

FY17 ANNUAL REPORT  
RESEARCH/SCHOLARLY ACTIVITY FUNDING BASE  
KANSAS STATE UNIVERSITY

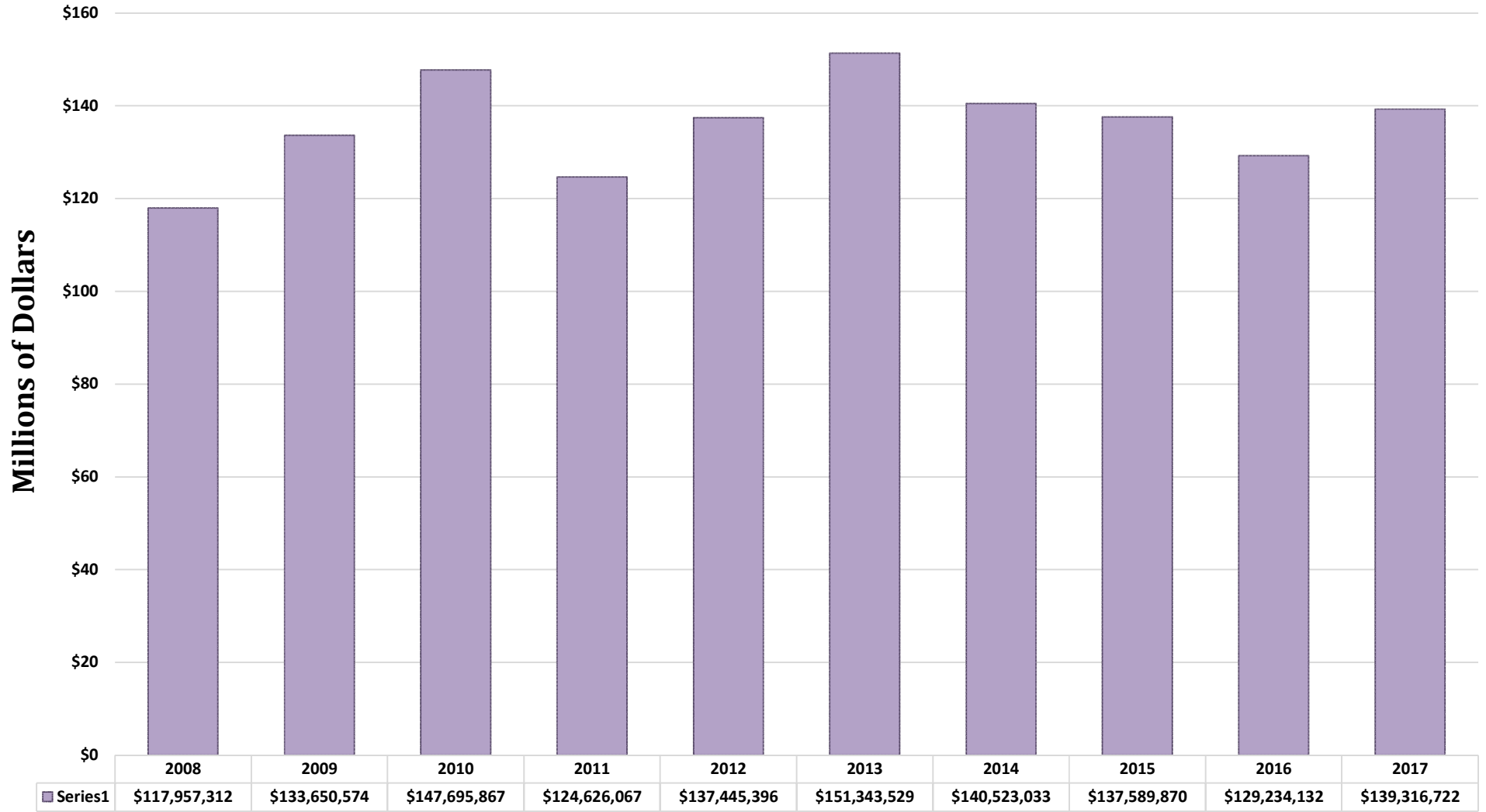
The research funding base at Kansas State University consists of funds appropriated from federal and state sources, gifts from alumni and friends, and awards of extramural funds from federal and state agencies, foundations, and various private and industrial organizations, mainly through the competitive grants process.

I.	Sponsored	\$139,316,722
II.	Appropriated	
	Main Campus State Appropriation	\$18,692,178
	Experiment Station Programs and Extension Services	
	Federal Appropriation*	\$10,373,964
	State Appropriation	\$46,369,453
	Veterinary Medical Center State Appropriation	\$0
	College of Technology and Aviation	\$744,493
	State Appropriation	
	SUBTOTAL	\$76,180,088
III.	Donated**	\$58,198,479
	RESEARCH/SCHOLARLY ACTIVITY BASE GRAND TOTAL	\$273,695,289

\*As of 8/29/17

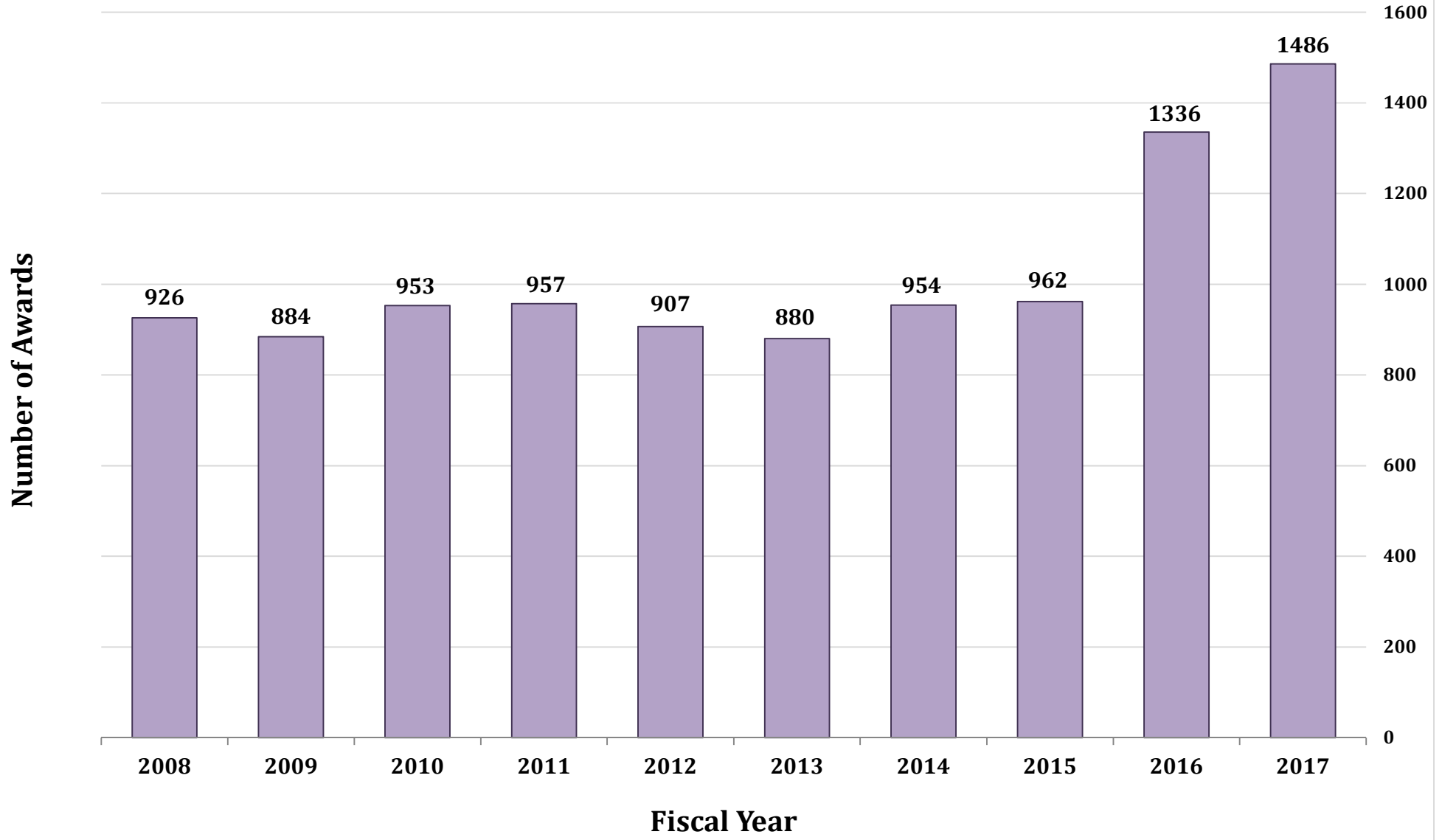
\*\*KSU Foundation funds transferred to KSU in support of research/scholarly activity (excludes transfers to Athletics).

