

Office of Research & Engagement
University of Tennessee
2nd Quarterly Research Report
for FY 2017
Cumulative for
July 1 - December 31, 2016



Robert Grzywacz, director of the UT-ORNL Joint Institute for Nuclear Physics and Applications and a physics professor at the university, helped develop a process to measure the decay of nuclear materials that helped prove the existence of four new elements.



THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

OFFICE OF RESEARCH &
ENGAGEMENT

Office of Research & Engagement • University of Tennessee 2nd Quarterly Research Report • FY 2017

Cumulative: July 1 - December 31, 2016

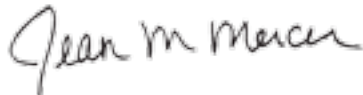
A Message from the AVCR

During the second quarter of FY17, the Office of Research and Engagement continued to assist in several proposal submissions and to receive several awards from external sponsors to support proposed projects.

One of the projects awarded this quarter was for a proposal submitted to the National Institute of Justice by Giovanni Vidoli, research assistant professor of anthropology and assistant director of the Forensic Anthropology Center, entitled "Implications of Three-Dimensional Laser Scanned Images for the Criminal Justice System." The goal of this project is to provide quantitative data on a layperson's and forensic professional's interpretation and assessment of traditional scene documentation and 3D laser scanned representations of potential crime scenes.

Additionally, Jason Hayward, associate professor of nuclear engineering received an award from the University of California, Berkeley as part of a Department of Energy initiative to develop a "Nuclear Science and Engineering Nonproliferation Research Consortium." The consortium partners are comprised of George Washington University; Michigan State University; Texas A&M University; University of California, Davis; University of California, Irvine; and the University of Nevada, Las Vegas.

The Office of Research and Engagement is continually looking for ways to foster and support research activities. I encourage you to reach out to me or other members of the ORE staff (research.utk.edu/staff) with questions or concerns.



Jean Mercer
Assistant Vice Chancellor for Research
Director of Sponsored Programs



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Proposals, Awards, and Expenditures

College/Center/ Institute	Proposals Submitted				Awards Received				Estimated Total Research Expenditures (HERD ¹)	
	No.	% No. Incr. Over FY 16	Amount Requested	% \$ Incr. Over FY 16	No. ³	% No. Incr. Over FY 16	Amount Received	% \$ Incr. Over FY 16	Amount Expended	% \$ Incr. Over FY 16
College of Architecture and Design	1	-50.0%	\$50,578	-25.0%	2	-50.0%	\$130,166	-32.9%	\$192,443	-34.8%
College of Arts and Science	297	26.4%	\$78,739,219	-2.3%	202	-0.5%	\$20,914,603	23.2%	\$19,120,897	13.2%
Haslam College of Business	14	7.7%	\$1,571,580	-43.1%	18	28.6%	\$2,117,190	2.7%	\$3,750,251	-2.5%
College of Communication and Information	12	20.0%	\$2,206,341	-53.1%	8	0.0%	\$1,271,722	40.0%	\$794,815	-11.9%
College of Education, Health, and Human Science	59	18.0%	\$30,404,924	32.3%	19	-42.4%	\$3,866,621	-58.6%	\$1,472,426	-33.5%
Tickle College of Engineering	326	-11.9%	\$107,642,663	-11.6%	303	-5.6%	\$35,932,672	0.1%	\$34,769,652	3.8%
College of Law	1	0.0%	\$12,802	-89.0%	0	N/C*	\$0	N/C*	\$13,398	120.3%
College of Nursing	13	8.3%	\$5,293,616	32.9%	6	200.0%	\$57,147	-52.3%	\$162,710	-56.5%
College of Social Work	18	20.0%	\$6,866,946	-40.2%	21	50.0%	\$2,481,767	70.5%	\$409,033	-12.7%
Research Centers and Institutes	144	46.9%	\$26,447,995	128.3%	178	24.5%	\$10,443,525	3.3%	\$13,684,360	-7.6%
UT Space Institute	27	-20.6%	\$5,016,955	-29.1%	17	-15.0%	\$1,799,933	14.6%	\$1,812,894	14.6%
Other ²	12	33.3%	\$6,755,163	715.4%	19	111.1%	\$6,986,292	160.1%	\$2,378,817	24.4%
Total	924	8.8%	\$271,008,782	1.1%	793	2.9%	\$86,001,638	5.8%	\$78,561,696	2.3%

Notes

1. HERD - Higher Education Research and Development Survey, the successor to the Survey of Research and Development Expenditures at Universities and Colleges.
2. Other Colleges, Centers or Institutes - This field captures any research proposal, award, and expenditure not included in the categories above. Not all research expenditures in this category have a corresponding proposal/award.
3. The Number of Awards Received represents the cumulative number of funding award increments. One project may receive multiple funding awards.

