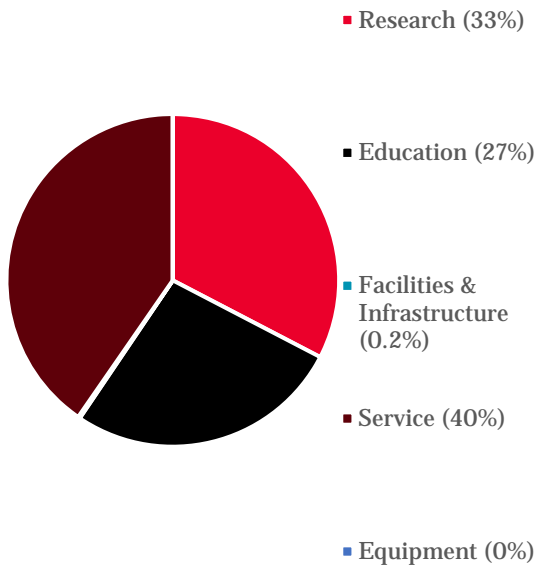
- **Dennis Lancaster**, Dean of Academic Affairs, West Plains received **\$235,050** from the **Missouri Division of Workforce Development** through the **South Central Workforce Investment Board** for the Greater Ozarks Fostering Adult Retraining and Recertification Program. This grant specifically focuses on building a manufacturing apprenticeship program.
- **David Claborn**, Associate Professor, CHHS-Master of Public Health received a contract for **\$126,110** from the **Missouri Department of Health and Senior Services** to sustain and enhance public health surveillance and investigations of tick and mosquito borne diseases by supporting entomological surveillance in selected counties and municipalities of Missouri where these data are absent or have not been recently validated.
- **Michael Goerndt**, Assistant Professor, Environmental Plant Science and Natural Resources Department, received **\$149,204** from the **United States Department of Agriculture, National Institute of Food and Agriculture**, for the study and method, challenges, production, sustainability and economics of establishing and managing silvopasture systems in the Missouri Ozark Region. Silvopasture is the practice of integrating trees, forage, and the grazing of domesticated animals in a mutually beneficial way.

- **Rachel Anderson**, Director of the eFactory and **Chrystal Irons**, Director of the Small Business Development Center received **\$350,000** from the **Missouri Technology Corporation** to continue to support the advancement of entrepreneurial capacity and implement a Pre Accelerator workshop/training. This grant will also refine mentorship and business counseling; refine the corporate innovation program; provide pitch and presentation counseling/events; and provide investment, proforma, business plan and projection counseling.
- **Alicia Mathis**, Department Head, Biology received **\$124,119** from the **National Parks Service (NPS)**, for an ongoing cooperative agreement between MSU and the National Park Service that locates NPS staff within the Biology Department on campus, providing opportunities for interaction between NPS staff and MSU students through participation in the classroom, field, and research projects. It also provides education opportunities for MSU students through participation in NPS led ecological monitoring activities and allows both MSU faculty and NPS staff to draw upon one another's expertise through information interaction, collaborative projects, and co-mentoring of undergraduate and graduate students.
- **Neal Lopinot**, Director of Center for Archeological Research and Jack Ray, Assistant Director of the Center for Archeological Research received **\$157,625** from the **U.S. Army Corp of Engineers Kansas City District** to survey portions of Fort Leonard Wood military installation for archeological sites of significance and to catalog any artifacts recovered.
- **Tamara Arthaud**, Professor, Counseling Leadership and Special Education received **\$100,000** from **U.S. Department of Education** through the **Missouri Department of Elementary and Secondary Education**, to fund tuition and fees for graduate students enrolled in the Blindness/Low Vision Program. This tuition reimbursement grant pays a portion of tuition, student fees, and licensure exams for Missouri residents who are students selected for these programs.
- **Rishi Patel**, Senior Research Scientist for the Center for Applied Science and Engineering, received **\$5,000,000** from the **Department of the Army, US Army Engineer Research and Development Center (ERDC)** for a cooperative agreement between JVIC-Missouri State University, Brewer Science and ERDC. The objective of this cooperative agreement is to continue and expand upon efforts of the previous Phases (I-III). This phase will focus on the application of the life cycle inventory/life cycle assessment, risk assessment and mitigation methodology to further develop the carbon nanomaterials into manufacturing; expand into pilot production of carbon-based ink formulations for screen and ink-jet printing; refine pilot production and full characterization of printed temperature, humidity, and flex sensors; develop "on-demand" printed sensor technology; expand into advanced materials and technology research for gas sensing; and generate knowledge and technical data for LCI/LCA assessment through printed sensor system integration and field application demonstration.