## Kansas State University Total Dollars of Extramural Awards Received

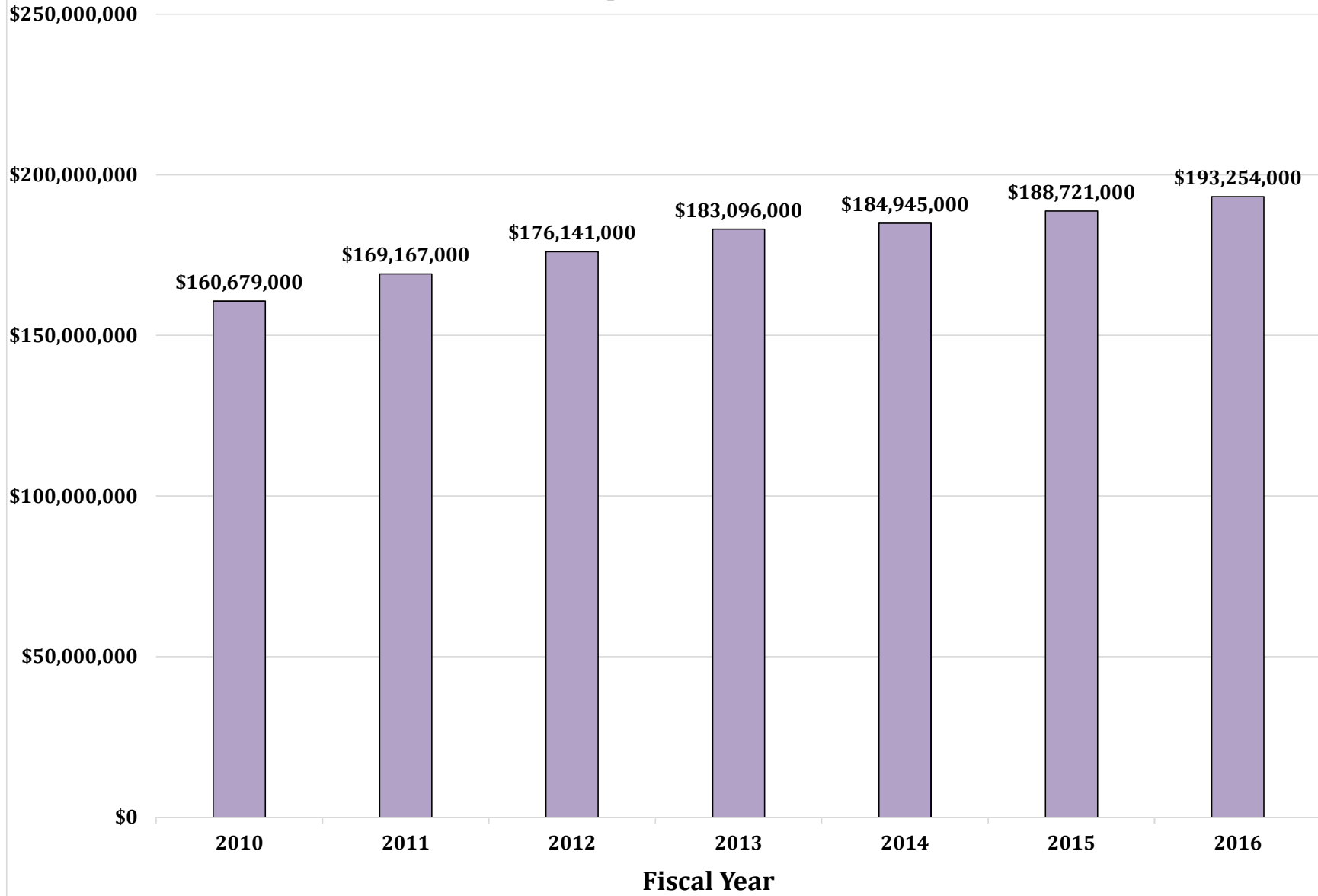


**Fiscal Year**

# Kansas State University Total Number of Extramural Awards Received



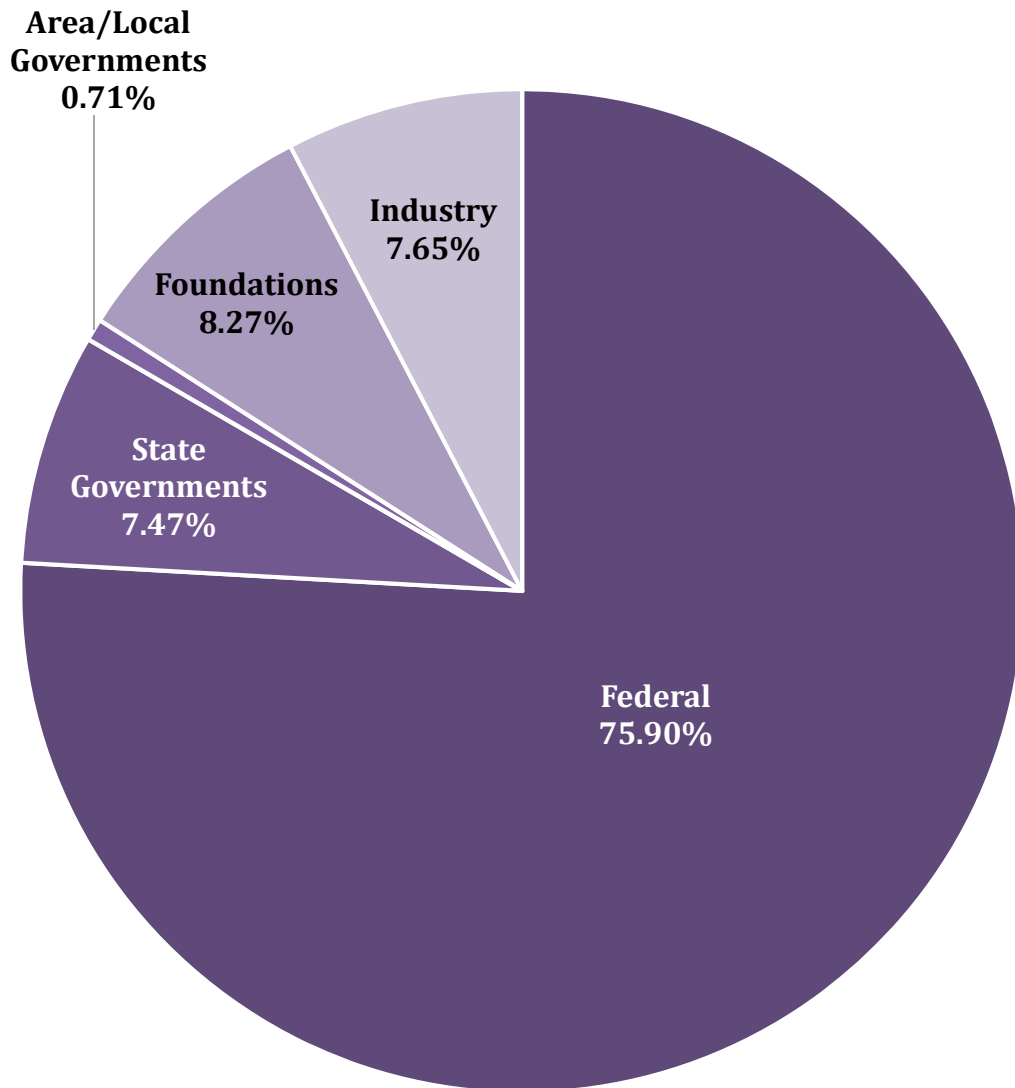
## Kansas State University Expenditures



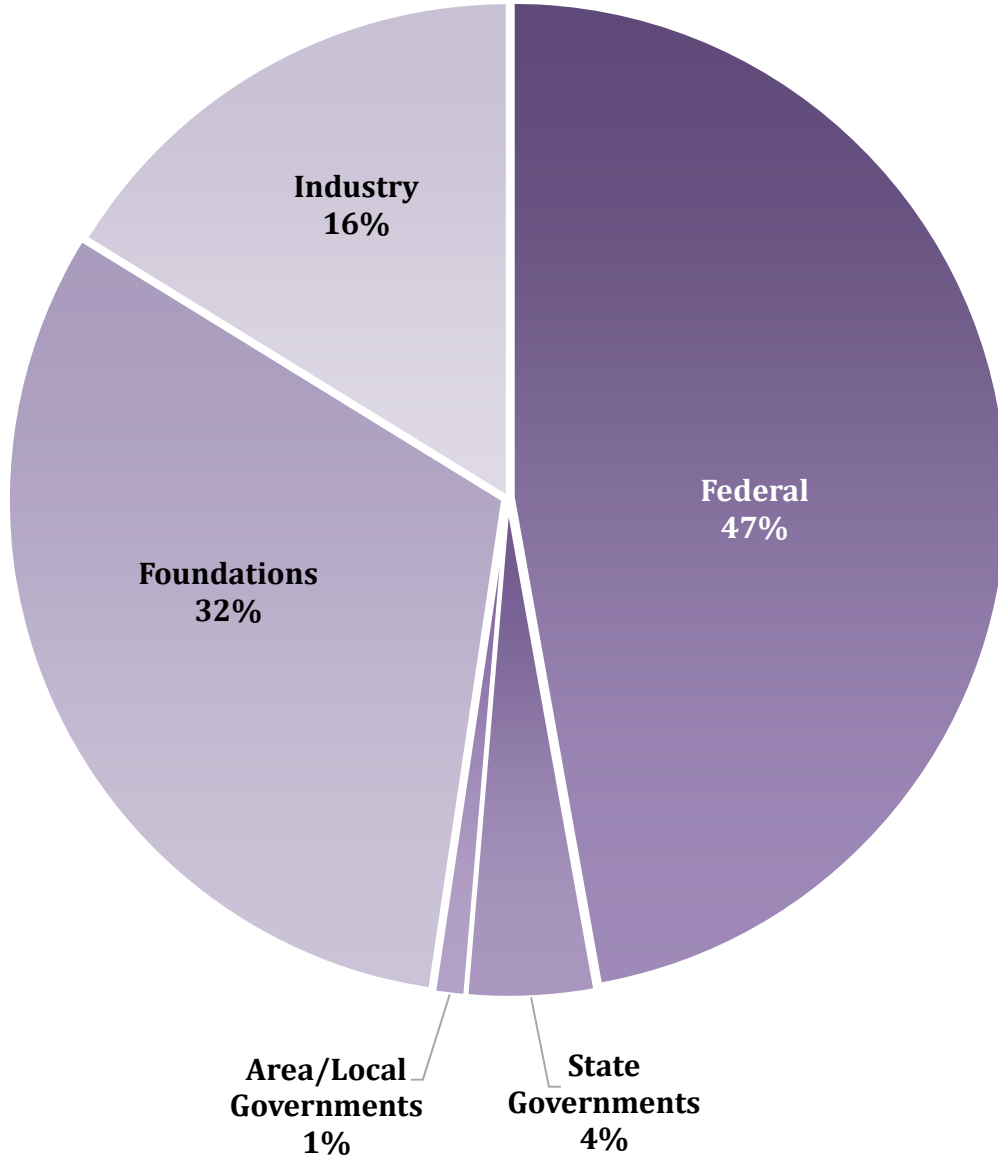
Kansas State University  
Sources of Awards  
Fiscal Year 2017

Source	Number of Awards	Dollar Value	Percentage
<b>Government:</b>			
Area/Local Governments	15	993,510	0.71%
State Governments	62	10,402,098	7.47%
Federal:			
Department of Agriculture	241	39,223,599	28.15%
Department of Defense	30	2,782,218	2.00%
Department of Education	26	3,001,127	2.15%
Department of Energy	42	7,891,625	5.66%
Department of Health and Human Services	130	15,331,805	11.00%
Department of Homeland Security	8	1,363,716	0.98%
Department of the Interior	21	2,778,044	1.99%
Department of Transportation	5	295,839	0.21%
Environmental Protection Agency	17	3,436,283	2.47%
National Aeronautics and Space Administration	8	405,885	0.29%
National Science Foundation	100	11,697,811	8.40%
US Agency for International Development	25	13,943,598	10.01%
Other Federal	48	3,589,234	2.58%
<b>Private:</b>			
Foundations	467	11,525,676	8.27%
Industry (Including Foreign)	241	10,654,654	7.65%
<b>TOTAL</b>	<b>1486</b>	<b>139,316,722</b>	<b>100.00%</b>

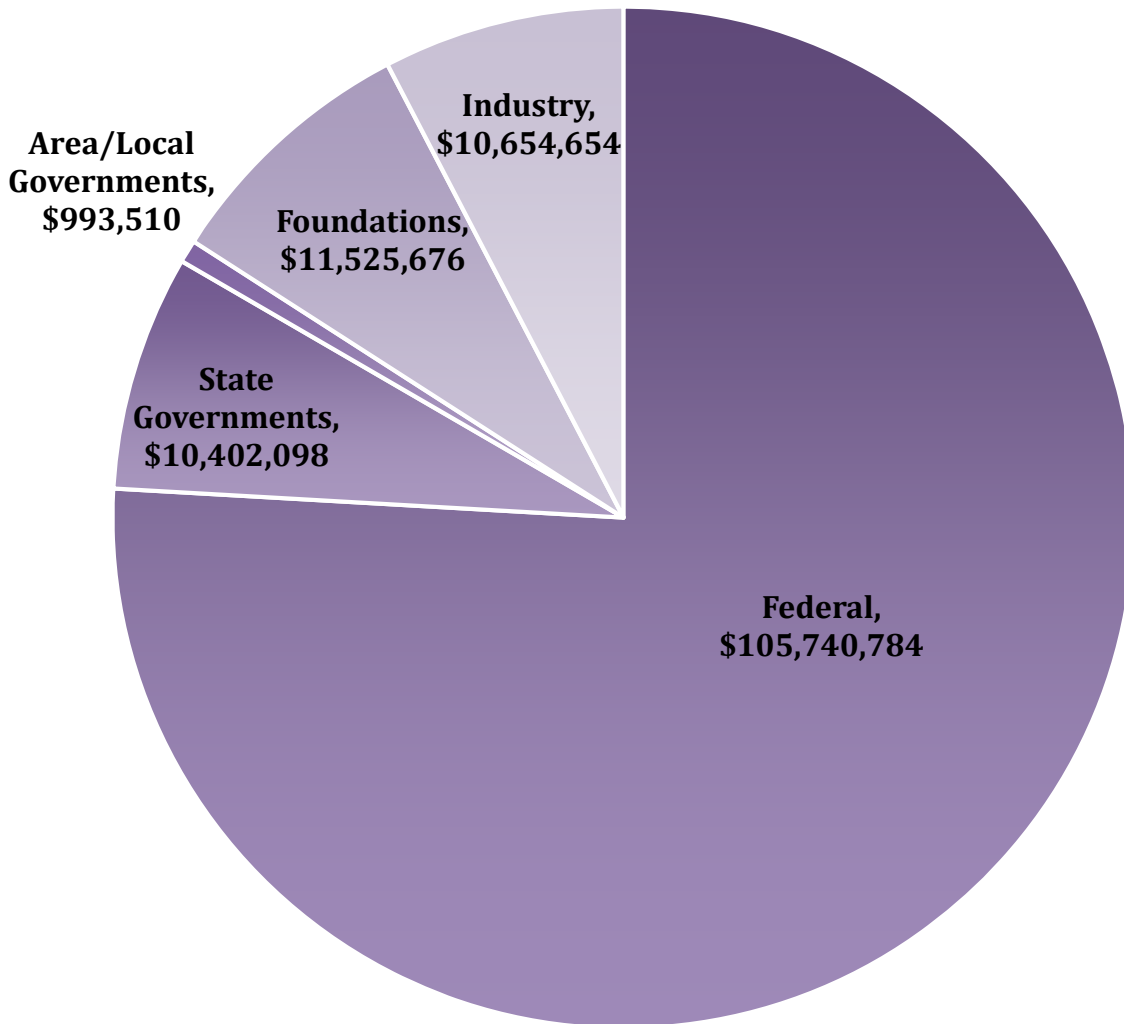
**FY2017 Percentage of Total  
Dollar Amount of  
Extramural Awards  
by Source**