* N/C - Not Calculable

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Top 20 Awards (by dollar value)

Investigators (Primary PI First)	Award Admin Department	Project Title	Sponsor	Anticipated Amount
	PI Home Department			
Peterson, Gregory	JICS	XSEDE 2.0: Integrating, Enabling and Enhancing National Cyberinfrastructure with Expanding Community Involvement	University of Illinois at Urbana-Champaign /NSF	\$8,961,437
	JICS			
Eighmy, Thomas; Penumadu, Dayakar; Babu, Sudarsanam	Research Admin	Institute for Advanced Composites Manufacturing Innovation	Collaborative Composite Solutions Corp./ Dept. of Energy	\$5,374,856
	Research Admin; CEE; MABE			
Tomsovic, Kevin; Tolbert, Leon; Li, Fangxing; Liu, Yilu; Wang, Fei; Chen, Chien-Fei	CURENT	ERC for Ultra-Wide Area Resilient Electric Energy Transmission Network	NSF	\$5,226,647
	EECS; CURENT			
Hardin, Erin; Schussler, Elisabeth; Gibbons, Melinda; Gardner, Denise; Ezzell, Timothy; Moazen, Marisa	Psychology	Collaborative Research: ASPIRE: Appalachian Students Promoting the Integration of Research in Education	NSF	\$2,887,974
	Psychology; EEB; Educational Psychology & Couns ; OIRA; Political Science ; Research Admin.			
Wang, Fei; Tolbert, Leon; Liu, Yilu	CURENT	A Smart and Flexible Microgrid with a Low-cost Scalable Open-source Controller	Dept. of Energy	\$2,400,000
	EECS			
Brewer, Ernest	CAPS Outreach Center	Educational Opportunity Center	Dept. of Education	\$2,326,014
	CAPS Outreach Center			
Dongarra, Jack; Bosilca, George; Bouteiller, Aurelien; Herault, Thomas	Innovative Computing Lab	Distributed Tasking for Exascale	DOE - Oak Ridge National Laboratory	\$1,840,582
	Innovative Computing Lab			
Dongarra, Jack; Jagode, Heike; Danalis, Antonios	Innovative Computing Lab	EXA-PAPI: The Exascale Performance Programming Interface	DOE - Oak Ridge National Laboratory	\$1,839,183
	Innovative Computing Lab			
Barrera Olivares, Francisco; Morrell-Falvey, Jennifer	BCMB	Transmembrane peptides for targeting acidosis	HHS - National Institute of General Medical Sciences	\$1,644,667
	BCMB			
Mockus, Audris; Bradley, Randy; Bichescu, Bogdan; Zaretski, Russell	EECS	BIGDATA: Collaborative Research: IA: OSCAR - Open Source Supply Chains and Avoidance of Risk: An evidence based approach to improve FLOSS supply chains	NSF	\$1,300,000
	EECS; Marketing & Supply Chain Mgmt ; Statistics, Operations & Mgmt			