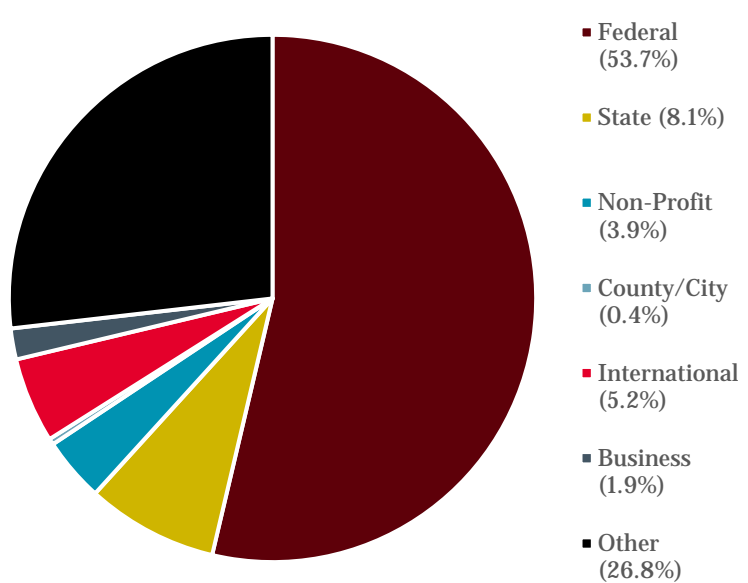
FY 2019 EXTERNAL FUNDING SUMMARY & TRENDS

In FY2019, federal agencies remain the leading source of grants and contracts. State and other types of sponsors provide the next largest sources of funding. Our project types are diverse with the majority being service projects, followed by research and then education.