**FY2017 Percentage of Total  
Number of  
Extramural Awards  
by Source**

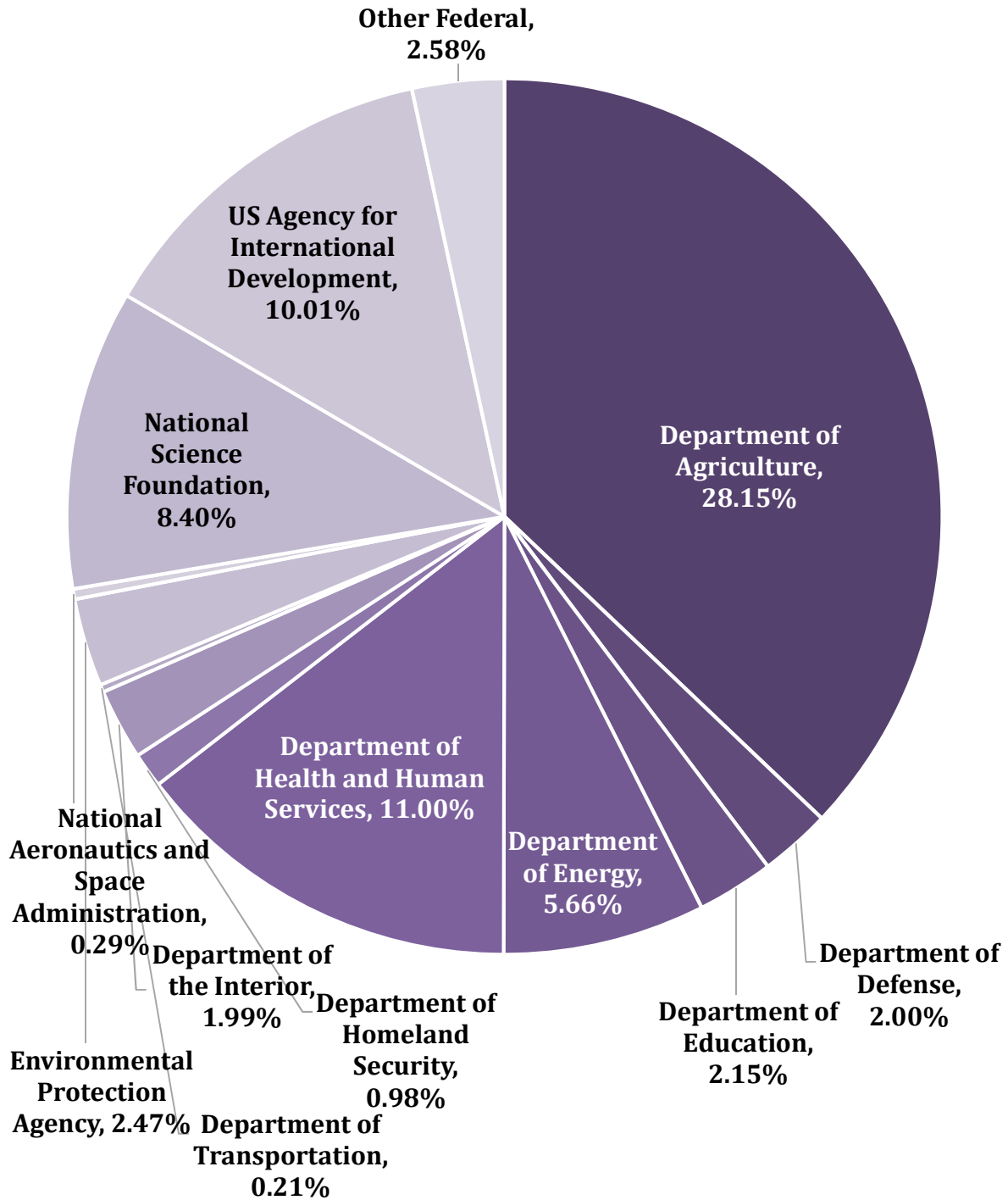


### FY2017 Extramural Award Sources by Dollar Amount

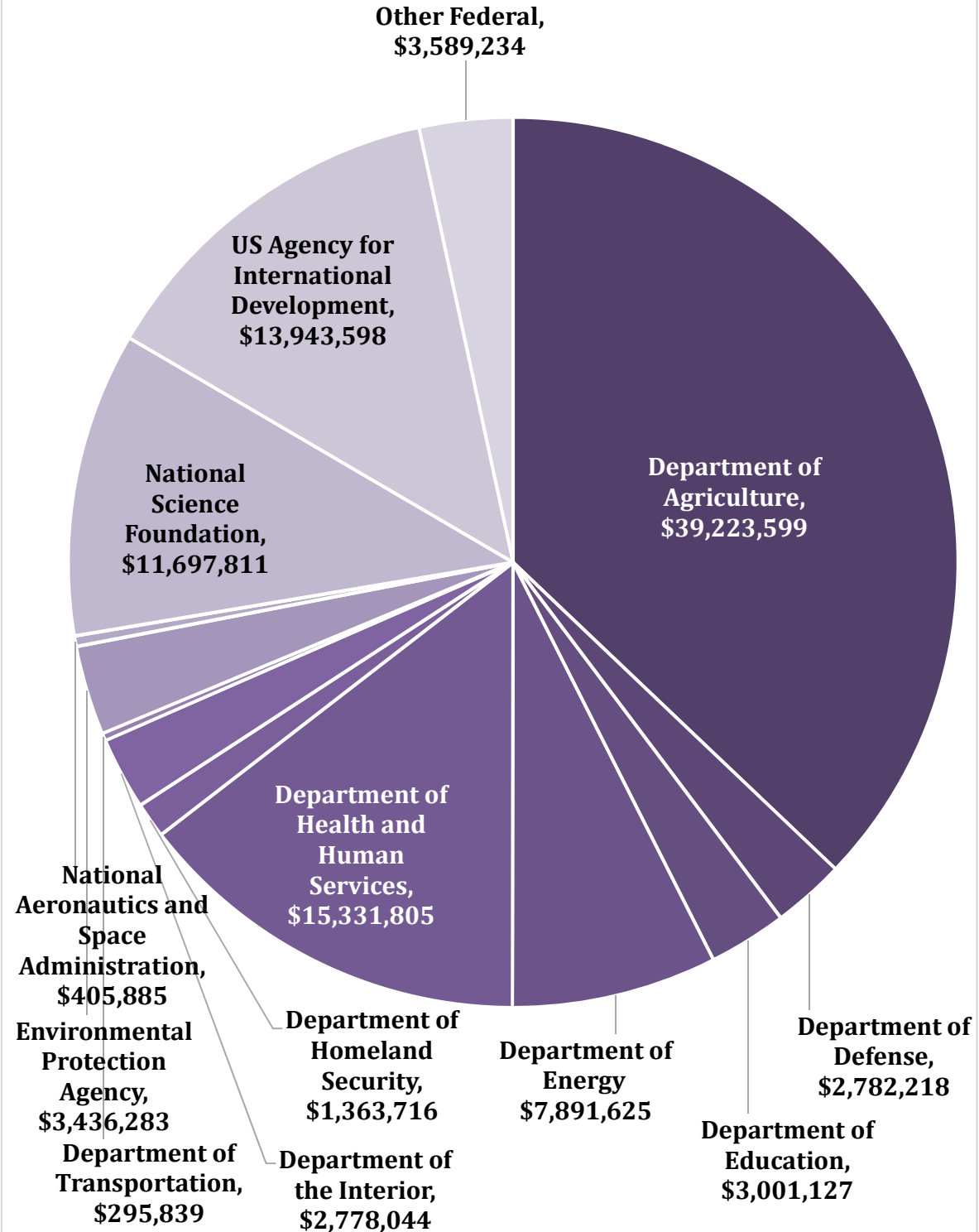




## FY2017 Extramural Award Federal Sources by Percentage



# FY2017 Extramural Award Federal Sources by Dollar Amount



Distribution of New Awards Among  
Colleges and Offices of the University  
Fiscal Year 2017

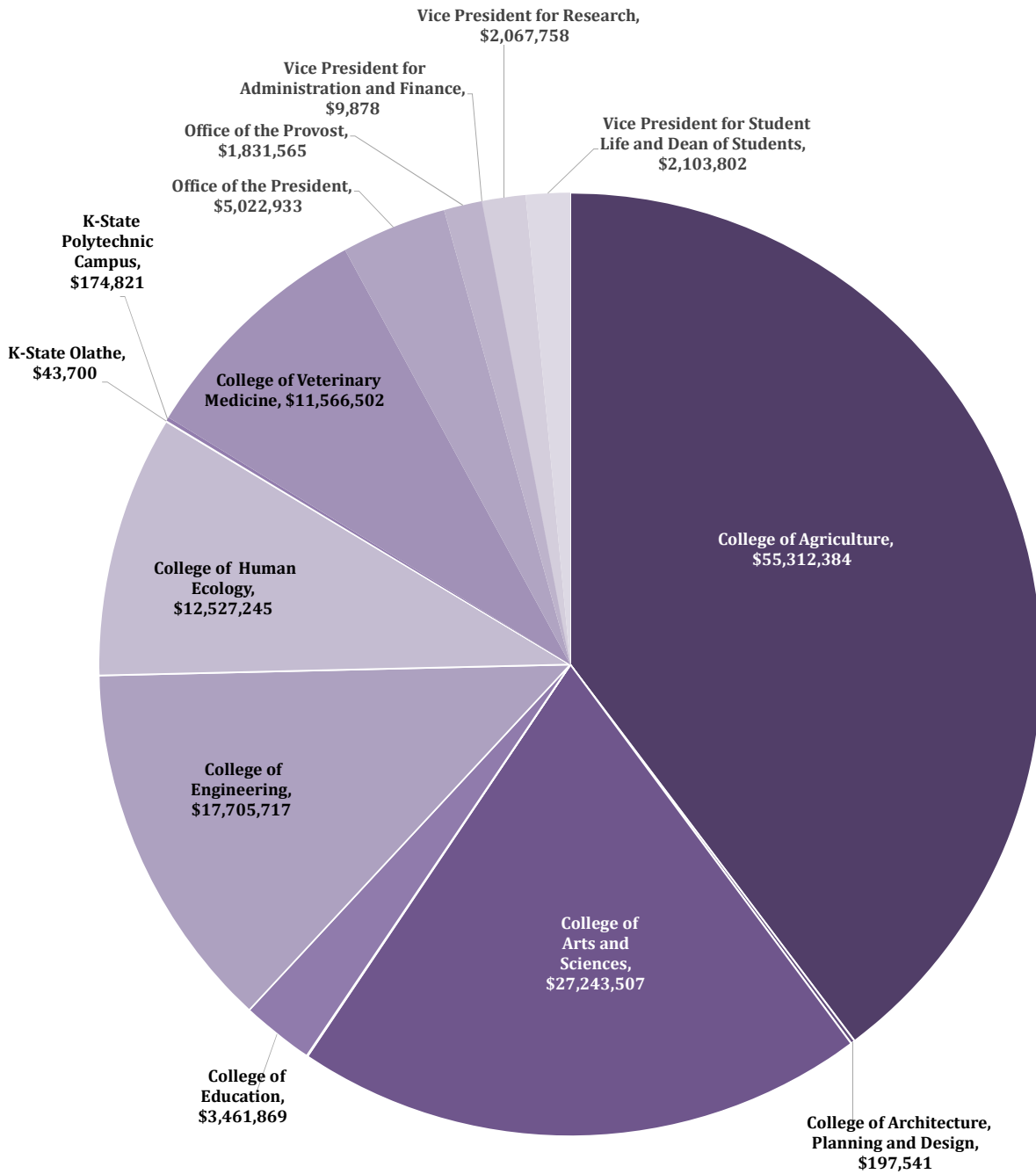
College/Office	Number of Awards	Dollar Value	Percentage
College of Agriculture	729	\$55,312,384 *	39.70%
College of Architecture, Planning and Design	12	\$197,541	0.14%
College of Arts and Sciences	195	\$27,243,507	19.56%
College of Business Administration	1	\$47,500	0.03%
College of Education	34	\$3,461,869	2.48%
College of Engineering	202	\$17,705,717	12.71%
College of Human Ecology	62	\$12,527,245 **	8.99%
K-State Olathe	4	\$43,700	0.03%
K-State Polytechnic Campus	3	\$174,821	0.13%
College of Veterinary Medicine	186	\$11,566,502	8.30%
Office of the President	4	\$5,022,933	3.61%
Office of the Provost	20	\$1,831,565	1.31%
Vice President for Administration and Finance	2	\$9,878	0.01%
Vice President for Research	10	\$2,067,758	1.48%
Vice President for Student Life and Dean of Students	22	\$2,103,802	1.51%
<b>UNIVERSITY TOTAL</b>	<b>1486</b>	<b>\$139,316,722</b>	<b>100.00%</b>