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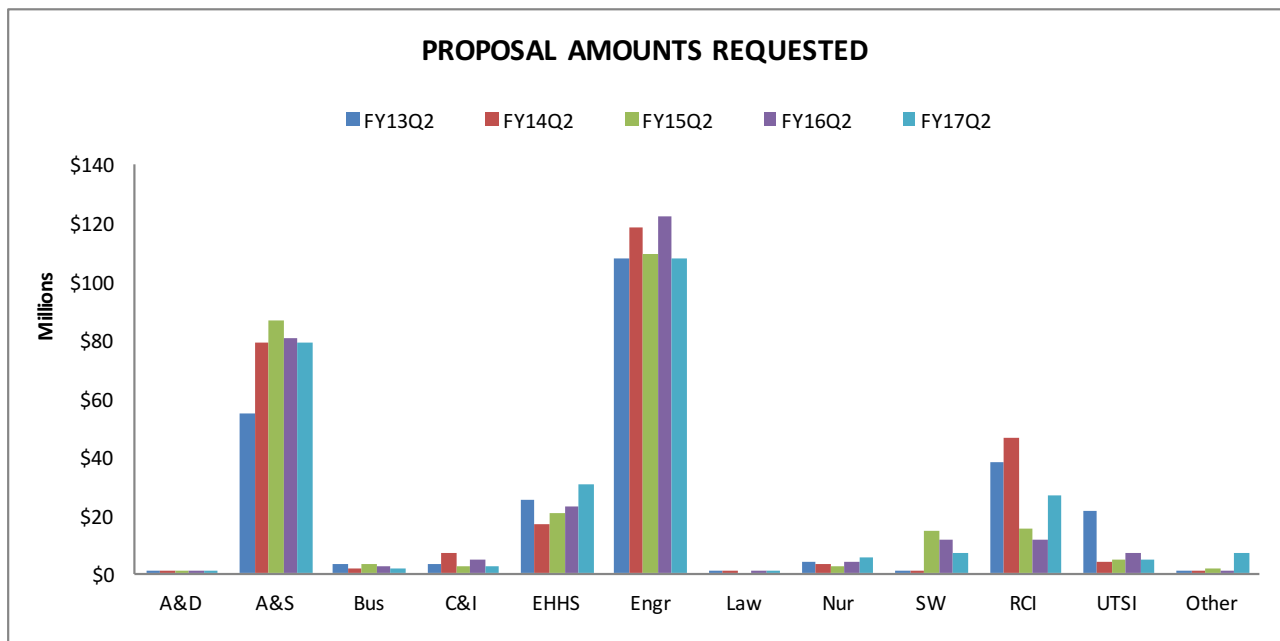
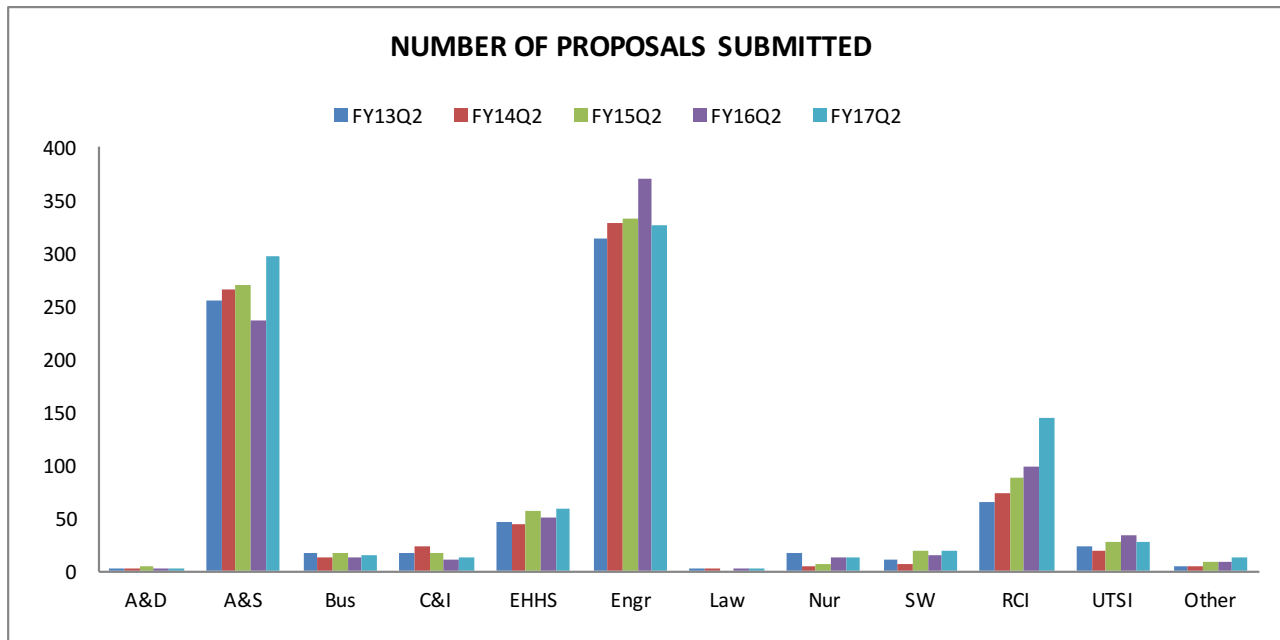
Top 20 Awards (Continued)