AWARDS BY PROJECT TYPE

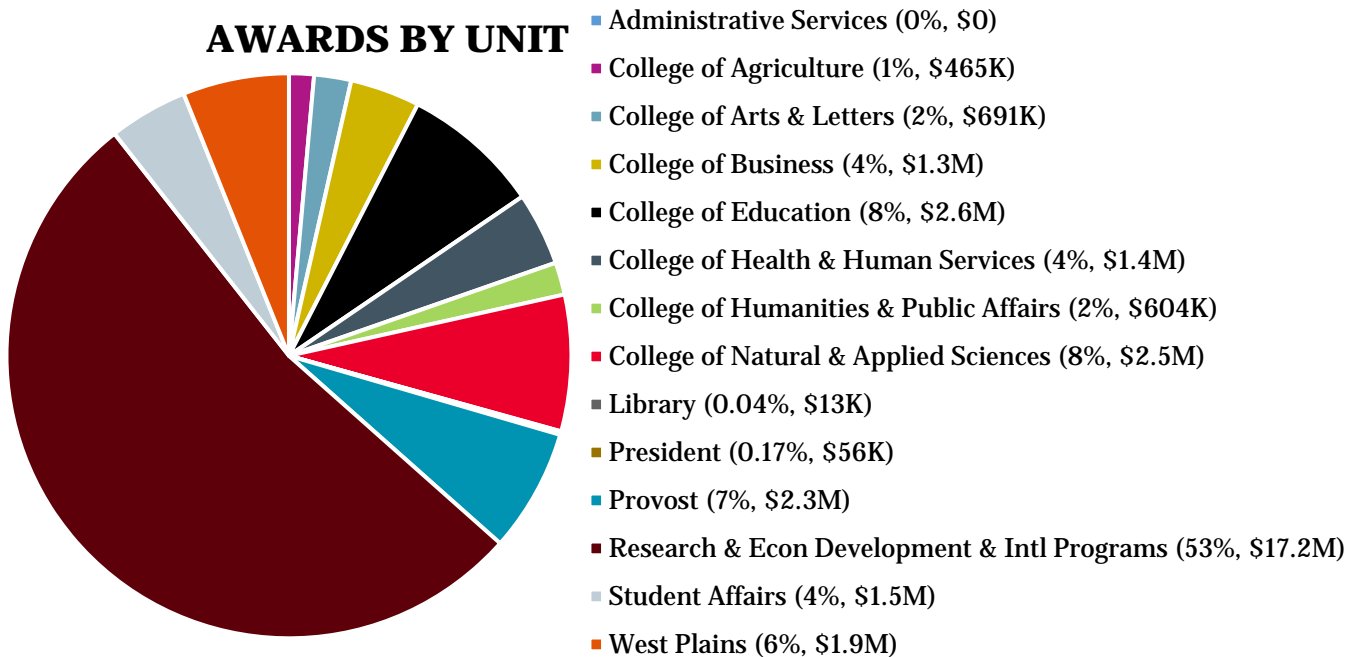


AWARDS BY SPONSOR TYPE



Eight 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 \$17.9 million (55%) of the total funds awarded in FY 2019.

AWARDS BY UNIT



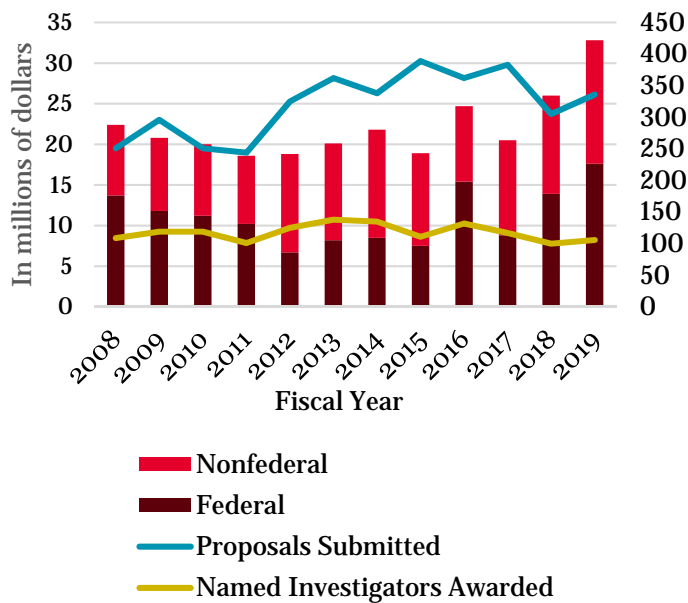
Missouri State University met its 2018-2019 Action Plan's Research Administration goals:

- Maintain external funding through private support, grants and sponsored contracts of \$40 million or more annually (\$32.8 million from Research Administration and \$20.1 million through the Foundation)
- Maintain the number of grant and contract proposals submitted for external funding through the Office of Research Administration

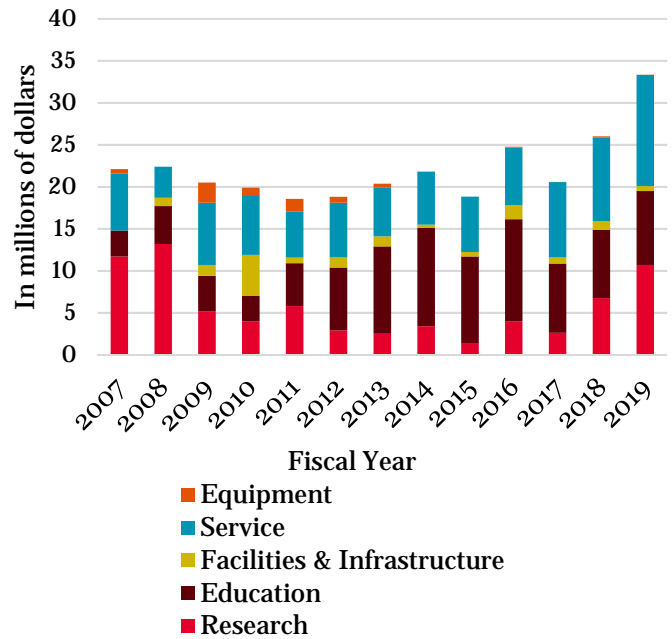
Over the last 8 years, faculty and staff have consistently submitted more than 300 proposals annually.