\*Includes Cooperative Extension Projects in College of Agriculture

\*\*Includes Cooperative Extension Projects in College of Human Ecology

NOTE: See 5 Year Summary of Extramural Support for Individual College Unit Details

# FY2017 Extramural Award Dollars by College / Office



**FY2017 Cumulative  
Proposal/Award Summary  
07/01/16 - 06/30/17**

Department/College	Proposals			Awards	
	**** Submitted	*Period	**Total	**** Received	***Total
<b><u>COLLEGE OF AGRICULTURE</u></b>					
Agricultural Economics	64	\$2,964,524	\$9,767,293	43	\$2,895,199
Agricultural Experiment Station	1	\$20,000	\$200,000	2	\$400,000
Agricultural Research Center-Hays	26	\$1,141,418	\$4,212,376	20	\$629,261
Agriculture and Natural Resources	0	\$0	\$0	0	\$0
Agronomy	264	\$9,649,913	\$30,421,502	164	\$7,117,549
Animal Sciences and Industry	179	\$6,562,152	\$13,397,256	118	\$3,333,192
Communication and Ag Education	19	\$540,744	\$1,465,740	16	\$491,995
Dean of Agriculture and Director of AES	15	\$2,436,502	\$4,045,288	12	\$12,755,031
Entomology	50	\$1,664,894	\$4,718,995	43	\$1,310,348
Food Science Institute	1	\$25,029	\$75,566	1	\$2,762
Grain Science and Industry	101	\$2,769,237	\$7,488,163	81	\$3,106,964
Horticulture, Forestry and Recreation Resources	76	\$3,816,998	\$9,939,867	43	\$1,557,661
International Agricultural Programs	1	\$5,050	\$5,050	2	\$71,185
Kansas Industrial Extension Services	0	\$0	\$0	0	\$0
KS Ctr for Agri & the Env./KS Water Resource Res. Inst.	9	\$83,538	\$957,234	13	\$2,979,332
Northwest Research Extension Center	17	\$628,207	\$1,296,208	9	\$182,942
Office of Academic Programs	1	\$48,741	\$149,959	1	\$103,827
Plant Biotechnology Center	1	\$126,386	\$126,386	2	\$100,694
Plant Pathology	68	\$3,904,003	\$10,990,524	69	\$7,904,457
Southeast Agricultural Research Center	13	\$140,635	\$208,218	5	\$30,946
Southwest Research Extension Center	31	\$724,503	\$1,951,454	21	\$835,659
<b>Total Agriculture</b>	<b>937</b>	<b>\$37,252,474</b>	<b>\$101,417,079</b>	<b>665</b>	<b>\$45,809,004</b>
<b><u>COLLEGE OF ARCHITECTURE, PLANNING &amp; DESIGN</u></b>					
Architecture	0	\$0	\$0	0	\$0
Dean of Architecture, Planning and Design	1	\$5,480	\$5,480	1	\$5,480
Interior Architecture and Product Design	0	\$0	\$0	0	\$0
Landscape Architecture/Regional & Community Planning	21	\$766,251	\$2,373,370	11	\$192,061
<b>Total Architecture, Planning and Design</b>	<b>22</b>	<b>\$771,731</b>	<b>\$2,378,850</b>	<b>12</b>	<b>\$197,541</b>
<b><u>COLLEGE OF ARTS AND SCIENCES</u></b>					
American Ethnic Studies	0	\$0	\$0	0	\$0
Art	3	\$104,831	\$104,831	1	\$15,000
Biochemistry	35	\$3,186,653	\$9,808,733	23	\$2,611,851
Biology	106	\$15,307,864	\$51,759,392	62	\$14,149,320
Chemistry	75	\$7,690,205	\$24,068,813	28	\$3,183,343
Communication Studies	3	\$253,839	\$747,428	2	\$59,000
Dean of Arts and Sciences	1	\$2,059	\$10,295	1	\$150,000
Economics	4	\$43,633	\$64,273	1	\$40,850
English	15	\$600,908	\$940,329	2	\$6,000
Geography	23	\$972,227	\$2,841,452	4	\$155,190
Geology	14	\$866,058	\$1,537,142	1	\$4,880
History	1	\$50,000	\$100,000	1	\$205,000
Mathematics	41	\$2,730,203	\$10,020,247	20	\$1,084,184
Modern Languages	2	\$12,000	\$12,000	0	\$0
Philosophy	10	\$254,970	\$535,977	0	\$0
Physics	65	\$6,621,258	\$20,444,157	25	\$4,327,675
Political Science	4	\$194,474	\$480,757	1	\$9,650
Psychological Sciences	15	\$3,127,744	\$10,764,295	4	\$361,113
School of Journalism and Mass Communications	4	\$360,016	\$1,595,795	3	\$164,561
School of Music, Theatre, and Dance	2	\$35,598	\$51,548	1	\$15,950
Sociology, Anthropology and Social Work	16	\$500,151	\$1,743,330	11	\$621,102

**FY2017 Cumulative  
Proposal/Award Summary  
07/01/16 - 06/30/17**

Department/College	Proposals			Awards	
	**** Submitted	*Period	**Total	**** Received	***Total
Statistics	18	\$506,970	\$1,436,345	4	\$78,838
Women Studies	1	\$45,941	\$45,941	0	\$0
<b>Total Arts and Sciences</b>	<b>458</b>	<b>\$43,467,602</b>	<b>\$139,113,080</b>	<b>195</b>	<b>\$27,243,507</b>

**COLLEGE OF BUSINESS ADMINISTRATION**

Finance	0	\$0	\$0	0	\$0
Accounting	0	\$0	\$0	0	\$0
Dean of Business Administration	0	\$0	\$0	0	\$0
Management	2	\$183,991	\$467,822	1	\$47,500
Marketing	0	\$0	\$0	0	\$0
<b>Total Business Administration</b>	<b>2</b>	<b>\$183,991</b>	<b>\$467,822</b>	<b>1</b>	<b>\$47,500</b>

**COLLEGE OF EDUCATION**

Curriculum and Instruction	19	\$2,274,610	\$10,386,491	12	\$882,857
Dean of Education	55	\$8,167,780	\$29,360,439	19	\$2,315,089
Educational Leadership	9	\$463,522	\$957,952	2	\$263,700
Elementary Education	0	\$0	\$0	0	\$0
Secondary Education	0	\$0	\$0	0	\$0
Special Education, Counseling and Student Affairs	4	\$115,580	\$305,813	1	\$223
<b>Total Education</b>	<b>87</b>	<b>\$11,021,492</b>	<b>\$41,010,695</b>	<b>34</b>	<b>\$3,461,869</b>

**COLLEGE OF ENGINEERING**

Advanced Manufacturing Institute	13	\$955,414	\$2,441,734	7	\$856,750
Architectural Engineering and Construction Science	0	\$0	\$0	0	\$0
Biological and Agricultural Engineering	89	\$4,322,964	\$13,176,770	40	\$1,808,356
Center for Hazardous Substance Research	1	\$400,000	\$2,000,000	4	\$1,724,852
Chemical Engineering	37	\$3,311,543	\$11,875,076	9	\$813,050
Civil Engineering	43	\$2,507,501	\$5,768,455	20	\$1,040,616
Computer Science	44	\$3,594,789	\$10,864,854	28	\$2,656,257
Dean of Engineering	3	\$103,606	\$419,873	1	\$75,000
Electrical and Computer Engineering	81	\$7,011,967	\$20,333,897	26	\$1,065,833
Engineering Experiment Station	0	\$0	\$0	0	\$0
Industrial and Manufacturing Systems Engineering	24	\$2,212,812	\$7,731,062	6	\$560,033
Institute for Environmental Research	14	\$636,882	\$2,038,541	4	\$525,072
Kansas Industrial Extension Service	12	\$667,756	\$1,032,349	13	\$1,588,371
Mechanical and Nuclear Engineering	113	\$10,869,167	\$35,094,495	44	\$4,991,527
National Gas Machinery Laboratory	0	\$0	\$0	0	\$0
National Institute for Land Management and Training	0	\$0	\$0	0	\$0
<b>Total Engineering</b>	<b>474</b>	<b>\$36,594,401</b>	<b>\$112,777,106</b>	<b>202</b>	<b>\$17,705,717</b>

**FY2017 Cumulative  
Proposal/Award Summary  
07/01/16 - 06/30/17**

Department/College	Proposals			Awards	
	**** Submitted	*Period	**Total	**** Received	***Total
<b><u>COLLEGE OF HUMAN ECOLOGY</u></b>					
Apparel, Textiles, and Interior Design	10	\$386,118	\$1,010,033	2	\$60,546
Dean of Human Ecology	13	\$1,240,060	\$3,427,560	13	\$1,536,171
Hospitality Management and Dietetics	7	\$539,218	\$1,356,545	2	\$226,236
Human Nutrition	45	\$3,027,189	\$10,801,226	21	\$2,452,835
Kinesiology	15	\$1,332,084	\$2,510,016	6	\$688,578
School of Family Studies and Human Services	34	\$4,146,063	\$8,647,226	17	\$5,556,125
<b>Total Human Ecology</b>	<b>124</b>	<b>\$10,670,732</b>	<b>\$27,752,606</b>	<b>61</b>	<b>\$10,520,491</b>
<b><u>K-STATE OLATHE</u></b>					
Innovation Campus	4	\$18,666	\$47,189	4	\$43,700
<b>Total K-State Olathe</b>	<b>4</b>	<b>\$18,666</b>	<b>\$47,189</b>	<b>4</b>	<b>\$43,700</b>
<b><u>K-STATE POLYTECHNIC CAMPUS</u></b>					
Academic Services	0	\$0	\$0	0	\$0
Applied Aviation Research Center	5	\$440,223	\$447,108	3	\$174,821
Arts, Science and Business	0	\$0	\$0	0	\$0
Aviation	3	\$400,000	\$1,120,000	0	\$0
Dean of Polytechnic Campus	1	\$117,518	\$360,913	0	\$0
Engineering Technology	0	\$0	\$0	0	\$0
Fiscal Affairs	0	\$0	\$0	0	\$0
Research and Engagement	2	\$14,795	\$14,795	0	\$0
<b>Total Technology and Aviation</b>	<b>11</b>	<b>\$972,536</b>	<b>\$1,942,816</b>	<b>3</b>	<b>\$174,821</b>
<b><u>COLLEGE OF VETERINARY MEDICINE</u></b>					
Anatomy and Physiology	104	\$8,533,934	\$26,316,757	24	\$1,729,199
Clinical Sciences	51	\$2,171,967	\$5,682,878	15	\$604,061
Dean of Veterinary Medical Center	14	\$332,386	\$831,194	3	\$189,828
Diagnostic Medicine/Pathobiology	216	\$17,955,613	\$53,026,698	107	\$8,272,443
Veterinary Diagnostic Laboratory	51	\$2,424,596	\$4,530,679	34	\$750,943
Veterinary Medical Teaching Hospital	1	\$12,829	\$12,829	3	\$20,028
<b>Total Veterinary Medical Center</b>	<b>437</b>	<b>\$31,431,325</b>	<b>\$90,401,035</b>	<b>186</b>	<b>\$11,566,502</b>
<b><u>COOPERATIVE EXTENSION</u></b>					
<b>Cooperative Extension - Agriculture</b>					
Agricultural Economics	0	\$0	\$0	0	\$0
Agriculture and Natural Resources	6	\$183,525	\$1,272,030	6	\$635,550
Agronomy	0	\$0	\$0	0	\$0
Biological and Agricultural Engineering	0	\$0	\$0	0	\$0
Extension Communications	0	\$0	\$0	0	\$0
County Agents	0	\$0	\$0	0	\$0
County Agents-Metropolitan Sector	2	\$32,012	\$178,831	1	\$1,600
County Agents-Northeast Sector	1	\$6,250	\$6,250	0	\$0
County Agents-Northwest Sector	0	\$0	\$0	0	\$0