Investigators (Primary PI First)	Award Admin Department	Project Title	Sponsor	Anticipated Amount
	PI Home Department			
Hillyer, Sarah; Huffman, Ashleigh	Center for Sport, Peace & Society	Better World: Empowering Global Change Agents through Sports	Department of State	\$1,030,000
	EHHS Admin.			
Shefner, Jon	Sociology	Host SSSP Administrative Office	Society for the Study of Social Problems	\$924,398
	Sociology			
Das, Maitreyi; Abel, Steven	BCMB	Cytokinetic events that promote actomyosin ring constriction and septum formation	NSF	\$850,000
	BCMB; Chemical Engineering			
Peterson, Gregory; Rose, Garrett; Arel, Itamar; Qi, Hairong; Hazlewood, Victor	JICS	MRI: Development of iSNARLD (Instrument for Situational Network Awareness for Real-time and Long-term Data)	NSF	\$822,120
	JICS; EECS			
Grzywacz, Robert; Heilbronn, Lawrence	Physics	New high-resolution neutron detector for the studies of exotic nuclei - NEXT	DOE - National Nuclear Security Administration	\$810,000
	Physics; Nuclear Engineering			
Taylor, Edward	CIRPC	Provide Services Supportive of the Wage & Hour Division of the Employment Standards Administration	Dept. of Labor	\$762,508
	CIRPC			
Donovan, David; Auxier, John	Nuclear Engineering	Ex-Situ Surface Characterization Studies and Boundary Plasma Diagnostic Development for DIII-D	DOE - Office of Science	\$750,738
	Nuclear Engineering			
Xi, Zhimin	Industrial & Systems Engineering	New Theory in Model-Based Design: A Design Foundation Driven by Probability of Design Errors	DOD - Defense Advanced Research Project Agency	\$732,373
	Industrial & Systems Engineering			
Gross, Louis; Dolislager, Fredrick; Galloway, Leslie; Stewart, Debra	EEB	UT-Battelle EPA Risk-Environment Assessment and Decision Analyses	DOE - Oak Ridge National Laboratory	\$720,009
	EEB			
Rose, Garrett; Sarles, Stephen; Collier, Charles	EECS	NCS-FO: Biomimetic membrane networks as adaptable neuromorphic computation circuits	NSF	\$669,763
	EECS; MABE			

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Proposal Calculations

Please note that we have implemented two changes in the proposal count and amount calculations:

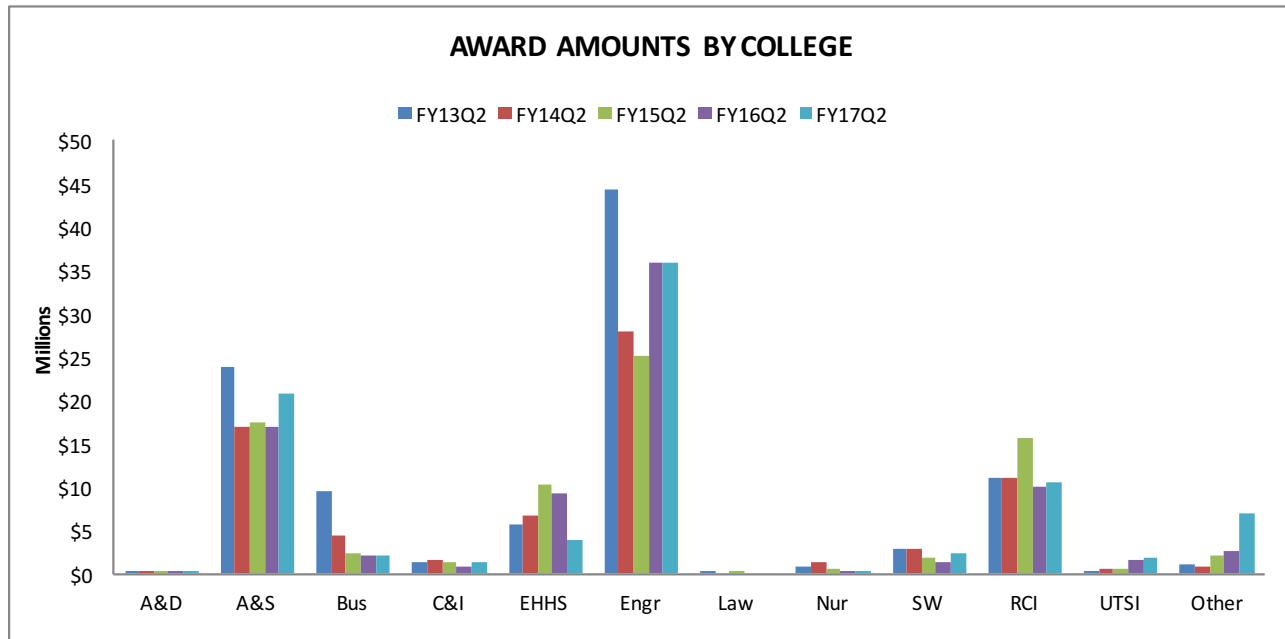
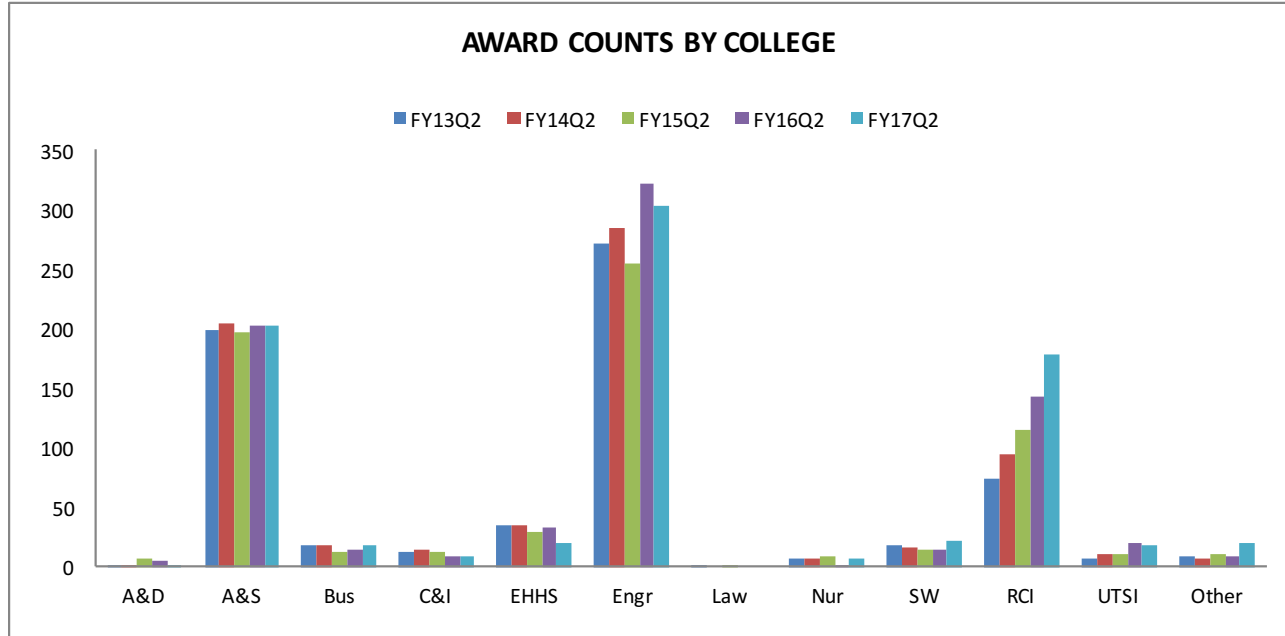
- We are no longer including Letters of Intent (preliminary proposals) in the proposal count/amount calculations.
- We are now including proposals with a status of 'Withdrawn'. These are actual proposals that were withdrawn after submission.