HISTORY OF SPONSORED RESEARCH & PROGRAMS ACTIVITY					
Fiscal Year	Proposals Submitted	Named Investigators Awarded	Total Awards	Total Requested (millions)	Total Awarded (millions)
2008	251	109	141	\$32.10	\$22.40
2009	296	119	196	\$48.30	\$20.90
2010	251	119	184	\$71.80	\$20.10
2011	244	101	153	\$65.70	\$18.70
2012	325	125	245	\$38.00	\$18.90
2013	362	138	289	\$32.40	\$20.10
2014	338	135	289	\$33.50	\$21.90
2015	389	111	297	\$52.70	\$19.00
2016	362	132	288	\$54.50	\$24.70
2017	383	117	285	\$54.20	\$20.50
2018	305	100	258	\$56.95	\$26.05
2019	336	106	292	\$48.01	\$32.80

EXTERNAL FUNDING TRENDS



PROJECT TYPE HISTORY



Missouri State University FY2019 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 (38) of faculty apply for external funding. The Research and Economic Development unit had the largest number (35) of awards, based on credit sharing values. The Center for Applied Science and Engineering obtained the highest value of funding (\$8.1M) of any center, department, or unit.

Missouri State University FY 19 Grant/Contract Activity by Unit

Unit	# Applying		# Awarded		Credit Share*			Actual**		
	Staff	Faculty	Staff	Faculty	Grants / Contracts		Award	Grants / Contracts		Award
					Submit	Awards	\$	Submit	Awards	\$
Administrative Services	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Agriculture	2	6	0	7	20	16	\$ 274,849	16	13	\$ 297,230
Center for Grapevine Biotechnology	0	1	0	1	5	2	\$ 85,595	4	2	\$ 85,595
Mid-America Viticulture & Enology Center	2	1	2	1	7	8	\$ 104,240	6	7	\$ 104,240
College of Arts & Letters	1	4	1	3	8	6	\$ 622,564	7	6	\$ 622,564
Center for Dispute Resolution	0	1	0	1	4	4	\$ 32,374	4	4	\$ 32,374
Center for Writing in College, Career, & Community	0	1	0	1	5	4	\$ 36,095	5	4	\$ 36,095
College of Business	0	2	0	1	4	3	\$ 1,300,922	4	3	\$ 1,300,922
Center for Project Innovation & Management	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Education	2	8	2	4	21	16	\$ 1,022,175	18	16	\$ 1,022,175
Agency for Teaching, Leading and Learning	3	1	2	1	11	9	\$ 1,563,383	8	7	\$ 1,563,383
Institute for Play Therapy	0	0	0	0	0	0	\$ -	0	0	\$ -
Institute for School Improvement	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Health & Human Services	3	17	3	14	36	33	\$ 1,366,541	33	31	\$ 1,404,488
Center for Research & Service	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Humanities & Public Affairs	0	1	0	0	1	0	\$ -	1	0	\$ -
Center for Archaeological Research	2	1	2	1	22	21	\$ 604,050	14	13	\$ 604,050
Center for Community Engagement	0	0	0	0	0	0	\$ -	0	0	\$ -
Center for Economic Research	0	0	0	0	0	0	\$ -	0	0	\$ -
Center for Social Science & Public Policy Research	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Natural & Applied Sciences	2	38	0	16	87	29	\$ 1,090,918	57	24	\$ 993,259
Bull Shoals Field Station	0	1	0	1	4	4	\$ 19,037	4	4	\$ 19,037
Center for Resource Planning & Management	4	0	4	0	28	27	\$ 744,532	17	17	\$ 808,967
Ozark Environmental Water Research Institute	1	1	1	1	23	24	\$ 687,400	13	13	\$ 698,243
Diversity & Inclusion	0	2	0	2	2	2	\$ 19,167	2	2	\$ 19,167
Graduate College	0	1	0	1	2	2	\$ 184,414	2	2	\$ 184,414
Information Services	0	0	0	0	0	0	\$ -	0	0	\$ -
Library	2	1	2	0	3	2	\$ 12,500	3	2	\$ 12,500
President	1	0	1	0	1	1	\$ 55,654	1	1	\$ 55,654
Provost	2	2	1	2	15	11	\$ 967,669	14	11	\$ 967,669
Ozarks Public Health Institute	0	1	0	1	4	6	\$ 974,821	4	5	\$ 936,874
Southwest Missouri Area Health Education Center	1	0	1	0	10	10	\$ 352,116	10	10	\$ 352,116
Research & Economic Development	7	0	6	0	37	35	\$ 4,503,237	35	32	\$ 4,503,237
Center for Applied Science & Engineering	2	0	2	0	6	7	\$ 8,121,132	6	7	\$ 8,121,132
Center for Biomedical & Life Sciences	0	1	0	1	9	10	\$ 831,015	9	10	\$ 831,015
International Leadership & Training Center	1	0	1	0	4	4	\$ 2,558,660	4	4	\$ 2,558,660
Jordan Valley Innovation Center	1	0	1	0	13	13	\$ 913,055	13	13	\$ 913,055
Small Business Development & Technology Center	1	0	1	0	7	7	\$ 300,409	7	7	\$ 300,409
Student Affairs	2	0	2	0	2	6	\$ 1,471,507	2	6	\$ 1,471,507
West Plains	5	4	8	5	15	18	\$ 1,982,959	13	16	\$ 1,982,959
TOTAL	47	96	43	65	416	340	\$ 32,802,989	336	292	\$ 32,802,989

