



EXTERNALLY FUNDED RESEARCH & PROJECTS REPORT
PREPARED BY THE OFFICE OF RESEARCH ADMINISTRATION
FISCAL YEAR (FY) 2021

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 2020-2021, Missouri State University was awarded a record \$122,015,086 to support projects in research, education and service. A total of \$86,032,459 came from CARES Act funding the remaining \$35,982,627 came from regular research and projects setting a record without CARES Act funding. A total of 364 proposals were submitted.

2021

TABLE 1: SUMMARY OF SPONSORED RESEARCH & PROGRAMS ACTIVITY			
Key Indicators	FY2021 Activity		% Change from FY2020
	CARES ACT Funding	Non-CARES ACT Funding	
Proposals Submitted	24	340	5%
Funds Requested	\$87,279,886	\$79,975,823	128%
Named Investigators	5	109	11%
Grants & Contracts Awarded	24	289	8%
Funds Awarded	\$86,032,459	\$35,982,627	170%

FY 2021 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 2021:

- Kelly Wood**, Associate Provost for Student Success, received **\$525,000** from the **U.S. Department of Education**. This Title III cooperative project is designed to improve retention and student success outcomes (career counseling, financial aid literacy) for first generation college students (FGS) for both Springfield and West Plains. The project will enable the university to (1) offer GEP 101/IDS 110 (First Year Foundations) sections specifically designed for the unique learning needs of FGS, (2) provide individual success coaching to monitor and track the progress of the students under their care and maintain communication with faculty and staff in support of these students, (3) implement a multi-channel communication system to provide academic, financial, and social support for FGS, and (4) establish a data-based program to identify at risk students based on historical and current barriers for success
- Keri Franklin**, Associate Provost for Public Affairs & Assessment, **Andrew Homburg**, Associate Professor of Music, **Diana Piccolo**, Associate Professor of Childhood Education & Family Studies, **Razib Iqbal**, Associate Professor of Computer Science, **Dave Cornelison**, Professor of Physics, Astronomy & Materials Science, **Tammi Davis**, Assistant Professor of Childhood Education & Family Studies, **Judith Martinez**, Assistant Professor of Modern & Classical Languages, and **Julia Cottrell**, Assessment & Learning Outcomes Consultant, received **\$3,996,749** from the **U.S. Department of Education**. The CODERS Project involves 150 teachers and 13,500 students in grades 3 - 8. The CODERS Project includes a three-year field trial and impact study of teacher and student programming. Computer Science and Critical Thinking course modules engage students and teachers in

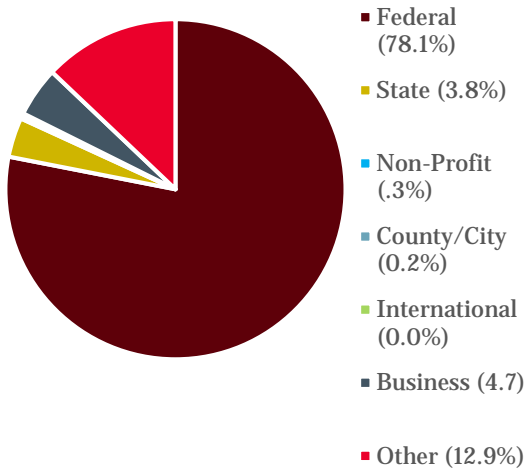
high-quality curriculum to support learning for rural students and teachers in Computer Science, provide technology, and develop a YouTube channel to support student engagement beyond the life of the grant.