**FY2017 Cumulative  
Proposal/Award Summary  
07/01/16 - 06/30/17**

Department/College	Proposals			Awards	
	**** Submitted	*Period	**Total	**** Received	***Total
Director of Cooperative Extension	7	\$700,385	\$1,377,387	7	\$1,589,079
Four-H Youth Development	2	\$77,570	\$77,570	1	\$57,570
Kansas Forest Service	12	\$1,985,064	\$2,275,192	13	\$6,856,782
KS Ctr for Agri & the Env./KS Water Resource Res. Inst.	0	\$0	\$0	0	\$0
Northeast Area Office	5	\$17,846	\$49,969	4	\$16,347
Northeast/Metro Area Office	0	\$0	\$0	0	\$0
Northwest Area Office	10	\$64,418	\$95,918	9	\$95,871
Southeast Area Office	18	\$163,070	\$330,221	9	\$50,558
Southwest Area Office	24	\$490,189	\$1,418,790	14	\$200,023
<b>Subtotal Cooperative Ext - Agriculture</b>	<b>87</b>	<b>\$3,720,329</b>	<b>\$7,082,158</b>	<b>64</b>	<b>\$9,503,380</b>
<b>Cooperative Extension - Human Ecology</b>					
Family and Consumer Sciences	2	\$2,036,480	\$2,128,113	1	\$2,006,754
Human Nutrition	0	\$0	\$0	0	\$0
Nutrition Program	0	\$0	\$0	0	\$0
<b>Subtotal Cooperative Ext - Human Ecology</b>	<b>2</b>	<b>\$2,036,480</b>	<b>\$2,128,113</b>	<b>1</b>	<b>\$2,006,754</b>
<b>Total Cooperative Extension</b>	<b>89</b>	<b>\$5,756,809</b>	<b>\$9,210,271</b>	<b>65</b>	<b>\$11,510,134</b>
<b><u>OFFICE OF THE PRESIDENT</u></b>					
Auditorium Performances	0	\$0	\$0	0	\$0
Beach Art Museum	1	\$30,000	\$119,381	0	\$0
Intercollegiate Athletics - State	2	\$433	\$433	2	\$433
Vice President for Communications and Marketing	0	\$0	\$0	1	\$22,500
Office of the President	0	\$0	\$0	1	\$5,000,000
<b>Total Office of the President</b>	<b>3</b>	<b>\$30,433</b>	<b>\$119,814</b>	<b>4</b>	<b>\$5,022,933</b>
<b><u>OFFICE OF THE PROVOST</u></b>					
Assessment and Program Review	0	\$0	\$0	0	\$0
Center for Engagement and Community Development	4	\$144,158	\$144,158	5	\$183,821
Center for the Advancement of Teaching & Learning	0	\$0	\$0	0	\$0
Dean of Global Campus	1	\$55,200	\$55,200	1	\$55,200
Dean of Graduate School	4	\$141,024	\$439,607	4	\$686,726
Information Security & Compliance	0	\$0	\$0	0	\$0
Information Technology Assistance Center	0	\$0	\$0	0	\$0
International Programs	1	\$51,606	\$359,996	0	\$0
Kansas Center for Rural Initiatives	0	\$0	\$0	0	\$0
Library	1	\$48,333	\$145,000	1	\$13,279
Office of Diversity and Dual Career Development	1	\$255,162	\$255,162	2	\$424,905
Office of the Provost	1	\$2,059	\$10,295	3	\$222,014
School of Leadership Studies	4	\$231,536	\$390,427	2	\$158,000
Vice Provost for Undergraduate Studies	2	\$36,350	\$63,018	2	\$87,620
<b>Total Office of the Provost</b>	<b>19</b>	<b>\$965,428</b>	<b>\$1,862,863</b>	<b>20</b>	<b>\$1,831,565</b>



**FY2017 Cumulative  
Proposal/Award Summary  
07/01/16 - 06/30/17**

Department/College	Proposals			Awards	
	**** Submitted	*Period	**Total	**** Received	***Total
<b><u>OFFICE OF THE VICE PRESIDENT FOR ADMINISTRATION AND FINANCE</u></b>					
Budget Office	0	\$0	\$0	0	\$0
KSU Police Department	0	\$0	\$0	2	\$9,878
Public Safety	0	\$0	\$0	0	\$0
Vice President for Administration and Finance	0	\$0	\$0	0	\$0
<b>Total Administration and Finance</b>	<b>0</b>	<b>\$0</b>	<b>\$0</b>	<b>2</b>	<b>\$9,878</b>
<b><u>OFFICE OF THE VICE PRESIDENT FOR RESEARCH</u></b>					
Biosecurity Research Institute	12	\$1,100,076	\$3,841,564	2	\$113,182
Comparative Medicine	0	\$0	\$0	0	\$0
National Agricultural Biosecurity Center	6	\$571,931	\$880,697	4	\$473,694
Office of the Vice President for Research	0	\$0	\$0	1	\$1,000,000
University Research Compliance Office	1	\$16,500	\$16,500	1	\$16,500
Vice President Biotech Laboratory	0	\$0	\$0	1	\$143,937
Vice President Electronics Design Laboratory	0	\$0	\$0	1	\$320,445
<b>Total Vice President for Research</b>	<b>19</b>	<b>\$1,688,507</b>	<b>\$4,738,761</b>	<b>10</b>	<b>\$2,067,758</b>
<b><u>OFFICE OF THE VICE PRESIDENT FOR STUDENT LIFE AND DEAN OF STUDENTS</u></b>					
Department of Housing	0	\$0	\$0	0	\$0
Educational and Personal Development	3	\$768,792	\$3,843,960	7	\$1,306,959
KSU Child Development Center, Inc.	3	\$225,339	\$628,956	2	\$145,339
New Student Services	0	\$0	\$0	3	\$47,650
Office of Student Life	2	\$346,976	\$353,976	2	\$268,438
Student Health	2	\$66,150	\$66,150	0	\$0
University Counseling Services	0	\$0	\$0	1	\$32,826
Vice President for Student Life	3	\$106,305	\$106,305	7	\$302,590
<b>Total Student Life and Dean of Students</b>	<b>13</b>	<b>\$1,513,562</b>	<b>\$4,999,347</b>	<b>22</b>	<b>\$2,103,802</b>
<b>University Totals</b>	<b>**** 2,695</b>	<b>\$182,321,023</b>	<b>\$538,192,145</b>	<b>**** 1,486</b>	<b>\$139,316,722</b>

**PROPOSALS**

\*Period = Initial budget period amount requested

\*\*Total = Total funds requested for entire project period

**AWARDS**

\*\*\*Total = Reflects the sum total of all awards actually received during the specified reporting period.

NOTE: Previous year awards received (i.e. in the case of incrementally funded awards) are not included if received in a previous award/reporting period. Only those award amounts received through specific award transactions processed during the specified reporting period are included. (All totals are cumulative throughout the fiscal year.)

\*\*\*\*These numbers include the collaborative count for proposals and awards and reflect the contributions of and credit granted to all project personnel based on the E% indicated on the Sponsored Programs Transmittal Sheet. During FY 2015 a new credit/reporting allocation capture strategy, referred to as "E%" on the Transmittal Sheet, was developed. The deployment of this more uniform credit allocation method streamlines and makes it easier for campus units to consistently report collaborative activities, that may not be reflected in previous year's totals.

KANSAS STATE UNIVERSITY  
SUMMARY OF EXTRAMURAL SUPPORT

FY2017

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
<b>AGRICULTURE</b>					
Dean of Agriculture & Director of AES	\$0	\$4,080,119	\$7,028,301	\$7,936,931	\$12,755,031
Agricultural Economics	\$1,879,073	\$2,701,748	\$4,499,667	\$4,987,123	\$2,895,199
Agronomy	\$6,317,145	\$9,047,246	\$4,282,708	\$7,460,995	\$7,117,549
Animal Sciences & Industry	\$3,264,082	\$4,160,941	\$2,330,114	\$3,124,814	\$3,333,192
Communication and Ag Education	\$28,948	\$572,825	\$273,151	\$204,843	\$491,995
Entomology	\$1,641,243	\$2,951,497	\$1,926,270	\$2,099,381	\$1,310,348
Food Science Institute	\$860,581	\$351,396	\$417,494	\$262,267	\$2,762
Grain Science & Industry	\$10,118,056	\$4,881,064	\$2,999,474	\$4,755,228	\$3,106,964
Hort., Forestry & Recreation Resources	\$610,161	\$1,212,934	\$528,216	\$1,153,206	\$1,557,661
International Agriculture Programs	\$453,714	\$473,742	\$135,843	\$2,798	\$71,185
KS Ctr for Agri & the Env/KS Water Res. Res. Inst.	\$886,934	\$1,237,346	\$2,471,533	\$3,172,778	\$2,979,332
Office of Academic Programs	\$150,737	\$223,774	\$160,203	\$75,427	\$103,827
Plant Biotechnology Center	\$72,000	\$72,000	\$73,902	\$62,887	\$100,694
Plant Pathology	\$9,373,376	\$8,563,872	\$8,040,595	\$7,442,382	\$7,904,457
Agricultural Experiment Station	\$0	\$10,000	\$0	\$2,200,000	\$400,000
Northwest Research Extension Center	\$387,423	\$167,220	\$106,297	\$98,224	\$182,942
Agricultural Research Center-Hays	\$341,647	\$536,961	\$520,094	\$905,459	\$629,261
Southeast Agricultural Res. Ctr.	\$60,928	\$26,385	\$0	\$48,065	\$30,946
Southwest Research Extension Ctr.	\$232,481	\$231,245	\$572,365	\$664,725	\$835,659
Extension Director	\$385,035	\$283,589	\$273,167	\$565,629	\$1,589,079
Extension Agricultural Economics	\$0	\$0	\$0	\$0	\$0
Extension Agronomy	\$10,609	\$21,677	\$0	\$10,837	\$0
Extension Animal Sciences & Industry	\$0	\$0	\$0	\$0	\$0
Extension Biological & Agricultural Engineering	\$0	\$0	\$0	\$0	\$0
Extension Communications	\$0	\$0	\$0	\$0	\$0
Extension Community Health Institute	\$0	\$0	\$0	\$0	\$0
Extension County Agents - Metropolitan Sector	\$0	\$0	\$0	\$6,600	\$1,600
Extension Entomology	\$0	\$0	\$0	\$0	\$0
Extension Four-H Youth Development	\$390,367	\$307,433	\$109,905	\$20,000	\$57,570
Extension Grain Science and Industry	\$0	\$0	\$0	\$0	\$0
Extension Hort., Forestry & Rec. Res.	\$0	\$0	\$0	\$0	\$0
Extension KS Ctr. for Agriculture & the Environ.	\$0	\$0	\$0	\$0	\$0
Extension Kansas Forest Service	\$420,967	\$3,442,665	\$20,287,123	\$460,444	\$6,856,782
Extension Kansas Water Resource Res. Inst.	\$0	\$0	\$0	\$0	\$0
Extension Northeast Area Office	\$10,235	\$56,784	\$13,900	\$16,037	\$16,347
Extension Northwest Area Office	\$9,360	\$1,575	\$39,465	\$76,424	\$95,871
Extension Plant Pathology	\$0	\$0	\$0	\$0	\$0
Extension Agriculture and Natural Resources	\$493,018	\$562,308	\$997,142	\$469,326	\$635,550
Extension South Central Area Office	\$0	\$0	\$0	\$0	\$0
Extension Southeast Area Office	\$32,699	\$42,263	\$33,485	\$69,067	\$50,558
Extension Southwest Area Office	\$23,662	\$64,677	\$120,868	\$320,401	\$200,023
College Totals	<u>38,454,478</u>	<u>\$46,285,286</u>	<u>\$58,241,282</u>	<u>\$48,672,298</u>	<u>\$55,312,384</u>