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

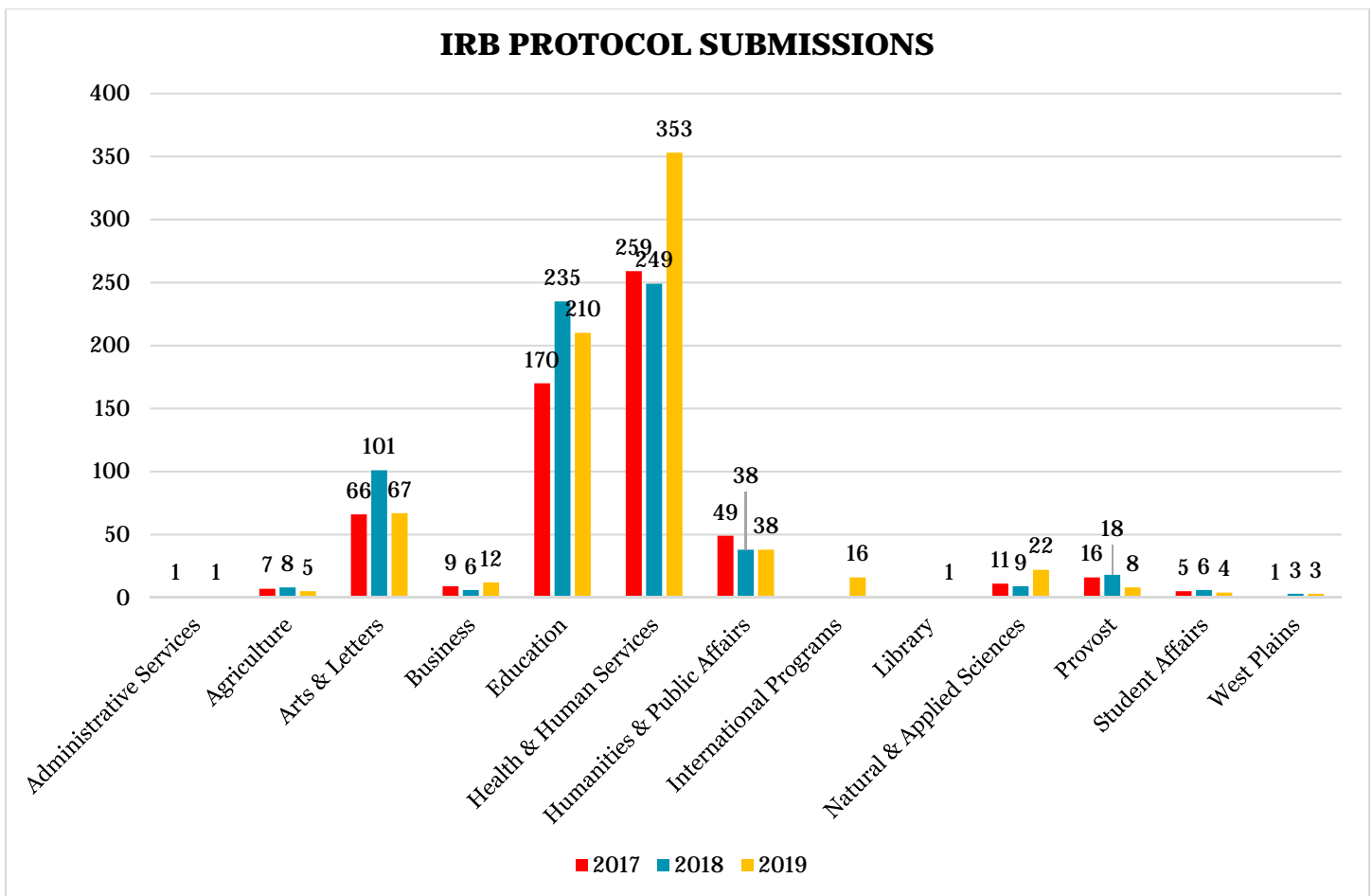
** Actual - proposals/awards will only be shown in the originating unit.