The changes will be implemented for all standard reports FY17 forward. Data for previous years will also be reported according to the changes described. If you have any questions about the differences between previous reports and reports going forward, please contact Anna Banks or Allison Heming with the ORE Research Informatics.

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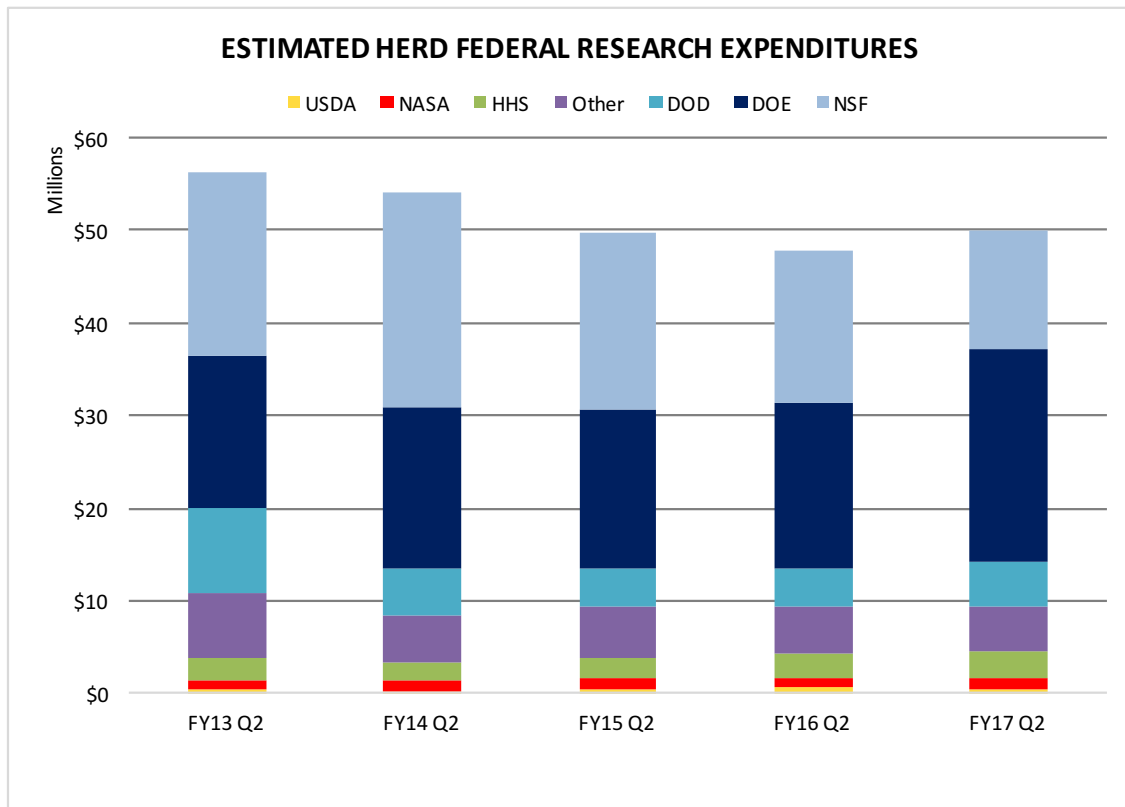
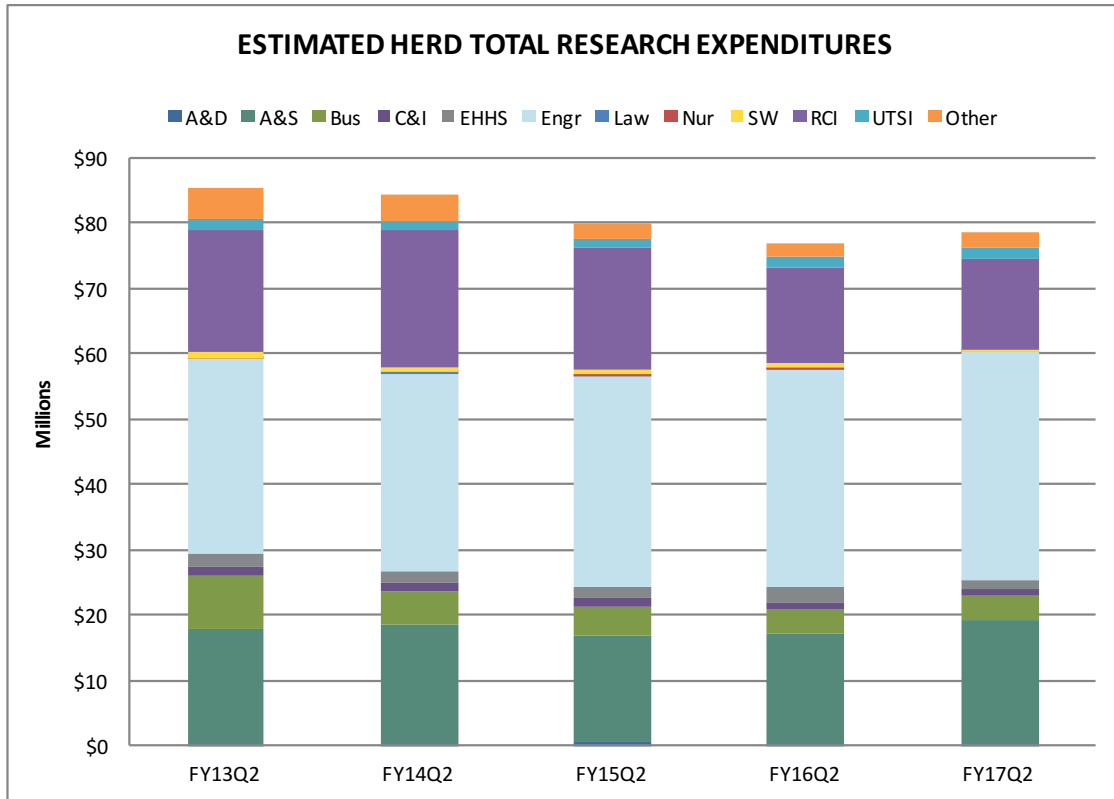
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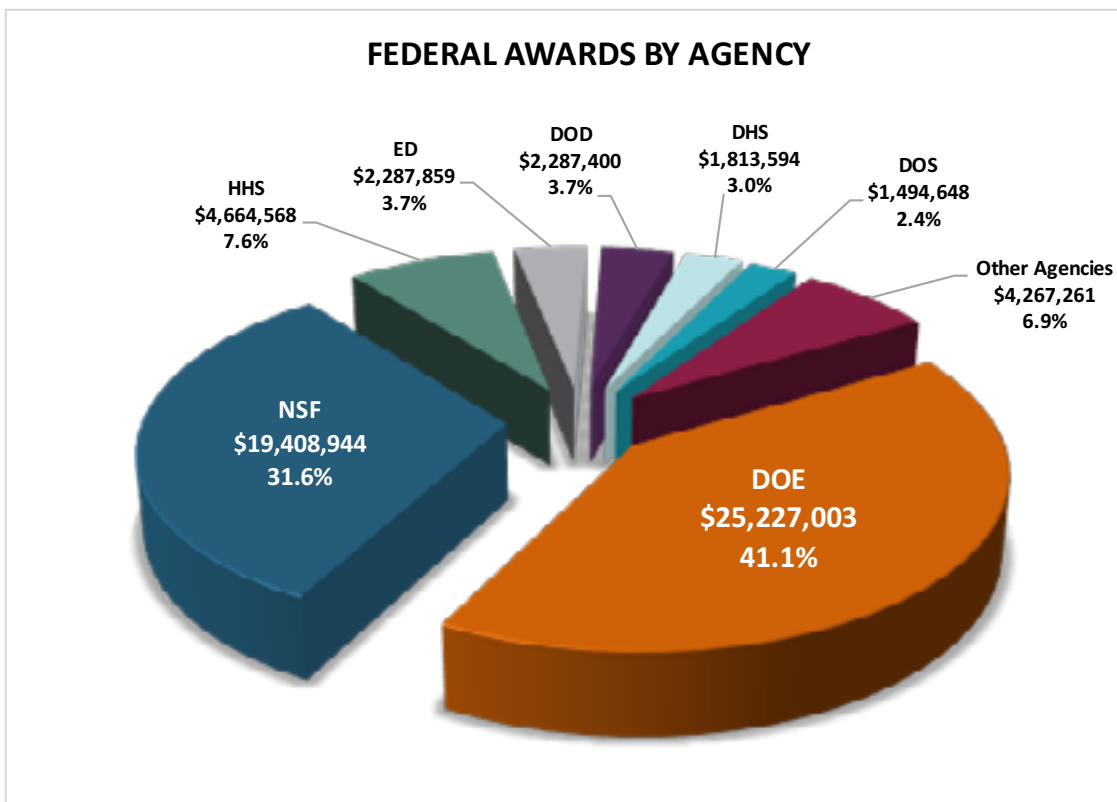