- **Michelle Norgren**, Director of the VESTA Resource Center, received **\$1,646,884** from the **National Science Foundation**. Funding will be used to assist, guide, and mentor two-year colleges throughout the U.S. in developing and/or expanding Viticulture and Enology programs addressing the technician-level workforce needs of the U.S. Grape and Wine Industry.
- **Russell Brock**, Director of the Agency for Teaching, Leading, and Learning, received **\$1,780,750** from the **U.S. Department of Education** through the **Missouri Department of Elementary and Secondary Education**. Activities supported by this contract provide additional training to field staff who might be involved in supporting districts and schools in their region. Activities require the use of state developed materials that are evidence-based and support students in regular and specialized classroom settings. Additional activities are focused on helping districts understand and meet federal program compliance requirements.
- **Kunti Bentley**, Project Coordinator received **\$550,000** from the **U.S. Department of Justice** for Project HEAL (Help, Educate, Advocate, and Listen) to coordinate campus prevention and response to sexual assault, dating and domestic violence, and stalking. The focus of this new consortium project is to ensure a coordinated community approach to these issues on the Missouri State University (MSU) and Ozarks Technical Community College (OTC) campuses in Springfield, Missouri.
- **Kris Grbac**, of Communication Sciences and Disorders, received **\$96,314** from the **Missouri Department of Health and Senior Services** to conduct activities that will assist the Missouri Newborn Hearing Screening Program with activities that will reduce the number of Missouri babies that become lost to follow up services after not passing a hospital hearing screening or being diagnosed with a significant, permanent hearing loss.
- **Ryan Udan**, Associate Professor of Biology, received **\$415,730** from the **National Institutes of Health**. The long-term objective of this project is to elucidate the mechanisms governing the formation of blood vessel wall thickness.
- **Jason Ray**, Director of the Center for Resource Planning and Management, received a **\$380,311** grant from the **US Department of Homeland Security** through the **Missouri Office of Homeland Security**. This project continues the Missouri Office of Homeland Security grant program for regional allocation of federal funds that ensure regional needs are addressed and enhance the state's collective preparedness.
- **Laszlo Kovacs**, Professor of Biology, received a **\$139,894** grant from the **National Science Foundation in collaboration with Saint Louis University**. His project, *Adapting perennial crops for climate change: Graft transmissible effects of rootstocks on grapevine shoots*, investigates the capacity of the rootstock to modulate the scion's response to climatic variation, which is a fundamental question in grape cultivation. A better understanding of rootstock-scion interaction will also shed light on the basic physiological problem of how the root system interacts with the aerial organs of the plant, and vice-versa. This study is of particular importance due to agriculture facing the environmental consequences of a changing climate.

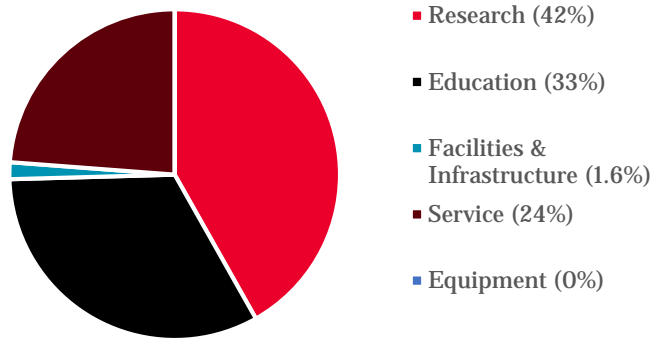
FY 2021 EXTERNAL FUNDING SUMMARY & TRENDS

In FY2021, federal agencies remain the leading source of grants and contracts. Our project types are diverse with the majority being research projects, followed by education, and then service.