FY2019 OFFICE OF RESEARCH ADMINISTRATION (ORA) HIGHLIGHTS

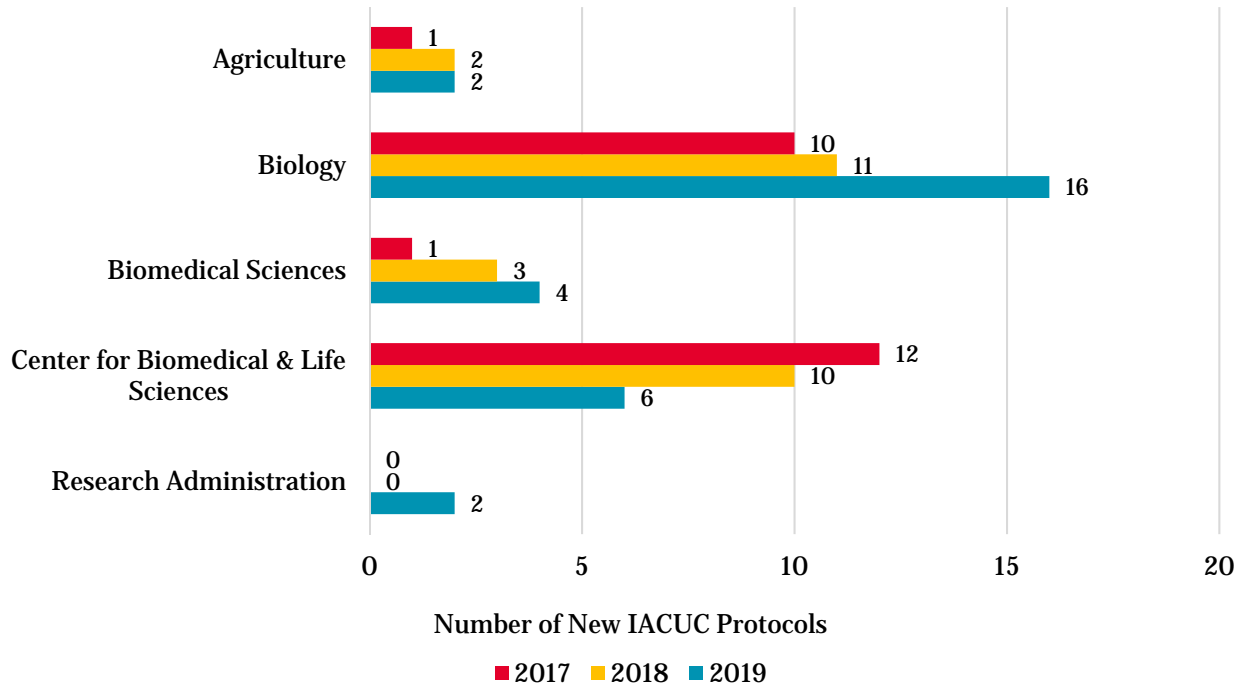
The ORA continues to support faculty and staff in their pursuit of external funding, in addition to considering ways to improve their support of faculty and staff. The ORA offers monetary support for travel to send more faculty and staff to conferences focused on grant writing, legislative visits, and meetings with federal and private agencies and program officers. The ORA also offers competitive funding for a summer graduate assistant to help gather information or data needed for a proposal submission. It is the intent of the ORA that these funds are a small investment for more proposals being submitted and hopefully funded in the future.

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 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 FY2019, the IRB reviewed 740 applications and the IACUC reviewed 30 new applications. The following charts provide information on submissions that occurred in FY2019, in addition to the totals from FY2017 and FY2018, for comparison.



IACUC PROTOCOL SUBMISSIONS



MORE INFORMATION

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