**ARCHITECTURE, PLANNING AND DESIGN**

Dean of Architecture, Planning & Design	\$0	\$0	\$0	\$0	\$5,480
Architecture	\$0	\$25,000	\$28,500	\$0	\$0
Interior Architecture and Product Design	\$0	\$0	\$0	\$3,745	\$0
Landscape Arch/Regional & Comm Plan	\$0	\$71,571	\$7,210	\$31,976	\$192,061
College Totals	<u>\$0</u>	<u>\$96,571</u>	<u>\$35,710</u>	<u>\$35,721</u>	<u>\$197,541</u>

**ARTS AND SCIENCES**

Dean of Arts & Sciences	\$0	\$200,000	\$150,000	\$150,000	\$150,000
Art	\$0	\$0	\$0	\$0	\$15,000
Biochemistry	\$1,446,113	\$2,463,717	\$2,737,009	\$2,616,972	\$2,611,851
Biology	\$7,793,383	\$8,162,164	\$11,506,539	\$6,835,361	\$14,149,320
Chemistry	\$2,491,458	\$2,243,577	\$1,530,901	\$1,680,835	\$3,183,343
Communication Studies	\$0	\$0	\$0	\$65,740	\$59,000
Economics	\$0	\$0	\$0	\$50,000	\$40,850
English	\$0	\$0	\$9,982	\$0	\$6,000
Geography	\$478,709	\$1,118,409	\$323,397	\$302,448	\$155,190

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
Geology	\$162,184	\$229,475	\$292,622	\$102,033	\$4,880
History	\$234,342	\$0	\$148,000	\$160,800	\$205,000
Kinesiology	\$179,012	\$178,084	\$0	\$0	\$0 *
Mathematics	\$418,469	\$861,187	\$383,781	\$673,452	\$1,084,184
Modern Languages	\$0	\$6,000	\$0	\$0	\$0
Music	\$15,950	\$15,950	\$17,355	\$0	\$0 **
Philosophy	\$0	\$0	\$0	\$0	\$0
Physics	\$5,231,021	\$5,694,471	\$8,741,477	\$5,092,355	\$4,327,675
Political Science	\$171,028	\$4,000	\$0	\$0	\$9,650
Psychological Sciences	\$841,284	\$934,052	\$688,600	\$684,705	\$361,113
School of Journalism & Mass Communications	\$379,467	\$835,043	\$152,992	\$155,435	\$164,561
School of Music, Theatre, and Dance	\$0	\$0	\$0	\$15,950	\$15,950 **
Sociology, Anthropology, & Social Work	\$227,879	\$488,048	\$362,336	\$442,722	\$621,102
Statistics	\$260,908	\$85,842	\$87,141	\$5,000	\$78,838
Woman Studies	\$0	\$0	\$0	\$0	\$0
College Totals	<u>\$20,331,206</u>	<u>\$23,520,019</u>	<u>\$27,132,132</u>	<u>\$19,033,808</u>	<u>\$27,243,507</u>

#### **BUSINESS ADMINISTRATION**

Dean of Business Administration	\$0	\$0	\$0	\$0	\$0
Accounting	\$41,416	\$0	\$0	\$0	\$0
Marketing	\$0	\$10,000	\$21,780	\$0	\$0
Management	<u>\$5,000</u>	<u>\$1,000</u>	<u>\$0</u>	<u>\$0</u>	<u>\$47,500</u>
College Totals	<u>\$46,416</u>	<u>\$11,000</u>	<u>\$21,780</u>	<u>\$0</u>	<u>\$47,500</u>

#### **EDUCATION**

Curriculum and Instruction	\$295,178	\$0	\$130,268	\$560,223	\$882,857
Dean of Education	\$4,568,448	\$4,913,616	\$10,151,287	\$3,983,009	\$2,315,089
Educational Leadership	\$87,771	\$19,500	\$0	\$20,964	\$263,700
Elementary Education	\$0	\$0	\$0	\$0	\$0
Secondary Education	\$0	\$0	\$0	\$0	\$0
Special Education, Counseling and Student Affairs	<u>\$0</u>	<u>\$27,026</u>	<u>\$27,020</u>	<u>\$0</u>	<u>\$223</u>
College Totals	<u>\$4,951,397</u>	<u>\$4,960,142</u>	<u>\$10,308,575</u>	<u>\$4,564,196</u>	<u>\$3,461,869</u>

#### **ENGINEERING**

Dean of Engineering	\$7,045,581	\$200,378	\$75,000	\$1,405,000	\$75,000
Advanced Manufacturing Institute	\$2,787,818	\$1,372,000	\$1,352,989	\$454,715	\$856,750
Architectural Engg & Construction Sci	\$0	\$37,730	\$0	\$630,000	\$0
Biological & Agricultural Engineering	\$1,526,681	\$794,204	\$595,754	\$1,741,129	\$1,808,356
Center for Hazardous Substance Research	\$288,727	\$2,274,343	\$48,000	\$650,460	\$1,724,852
Chemical Engineering	\$1,120,526	\$1,475,765	\$1,084,436	\$1,178,431	\$813,050
Civil Engineering	\$2,753,232	\$1,193,043	\$1,630,957	\$2,674,909	\$1,040,616
Computer Science	\$3,782,564	\$2,908,196	\$1,128,108	\$2,933,327	\$2,656,257
Electrical & Computer Engineering	\$874,793	\$1,426,653	\$1,125,422	\$2,348,088	\$1,065,833
Engineering Experiment Station	\$0	\$0	\$0	\$630,000	\$0
Institute for Environmental Research	\$611,763	\$421,049	\$397,738	\$486,087	\$525,072
Extension Engineering	\$0	\$0	\$0	\$0	\$0
Industrial & Manufacturing Sys Engg	\$1,330,252	\$903,179	\$261,640	\$1,582,484	\$560,033
Kansas Industrial Extension Service	\$1,004,228	\$849,510	\$982,346	\$1,198,158	\$1,588,371
Mechanical and Nuclear Engineering	\$2,029,180	\$2,245,934	\$3,694,879	\$5,303,479	\$4,991,527
National Gas Machinery Laboratory	\$201,149	\$37,730	\$0	\$50,146	\$0
Nat'l Institute for Land Mgmt & Training	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
College Totals	<u>\$25,356,493</u>	<u>\$16,139,714</u>	<u>\$12,377,269</u>	<u>\$23,266,413</u>	<u>\$17,705,717</u>

#### **HUMAN ECOLOGY**

Dean of Human Ecology	\$110,461	\$491,557	\$408,764	\$746,412	\$1,536,171
Apparel, Textiles & Interior Design	\$713,847	\$0	\$51,190	\$115,702	\$60,546
Human Nutrition	\$1,716,444	\$1,506,520	\$1,287,316	\$3,381,174	\$2,452,835
Hospitality Mgmt & Dietetics	\$500,000	\$827,642	\$648,372	\$865,776	\$226,236
Kinesiology	\$100,454	\$124,866	\$1,423,210	\$697,233	\$688,578 *
School of Family Studies & Human Services	\$6,524,106	\$7,537,520	\$8,292,408	\$6,700,747	\$5,556,125
Extension Apparel, Textiles & Interior Design	\$0	\$0	\$0	\$0	\$0
Extension Family & Consumer Sciences	\$1,757,763	\$2,489,822	\$2,547,558	\$0	\$2,006,754
Extension Human Nutrition	\$0	\$0	\$0	\$0	\$0
Extension Nutrition Program	\$0	\$0	\$0	\$0	\$0
Ext. Family Studies & Human Services	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
College Totals	\$11,423,074	\$12,977,927	\$14,658,818	\$12,507,044	\$12,527,245
<b>K-STATE OLATHE</b>					
Innovation Campus	\$500	\$0	\$0	\$6,700	\$43,700
College Totals	\$500	\$0	\$0	\$6,700	\$43,700
<b>K-STATE POLYTECHNIC CAMPUS</b>					
Dean of Polytechnic Campus	\$0	\$0	\$0	\$342,269	\$0
Academic Services	\$12,276	\$0	\$0	\$0	\$0
College Advancement	\$0	\$1,500	\$0	\$0	\$0
Applied Aviation Research Center	\$10,000	\$157,993	\$215,808	\$554,280	\$174,821
Arts, Science and Business	\$0	\$500	\$68,274	\$0	\$0
Aviation	\$0	\$0	\$0	\$0	\$0
Engineering Technology	\$0	\$0	\$0	\$0	\$0
College Totals	\$22,276	\$159,993	\$284,082	\$896,549	\$174,821
<b>VETERINARY MEDICINE</b>					
Dean of Veterinary Medicine	\$199,401	\$206,431	\$996,018	\$486,947	\$189,828
Anatomy & Physiology	\$7,747,515	\$2,997,688	\$986,331	\$2,083,780	\$1,729,199
Clinical Sciences	\$1,164,922	\$771,662	\$651,561	\$339,520	\$604,061
Diagnostic Medicine/Pathobiology	\$10,496,241	\$8,910,119	\$8,156,890	\$9,069,125	\$8,272,443
Veterinary Diagnostic Laboratory	\$231,875	\$50,127	\$271,401	\$323,865	\$750,943
Veterinary Medical Teaching Hospital	\$2,000	\$2,000	\$16,950	\$28,034	\$20,028
College Totals	\$19,841,954	\$12,938,027	\$11,079,151	\$12,331,271	\$11,566,502
<b>PRESIDENT</b>					
Beach Art Museum	\$0	\$8,872	\$13,000	\$0	\$0
McCain Auditorium	\$0	\$0	\$0	\$0	\$0
Intercollegiate Athletics - State	\$0	\$0	\$0	\$0	\$433
Vice President for Communications and Marketing	\$0	\$0	\$23,000	\$22,500	\$22,500
Office of the President	\$0	\$5,000,000	\$0	\$0	\$5,000,000
Totals	\$0	\$5,008,872	\$36,000	\$22,500	\$5,022,933
<b>PROVOST</b>					
Office of the Provost	\$1,527	\$341,067	\$162,534	\$133,380	\$222,014
Assessment & Program Review	\$14,421	\$0	\$0	\$0	\$0
Center for Engagement, Community Development	\$101,648	\$264,757	\$33,660	\$416,123	\$183,821
Dean of Global Campus	\$15,871,917	\$9,987,444	\$0	\$0	\$55,200
Dean of the Graduate School	\$579,565	\$320,741	\$0	\$584,955	\$686,726
Enterprise Server Technologies	\$0	\$0	\$0	\$0	\$0
Information Security & Compliance	\$0	\$139,969	\$3,200	\$0	\$0
Information Systems	\$0	\$0	\$0	\$0	\$0
Information Technology Assistance Center	\$0	\$3,850	\$0	\$0	\$0
International Programs	\$0	\$0	\$0	\$48,851	\$0
Kansas Center for Rural Initiatives	\$0	\$0	\$0	\$0	\$0
Library	\$0	\$0	\$0	\$22,169	\$13,279
Network and Telecommunications Services	\$0	\$0	\$0	\$0	\$0
Office of Diversity and Dual Career Dev.	\$0	\$0	\$257,299	\$108,085	\$424,905
Office of Mediated Education	\$0	\$0	\$0	\$0	\$0
Planning and Analysis	\$0	\$0	\$0	\$0	\$0
Regents Educational Communications Ctr.	\$0	\$0	\$0	\$0	\$0
School of Leadership Studies	\$94,847	\$61,048	\$54,080	\$146,248	\$158,000
Vice Provost for Undergraduate Studies	\$0	\$0	\$0	\$0	\$87,620
Totals	\$16,663,925	\$11,118,876	\$510,773	\$1,459,811	\$1,831,565