AWARDS BY SPONSOR TYPE WITHOUT CARES ACT FUNDING

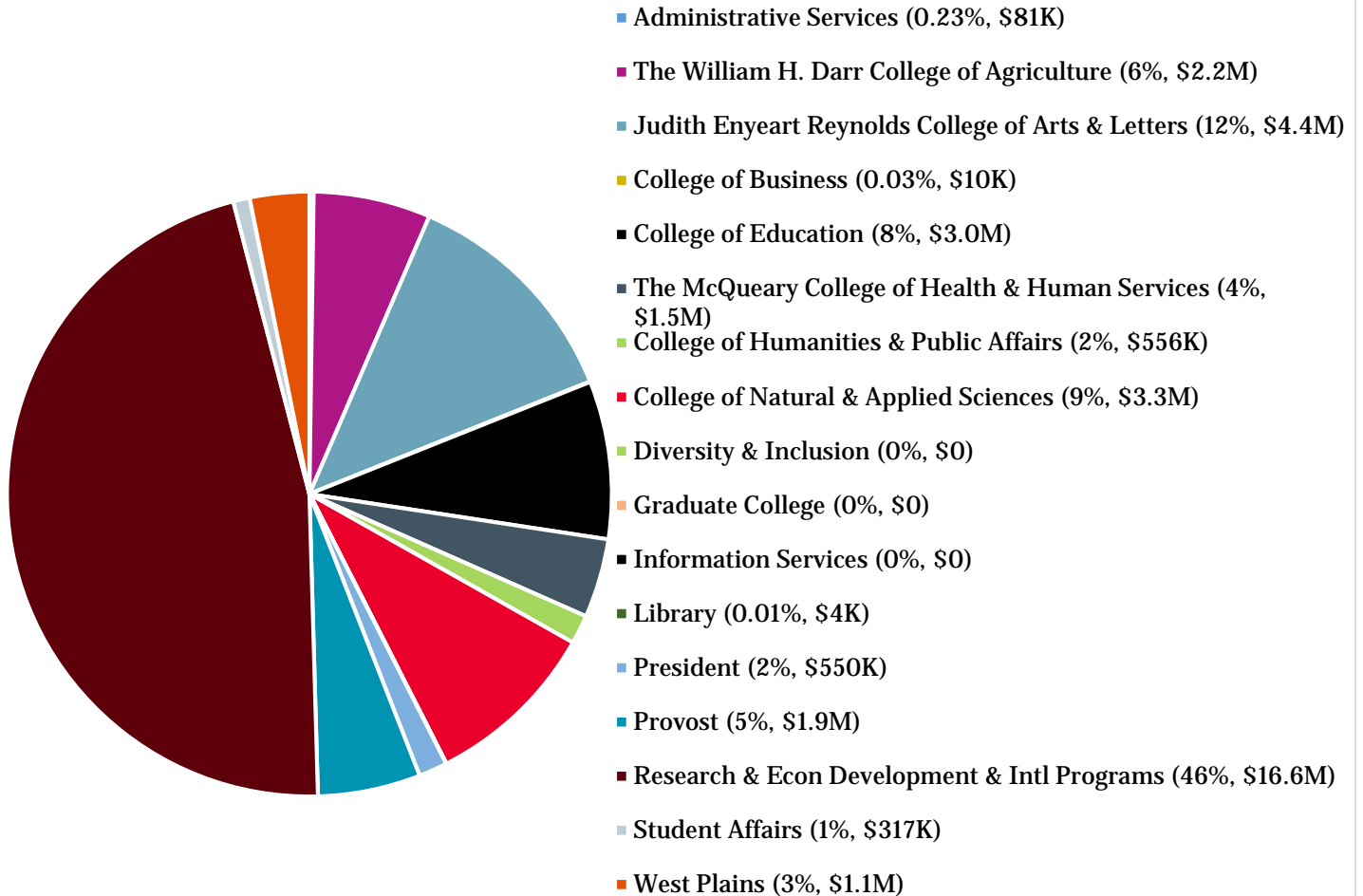


AWARDS BY PROJECT TYPE WITHOUT CARES ACT FUNDING



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 \$22.7 million of the total funds awarded in FY 2021.

AWARDS BY UNIT - WITHOUT CARES ACT FUNDING



Missouri State University met its 2020-2021 Action Plan's Research Administration goals:

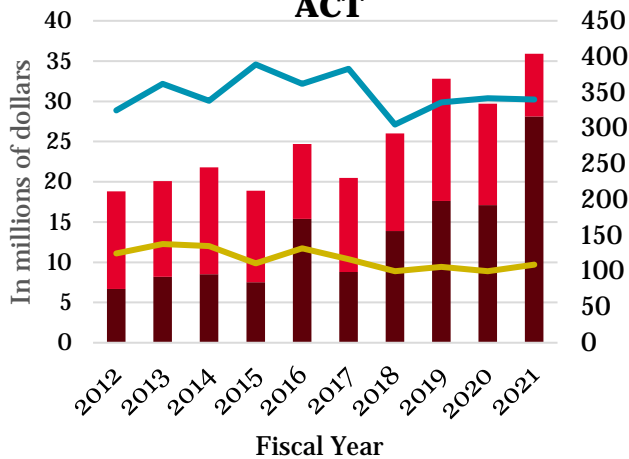
- Maintain external funding through private support, grants, and sponsored contracts of \$40 million or more annually (\$35.9 million from Research Administration and \$25.8 million through the Foundation)
- Maintain the number of grant and contract proposals submitted for external funding through the Office of Research Administration

Over the last 10 years, faculty and staff have consistently submitted more than 300 proposals annually.