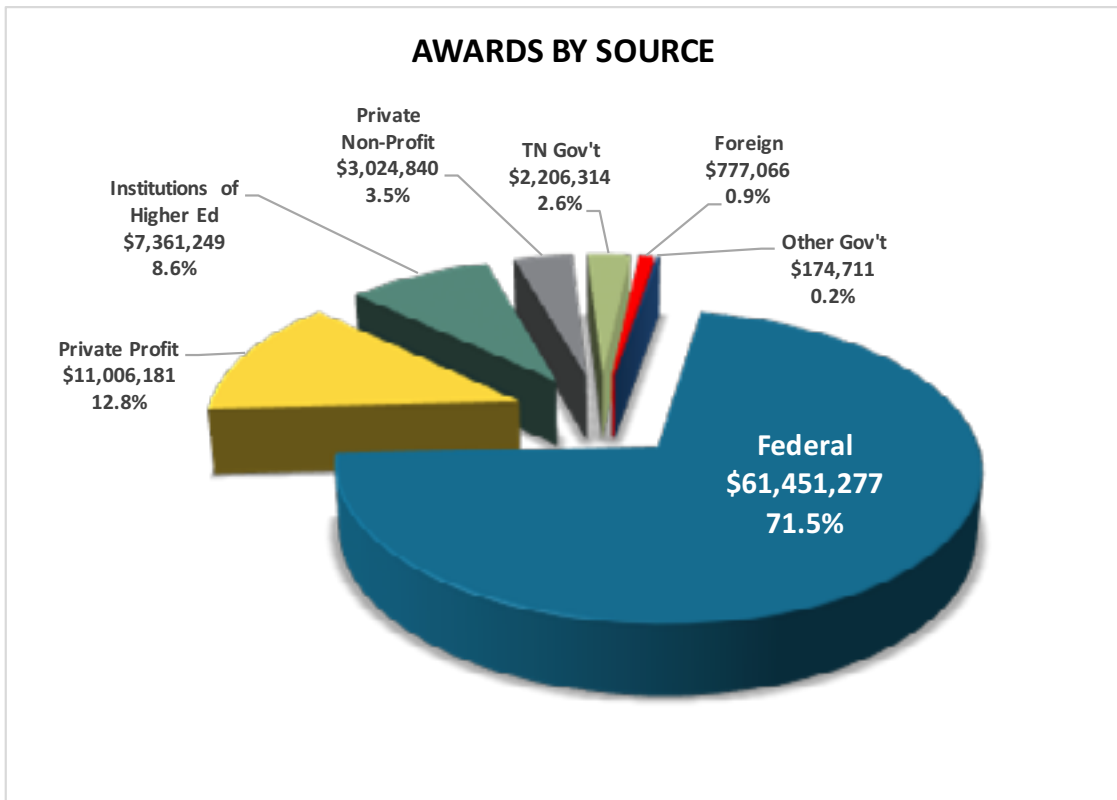
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How Quarterly Research Summary Data are Derived

Each Quarterly Research Summary is a fiscal year-to-date comparison.

Data depicting colleges and research centers and institutes are presented to show trends within each unit. Award and proposal data are pulled from Cayuse SP. Research expenditure data are pulled from IRIS.

To ensure consistency of the Office of Research and Engagement reports, all quarterly and annual report award selection is based on the Award Effective Date (beginning of project funding). The proposal selection is based on the Proposal Approval Date.

Award, proposal, and expenditure data include UT Knoxville, UTSI, and UWA.

There are occasionally variations in the numbers reported for each quarter as information is updated into Cayuse SP and IRIS on a daily basis. The data for this report were collected on February 13, 2017. The annual report will represent the final amounts for that fiscal year.