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
<b>V. P. ADMINISTRATION AND FINANCE</b>					
Vice President for Administration and Finance	\$0	\$0	\$0	\$0	\$0
Budget Office	\$0	\$0	\$0	\$0	\$0
KSU Police Department	\$2,500	\$1,500	\$0	\$19,605	\$9,878
Public Safety	\$0	\$0	\$0	\$0	\$0
Physical Facilities	\$0	\$0	\$0	\$0	\$0
Totals	<u>\$2,500</u>	<u>\$1,500</u>	<u>\$0</u>	<u>\$19,605</u>	<u>\$9,878</u>

<b>V. P. INSTITUTIONAL ADVANCEMENT</b>					
Department of Housing	\$0	\$0	\$0	\$0	\$0
Educational & Personal Development	\$0	\$0	\$0	\$0	\$0
KSU Child Development Center	\$0	\$0	\$0	\$0	\$0
Office of Diversity & Dual Career Dev.	\$0	\$0	\$0	\$0	\$0
University Counseling Services	\$0	\$0	\$0	\$0	\$0
Vice President for Institutional Advancement	\$0	\$0	\$0	\$0	\$0
Totals	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>

<b>VICE PRESIDENT FOR RESEARCH</b>					
Vice President for Research	\$5,180,466	\$237,058	\$152,333	\$10,000	\$1,000,000
Biosecurity Research Institute	\$5,226,382	\$5,033,555	\$499,995	\$599,562	\$113,182
National Agricultural Biosecurity Center	\$1,753,544	\$148,134	\$199,041	\$3,128,243	\$473,694
University Research Compliance Office	\$0	\$0	\$0	\$13,200	\$16,500
Biotechnology Laboratory	\$0	\$0	\$0	\$141,199	\$143,937
Electronics Design Lab	\$334,864	\$616,545	\$192,706	\$669,553	\$320,445
Totals	<u>\$12,495,755</u>	<u>\$6,035,292</u>	<u>\$1,044,075</u>	<u>\$4,561,757</u>	<u>\$2,067,758</u>

<b>V.P. FOR STUDENT LIFE AND DEAN OF STUDENTS</b>					
Office of Vice President for Student Life	\$15,000	\$61,000	\$26,000	\$54,500	\$302,590
Department of Housing	\$0	\$1,000	\$0	\$0	\$0
Educational & Personal Development	\$1,118,279	\$986,068	\$1,267,874	\$772,717	\$1,306,959
KSU Child Development Center	\$586,442	\$137,806	\$480,285	\$862,307	\$145,339
New Student Services	\$0	\$49,940	\$51,351	\$56,351	\$47,650
Office of Diversity & Dual Career Dev.	\$0	\$0	\$0	\$0	\$0
Office of Student Life	\$0	\$0	\$0	\$70,263	\$268,438
University Counseling Services	\$34,333	\$34,000	\$34,713	\$40,321	\$32,826
Totals	<u>\$1,754,054</u>	<u>\$1,269,814</u>	<u>\$1,860,223</u>	<u>\$1,856,459</u>	<u>\$2,103,802</u>

<b>UNIVERSITY TOTALS</b>	<b>\$151,343,528</b>	<b>\$140,523,033</b>	<b>\$137,589,870</b>	<b>\$129,227,432</b>	<b>\$139,316,722</b>
--------------------------	----------------------	----------------------	----------------------	----------------------	----------------------

\*Kinesiology moved to Human Ecology in 2013. Only previously awarded grants continue to be listed in Arts and Sciences.

\*\*Music is now Included with School of Music, Theatre, and Dance.

During FY 2015 a new credit/reporting allocation capture strategy, referred to as "E%" on the Sponsored Project Transmittal Sheet, was developed. The deployment of this more uniform allocation method streamlines and makes it easier for campus units to consistently report collaborative activities, that may not be necessarily reflected in previous year's totals.

# EXTRAMURAL AWARDS

Fiscal Year 2017 Cumulative (July 1, 2016 – June 30, 2017)

## COLLEGE OF AGRICULTURE

### AGRICULTURAL ECONOMICS

**Amanor-Boadu, Vincent R., Featherstone, Allen M., and Ross, Kara**, US Agency for International Development, \$14,392, "Pulse Value Chain Initiative-Zambia (PVCIZ)."

**Amanor-Boadu, Vincent R., Featherstone, Allen M., and Lilja, Nina K.** (International Agricultural Programs), US Agency for International Development, \$66,135, "Strengthening the Capacity of the Department of Agribusiness and Natural Resource Economics (DANRE) in the College of Agricultural and Environmental Sciences (CAES), Makerere University."

**Amanor-Boadu, Vincent R., Ross, Kara, Shanoyan, Aleksan, and Zereyesus, Yacob**, US Department of Agriculture, \$477,624, "METSS Ghana Implementation (Sustaining Growth Through Effective Management and Collaboration)."

**Barkley, Andrew P., Bergtold, Jason S., and Schwab, Benjamin B.**, Association of Public and Land-Grant Universities, \$495, "Innovative Educational Experience Enhancements for Students in Introduction to Agricultural Economics."

**Bergtold, Jason S., Barkley, Andrew P., and Schwab, Benjamin B.**, Association of Public and Land-Grant Universities, \$510, "Innovative Educational Experience Enhancements for Students in Introduction to Agricultural Economics."

**Bergtold, Jason S., and Stamm, Michael J.** (Agronomy), US Department of Agriculture, \$15,000, "Oilseed to Jet-Fuel Economics, Outreach, and Extension."

**Featherstone, Allen M., and Tsoodle, Leah J.**, Kansas Department of Agriculture, "Memorandum of Agreement."

**Featherstone, Allen M., and Tsoodle, Leah J.**, Kansas Department of Revenue, \$314,972, "Modification of Agreement."

**Featherstone, Allen M., Amanor-Boadu, Vincent R., and Ross, Kara**, US Agency for International Development, "Pulse Value Chain Initiative-Zambia (PVCIZ)."

**Featherstone, Allen M., Amanor-Boadu, Vincent R., and Lilja, Nina K.** (International Agricultural Programs), US Agency for International Development, \$68,139, "Strengthening the Capacity of the Department of Agribusiness and Natural Resource Economics (DANRE) in the College of Agricultural and Environmental Sciences (CAES), Makerere University."

**Fox, John "Sean" A., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Ellis, Jason D.** (Communications), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Schroeder, Ted C., Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), **Tonsor, Glynn T., and Zurek, Ludek** (Entomology), US Department of Agriculture, \$460, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Golden, Bill B., and Hutchinson, Stacy L.** (Biological and Agricultural Engineering), City of Wichita, KS, \$2,500, "Agreement for Consulting Services."

**Golden, Bill B., Foster, Anserd J.** (Southwest Area Office), and **Kisekka, Isaya** (Southwest Research Extension Center), Kansas Corn Commission, \$1,477, "Exploring the Value of Plant Analysis to Enhance Water Use Efficiency in Southwest Kansas."

**Golden, Bill B., and Kisekka, Isaya** (Southwest Research Extension Center), Kansas Corn Commission, \$4,993, "Mobile Drip Irrigation for Sustaining Corn Production with Limited Water."

**Golden, Bill B., Kisekka, Isaya** (Southwest Research Extension Center), **Lamm, Freddie R.** (Northwest Research Extension Center), **O'Brien, Daniel M.** (Northwest Area Office), and **Schlegel, Alan J.** (Southwest Research Extension Center), Kansas Grain Sorghum Commission, \$10,200, "Sorghum Yield and Profitability Relative to Water Supply and Irrigation Management."

**Golden, Bill B., and Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), Kansas Water Office, "Monitoring the Impacts of Sheridan County 6 Local Enhanced Management Area."

**Golden, Bill B., and Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), Kansas Water Office, \$14,250, "Monitoring the Impacts of Willis Technology Farms - KWO Contract 16-128."

**Golden, Bill B., Kisekka, Isaya** (Southwest Research Extension Center), **Rice, Charles W.** (Agronomy), **Rogers, Danny H.** (Biological and Agricultural Engineering), and **Sanderson, Matthew R.** (Sociology, Anthropology, and Social Work), US Department of Agriculture, \$147,394, "Sustaining Agriculture through Adaptive Management to Preserve the Ogallala Aquifer under a Changing Climate."

**Golden, Bill B., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$57,446, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Griffin, Terry W., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Lollato, Romulo P.** (Agronomy), **Patrignani, Andres** (Agronomy), **Presley, DeAnn R.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), and **Tomlinson, Peter J.** (Agronomy), American Bakers Association, \$2,500, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Griffin, Terry W., Adee, Eric A.** (Agronomy), **Ciampitti, Ignacio** (Agronomy), **Duncan, Stewart R.** (Northeast Area Office), **Lin, Xiaomao** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$1,499, "The Quest of 100-Bushel Soybean: On-Farm Approach."

**Griffin, Terry W., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Flippo, Daniel** (Biological and Agricultural Engineering), and **Sharda, Ajay** (Biological and Agricultural Engineering), Mahindra & Mahindra Limited, \$11,961, "Testing and Evaluation Services Agreement."

**Hendricks, Nathan P.,** National Wildlife Federation, \$77,000, "Collaboration Agreement."

**Hendricks, Nathan P., and Steward, David R.** (Civil Engineering), US Department of Agriculture, \$324,946, "Mixed Approaches Towards Effective Collective Management of Groundwater Resources."

**Hund, Duane M., Ibendahl, Gregory, and Reid, Roberta M.**, US Department of Agriculture, \$16,388, "Managing Your Farm for Long-Term Success."

**Ibendahl, Gregory, Hund, Duane M., and Reid, Roberta M.**, US Department of Agriculture, \$16,884, "Managing Your Farm for Long-Term Success."

**Ibendahl, Gregory**, US Department of Agriculture, \$369,853, "The Development of an Organic Crop Budgeting Tool to Help Advise Producers."

**Leatherman, John C.**, US Department of Health and Human Services, \$55,862, "Community Assessment and Education to Promote Behavioral Health Planning and Evaluation (CAPE): Curriculum Development and Rollout Workshops 2017."

**Llewelyn, Richard V., Reid, Roberta M., and Taylor, Mykel R.**, US Department of Agriculture, "The Farm Financial Situation in Kansas: Technical Assistance for Producers to Navigate Difficult Times."

**Pendell, Dustin L., Bradford, Barry J.** (Animal Sciences and Industry), **Min, Doohong** (Agronomy), **O'Quinn, Travis G.** (Animal Sciences and Industry), and **Vipham, Jessie** (Dean of Agriculture and Director of AES), US Agency for International Development, \$63,212, "Linking Cattle Nutrition to Human Nutrition: A Value Chain Approach to Improving the Production, Handling, and Consumption of Animal Source Foods in Ethiopia."

**Pendell, Dustin L., Thompson, Jada, and Tonsor, Glynn T.**, US Department of Agriculture, \$41,161, "Evaluation of Biosecurity Incentives: Assessing Feedlot, Dairy, Broiler, Egg Layer and Turkey Producers."

**Pendell, Dustin L.**, US Department of Agriculture, \$49,716, "Workshop on the Economics of Animal Health and Biosecurity."

**Reid, Roberta M., Hund, Duane M., and Ibendahl, Gregory**, US Department of Agriculture, \$16,388, "Managing Your Farm for Long-Term Success."

**Reid, Roberta M., Llewelyn, Richard V., and Taylor, Mykel R.**, US Department of Agriculture, "The Farm Financial Situation in Kansas: Technical Assistance for Producers to Navigate Difficult Times."

**Ross, Kara, Amanor-Boadu, Vincent R., and Featherstone, Allen M.**, US Agency for International Development, "Pulse Value Chain Initiative-Zambia (PVCIZ)."

**Ross, Kara, Amanor-Boadu, Vincent R., Shanoyan, Aleksan, and Zereyesus, Yacob**, US Department of Agriculture, "METSS Ghana Implementation (Sustaining Growth Through Effective Management and Collaboration)."