TABLE 2: HISTORY OF SPONSORED RESEARCH & PROGRAMS ACTIVITY WITHOUT CARES ACT FUNDING

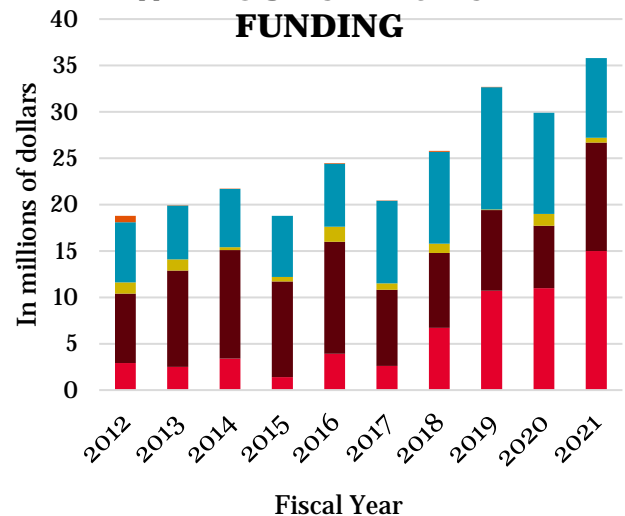
Fiscal Year	Proposals Submitted	Named Investigators Awarded	Total Awards	Total Requested (millions)	Total Awarded (millions)
2012	325	125	245	\$38.00	\$18.90
2013	362	138	289	\$32.40	\$20.10
2014	338	135	289	\$33.50	\$21.90
2015	389	111	297	\$52.70	\$19.00
2016	362	132	288	\$54.50	\$24.70
2017	383	117	285	\$54.20	\$20.50
2018	305	100	258	\$56.95	\$26.05
2019	336	106	292	\$48.01	\$32.80
2020	342	100	283	\$57.70	\$29.70
2021	340	109	289	\$79.90	\$35.90

EXTERNAL FUNDING TRENDS - WITHOUT CARES ACT



- Nonfederal
- Federal
- Proposals Submitted
- Named Investigators Awarded

PROJECT TYPE HISTORY WITHOUT CARES ACT FUNDING



- Equipment
- Service
- Facilities & Infrastructure
- Education
- Research

Missouri State University FY2021 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 (39) of faculty apply for external funding and the largest number (73) of awards, based on credit sharing values. The Center for Applied Science & Engineering obtained the highest value of funding (\$12.9M) of any center, department, or unit.

Missouri State University FY 21 Grant/Contract Activity by Unit - Without CARES Act Funding

Unit	# Applying		# Awarded		Credit Share*			Actual**		
	Staff	Faculty	Staff	Faculty	Grants / Contracts Submit	Awards	Award \$	Grants / Contracts Submit	Awards	Award \$
Administrative Services	1	0	2	0	2	2	\$ 81,079	2	2	\$ 81,079
The William H. Darr College of Agriculture	0	4	1	4	16	15	\$ 149,039	16	15	\$ 1,795,923
Center for Grapevine Biotechnology	0	1	0	0	1	0	\$ -	1	0	\$ -
Mid-America Viticulture & Enology Center	2	2	2	2	7	9	\$ 2,104,305	6	7	\$ 457,421
Judith Enyeart Reynolds College of Arts & Letters	0	8	0	8	13	13	\$ 2,140,755	8	8	\$ 422,153
Center for Dispute Resolution	0	1	0	1	4	4	\$ 57,070	4	4	\$ 57,070
Center for Writing in College, Career, & Community	1	1	1	1	6	2	\$ 399,676	2	1	\$ 3,996,749
College of Business	0	1	0	1	1	1	\$ 8,000	1	1	\$ 10,000
Center for Project Innovation & Management	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Education	4	18	1	8	36	16	\$ 2,174,932	27	14	\$ 1,055,843
Agency for Teaching, Leading and Learning	1	0	1	1	5	8	\$ 1,982,794	5	7	\$ 1,982,794
Institute for Play Therapy	0	0	0	0	0	0	\$ -	0	0	\$ -
Institute for School Improvement	0	0	0	0	0	0	\$ -	0	0	\$ -
The McQueary College of Health & Human Services	2	25	2	16	51	41	\$ 1,509,138	42	38	\$ 1,519,743
Center for Research & Service	0	0	0	0	0	0	\$ -	0	0	\$ -
College of Humanities & Public Affairs	0	0	0	0	0	0	\$ -	0	0	\$ -
Center for Archaeological Research	1	1	1	1	16	22	\$ 556,395	12	15	\$ 556,395
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	4	39	4	25	117	73	\$ 3,477,535	70	51	\$ 2,717,839
Bull Shoals Field Station	0	1	0	1	3	3	\$ 2,556	3	3	\$ 2,556
Center for Resource Planning & Management	2	0	2	0	11	8	\$ 484,732	9	7	\$ 484,732
Ozark Environmental Water Research Institute	1	1	1	1	3	6	\$ 164,375	2	3	\$ 159,400
Diversity & Inclusion	0	0	0	0	0	0	\$ -	0	0	\$ -
Graduate College	0	0	0	0	0	0	\$ -	0	0	\$ -
Information Services	0	0	0	0	0	0	\$ -	0	0	\$ -
Library	3	3	1	2	6	3	\$ 4,600	4	2	\$ 4,600
President	0	0	1	0	1	1	\$ 550,000	1	1	\$ 550,000
Provost	2	3	1	3	16	14	\$ 1,308,196	14	14	\$ 1,308,196
Ozarks Public Health Institute	0	1	0	1	3	3	\$ 309,233	2	2	\$ 301,917
Southwest Missouri Area Health Education Center	1	0	1	0	10	10	\$ 365,010	10	10	\$ 365,010
Research & Economic Development	3	0	4	0	42	33	\$ 2,403,801	42	33	\$ 2,403,801
Center for Applied Science & Engineering	3	0	3	0	8	9	\$ 12,940,003	7	9	\$ 12,940,003
Center for Biomedical & Life Sciences	0	1	0	1	9	8	\$ 124,208	9	8	\$ 124,208
International Leadership & Training Center	1	0	1	0	2	2	\$ 79,950	2	2	\$ 79,950
Jordan Valley Innovation Center	0	0	1	0	16	14	\$ 746,927	15	14	\$ 746,927
Small Business Development Center	1	0	1	0	12	10	\$ 398,877	10	10	\$ 398,877
Student Affairs	5	0	3	0	6	4	\$ 317,929	2	3	\$ 317,929
West Plains	2	2	4	1	12	5	\$ 1,141,512	12	5	\$ 1,141,512
TOTAL	40	113	39	78	435	339	\$ 35,982,627	340	289	\$ 35,982,627

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

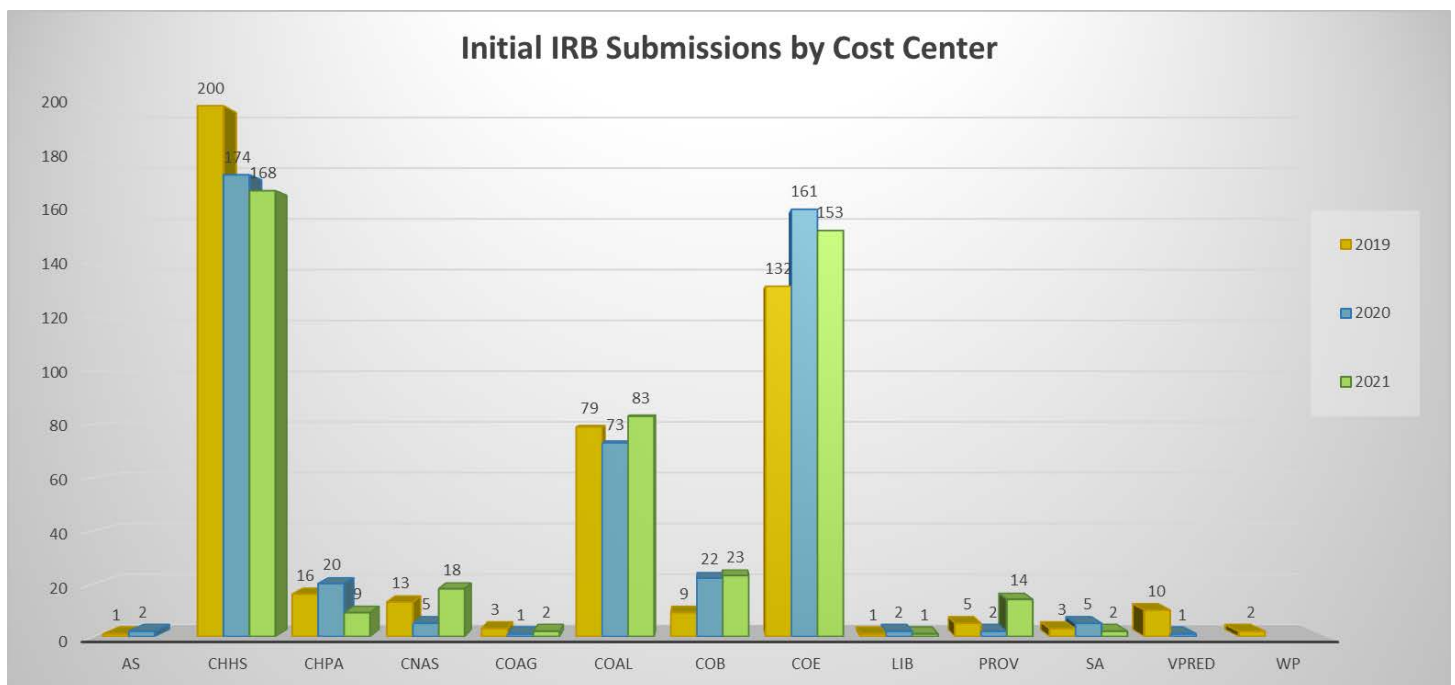
** Actual - proposals/awards will only be shown in the originating unit.

FY2021 OFFICE OF RESEARCH ADMINISTRATION (ORA) HIGHLIGHTS

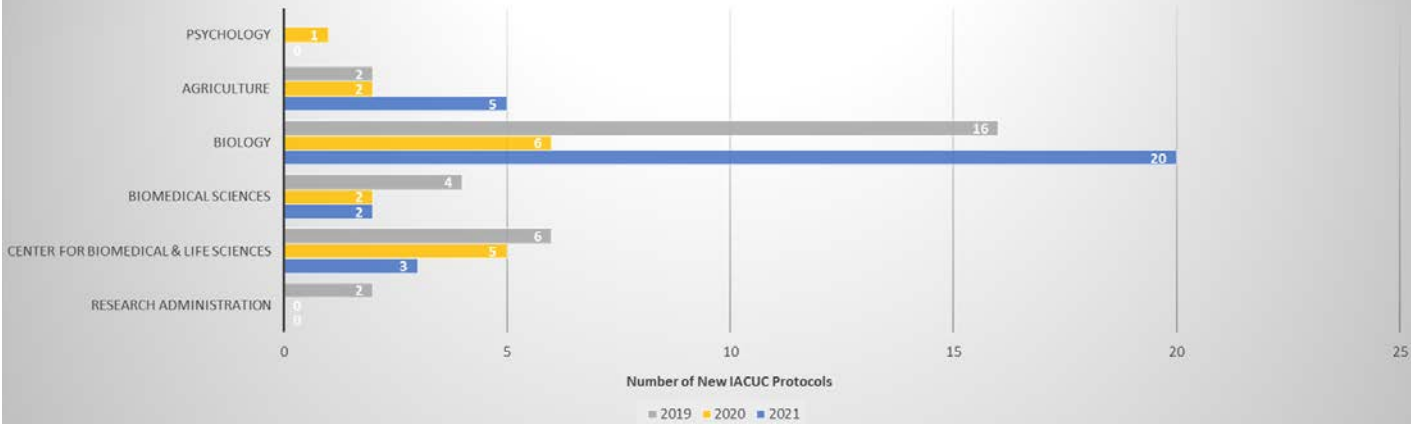
The ORA continues to support faculty and staff in their pursuit of external funding, in addition to considering ways to improve their support of faculty and staff. The ORA offers monetary support for travel to send more faculty and staff to conferences focused on grant writing, legislative visits, and 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 to stimulate proposal submission, and hopefully increased funding 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 FY2021, the IRB reviewed 473 applications and the IACUC reviewed 30 new applications. The following charts provide information on new submissions that occurred in FY2021, in addition to the totals from FY2019 and FY2020, for comparison.



IACUC PROTOCOL SUBMISSIONS



MORE INFORMATION

VISIT OUR WEBSITES:

missouristate.edu/research
ora.missouristate.edu

CONTACT:

Office of Research Administration
researchadministration@missouristate.edu
417.836.5972