**Schroeder, Ted C.**, US Department of Agriculture, \$25,000, "Economic Impacts of Food and Drug Administration Veterinary Feed Directive Rules on Beef Cattle Sector."

**Schroeder, Ted C.**, US Department of Agriculture, \$20,000, "External Review of Meat Price Spreads Data Product."

**Schroeder, Ted C., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Ellis, Jason D.** (Communications), **Fox, John "Sean" A., Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), **Tonsor, Glynn T., and Zurek, Ludek** (Entomology), US Department of Agriculture, \$230, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."



**Schwab, Benjamin B., Barkley, Andrew P., and Bergtold, Jason S.**, Association of Public and Land-Grant Universities, \$495, "Innovative Educational Experience Enhancements for Students in Introduction to Agricultural Economics."

**Schwab, Benjamin B., and Campabadal Teran, Carlos** (Grain Science and Industry), US Agency for International Development, \$18,070, "Appropriate-Scale Mechanization Consortium for Sustainable Intensification."

**Shanoyan, Aleksan, Amanor-Boadu, Vincent R., Ross, Kara, and Zereyesus, Yacob**, US Department of Agriculture, "METSS Ghana Implementation (Sustaining Growth Through Effective Management and Collaboration)."

**Taylor, Mykel R.**, US Department of Agriculture, \$250,000, "Enhancing Enrollment of Leased Land in Agri-environmental Programs: An Investigation of the Conservation Stewardship Program in Kansas."

**Taylor, Mykel R., Llewelyn, Richard V., and Reid, Roberta M.**, US Department of Agriculture, \$35,000, "The Farm Financial Situation in Kansas: Technical Assistance for Producers to Navigate Difficult Times."

**Thompson, Jada, Pendell, Dustin L., and Tonsor, Glynn T.**, US Department of Agriculture, \$41,161, "Evaluation of Biosecurity Incentives: Assessing Feedlot, Dairy, Broiler, Egg Layer and Turkey Producers."

**Tonsor, Glynn T.**, US Department of Agriculture, \$134,544, "A Human Behavioral Approach to Reducing the Impact of Livestock Pest or Disease Incursions of Socio-economic Importance."

**Tonsor, Glynn T., Pendell, Dustin L., and Thompson, Jada**, US Department of Agriculture, \$20,581, "Evaluation of Biosecurity Incentives: Assessing Feedlot, Dairy, Broiler, Egg Layer and Turkey Producers."

**Tonsor, Glynn T., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Ellis, Jason D.** (Communications), **Fox, John "Sean" A., Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Schroeder, Ted C., Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$460, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Tsoodle, Leah J., and Featherstone, Allen M.**, Kansas Department of Agriculture, \$76,126, "Memorandum of Agreement."

**Tsoodle, Leah J., and Featherstone, Allen M.**, Kansas Department of Revenue, "Modification of Agreement."

**Villoria, Nelson**, National Science Foundation, \$29,675, "CIF21 DIBBs: Integrating Geospatial Capabilities into HUBzero."

**Williams, Jeffery R., Kluitenberg, Gerard J.** (Agronomy), **Nelson, Nathan O.** (Agronomy), **Roozeboom, Kraig L.** (Agronomy), and **Tomlinson, Peter J.** (Agronomy), Kansas Corn Commission, \$500, "Cover Crops and Phosphorus Management to Protect Water Quality in Corn-Soybean Rotations."

**Yu, Jisang, Harvey, Jagger J.** (Dean of Agriculture and Director of AES), and **Leslie, John F.** (Plant Pathology), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss (Nepal Buy-In)."

**Zereyesus, Yacob, Amanor-Boadu, Vincent R., Ross, Kara, and Shanoyan, Aleksan**, US Department of Agriculture, "METSS Ghana Implementation (Sustaining Growth Through Effective Management and Collaboration)."

## **AGRICULTURAL EXPERIMENT STATION**

**Minton, J. Ernest**, Kansas Department of Agriculture, \$200,000, "Task Order - Collaborative Sorghum Investment Program."

**Minton, J. Ernest**, and **Pierzynski, Gary M.** (Agronomy), National Ecological Observatory Network, Inc., "Ecological Observation and Access Agreement."

**Minton, J. Ernest**, United Sorghum Checkoff Program, \$200,000, "Center for Sorghum Checkoff Program Agreement."

## **AGRICULTURAL RESEARCH CENTER-HAYS**

**Gillen, Robert L.**, Support Funds, \$17,000, "AHY Support Funds Research 36."

**Gillen, Robert L.**, Support Funds, \$5,000, "AHY Support Funds Research 37."

**Gillen, Robert L.**, US Department of Agriculture, \$45,000, "Acquisition of Goods and Services."

**Harmony, Keith R.**, **Fick, Walter H.** (Agronomy), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$7,891, "Educating Kansas Livestock Producers about Drought Risk Management Strategies and Tools."

**Jaeger, John R.**, **Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.**, **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$4,787, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Obour, Augustine K.**, **Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.**, **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$38,297, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Perumal, Ramasamy**, **Aiken, Robert M.** (Northwest Research Extension Center), and **Little, Christopher R.** (Plant Pathology), Kansas Grain Sorghum Commission, \$79,200, "Development of Sorghum Germplasm with Enhanced Drought Tolerance and Higher Grain Yield."

**Perumal, Ramasamy**, **Little, Christopher R.** (Plant Pathology), and **Tesso, Tesfaye** (Agronomy), Kansas Grain Sorghum Commission, \$4,264, "Germplasm Screening, Host-Plant Interactions, and Inoculation Techniques for Sorghum Stalk Rot Diseases in Kansas."

**Perumal, Ramasamy**, and **Morris, Geoffrey** (Agronomy), Kansas Grain Sorghum Commission, \$15,800, "Improved Genomic Mapping and Marker-Assisted Selection for Cold Tolerance in Grain Sorghum."

**Perumal, Ramasamy, Morris, Geoffrey** (Agronomy), **Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), **SV, Krishna J.** (Agronomy), and **Tesso, Tesfaye** (Agronomy), Kansas Grain Sorghum Commission, \$5,500, "Physiological and Genetic Characterization of Grain Sorghum for Enhancing Terminal Heat and Drought Stress Resilience."

**Perumal, Ramasamy**, US Department of Agriculture, \$30,000, "Development and Characterization of Sorghum with Improved End-Use Quality."

**Zhang, Guorong**, Brewers Association, \$10,000, "Building a Winter Malting Barley Market for the Great Plains."

**Zhang, Guorong, Fritz, Allan K.** (Agronomy), and **Poland, Jesse A.** (Plant Pathology), Kansas Wheat Alliance, Inc., \$9,000, "Applying Genomic Selection in KSU Wheat Breeding Programs."

**Zhang, Guorong, Aiken, Robert M.** (Northwest Research Extension Center), **Fritz, Allan K.** (Agronomy), and **SV, Krishna J.** (Agronomy), Kansas Wheat Alliance, Inc., \$840, "New Selection Strategies for Drought-Tolerant Wheat."

**Zhang, Guorong**, Kansas Wheat Commission, \$138,000, "Development of New Hard Red and Hard White Winter Wheat Varieties with Improved Levels of Disease Resistance for Western Kansas."

**Zhang, Guorong, DeWolf, Erick D.** (Plant Pathology), **Friebe, Bernd** (Plant Pathology), **Fritz, Allan K.** (Agronomy), and **Gill, Bikram S.** (Plant Pathology), Kansas Wheat Commission, \$3,000, "Disease Phenotyping: Determining the Reaction of Wheat Lines to Important Diseases."

**Zhang, Guorong**, Kansas Wheat Commission, \$65,000, "Genetic Improvement for Hard White Wheat."

**Zhang, Guorong**, Kansas Wheat Commission, \$65,000, "Genetic Improvement for Hard White Wheat."

**Zhang, Guorong**, Kansas Wheat Commission, \$43,000, "Pyramiding Wheat Streak Mosaic Virus Resistance Genes and Development of high Temperature Resistance."

**Zhang, Guorong**, US Department of Agriculture, \$42,682, "Validation, Characterization and Deployment of QTL for Grain Yield Components in Wheat - AG Research Center - Hays."

## **AGRONOMY**

**Adee, Eric A.**, and **Little, Christopher R.** (Plant Pathology), Kansas Soybean Commission, \$5,670, "SDS: Resistance Screening, ILeVO Treatment, Survival on Corn Residue, and Pathogen Variability."

**Adee, Eric A.**, **Ciampitti, Ignacio**, **Duncan, Stewart R.** (Northeast Area Office), **Griffin, Terry W.** (Agricultural Economics), **Lin, Xiaomao**, and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$1,499, "The Quest of 100-Bushel Soybean: On-Farm Approach."

**Adee, Eric A.**, Support Funds, \$157,030, "AGR Support Funds Experiment Field 26."

**Alvarez Santos, Eduardo**, **Lollato, Romulo P.**, and **Ruiz Diaz Suarez, Dorivar A.**, Koch Agronomic Services, LLC, \$14,100, "Evaluation of Urea N Fertilizer Volatilization from Topdressing Wheat under Cold Weather Conditions."

**Asebedo, Antonio R.**, **Lollato, Romulo P.**, and **Poland, Jesse A.** (Plant Pathology), Kansas Wheat Alliance, Inc., \$27,143, "Developing Massive-parallel Phenotyping Systems for Winter Wheat."

**Asebedo, Antonio R.**, VariMax, LLC, \$75,000, "Developing Automated Processing Systems for Satellite Based Nitrogen Recommendation Algorithms."

**Assefa Mulisa, Yared, Ciampitti, Ignacio, Johnson, Wendy** (Entomology), and **McCornack, Brian P.** (Entomology), Kansas Corn Commission, \$4,453, "Corn Management Decision Guiding Website and Mobile App."

**Bheemanahallirangappa, Raju, Schapaugh Jr, William T., and SV, Krishna J.**, Kansas Soybean Commission, \$14,000, "High-throughput Platform to Enhance Quality of Beans and Add Value to Kansas Soybean Breeding Program."

**Ciampitti, Ignacio**, John Deere World Headquarters, \$24,600, "Canola Yields as Affected by Management, Environment, and Genotype Factors: A Review-Analysis."

**Ciampitti, Ignacio**, John Deere World Headquarters, \$68,840, "Precise Planting, Seed Singulation, Versus Conventional Seeding for Wheat."

**Ciampitti, Ignacio**, and **McCornack, Brian P.** (Entomology), Kansas Corn Commission, \$22,500, "Beyond the Summer Science Institute - Using Corn in the Curriculum to Advance Inquiry-based Learning."

**Ciampitti, Ignacio, Assefa Mulisa, Yared, Johnson, Wendy** (Entomology), and **McCornack, Brian P.** (Entomology), Kansas Corn Commission, \$53,430, "Corn Management Decision Guiding Website and Mobile App."

**Ciampitti, Ignacio**, Kansas Corn Commission, \$64,218, "Extension and Applied Research Programs for Kansas Corn Production."

**Ciampitti, Ignacio, Rice, Charles W., and Ruiz Diaz Suarez, Dorivar A.**, Kansas Corn Commission, \$9,991, "Soil Health Partnership: Kansas."

**Ciampitti, Ignacio, Ruiz Diaz Suarez, Dorivar A., and Thompson, Curtis R.**, Kansas Grain Sorghum Commission, \$12,541, "Sorghum Production Schools for Kansas."

**Ciampitti, Ignacio, Duncan, Stewart R.** (Northeast Area Office), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$4,258, "2017 K-State Soybean Production Schools for Kansas."

**Ciampitti, Ignacio, Duncan, Stewart R.** (Northeast Area Office), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$8,918, "2018 K-State Soybean Production Schools for Kansas."

**Ciampitti, Ignacio, Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$13,200, "Improving Soybean Yield in the Double Crop Soybean System."

**Ciampitti, Ignacio**, and **Patrignani, Andres**, Kansas Soybean Commission, \$3,018, "New Technology for Long-Known Challenges: Better Characterizing Soil Moisture Spatial Variability of Soybean-Dominated Landscape Using COSMOS."

**Ciampitti, Ignacio, Adee, Eric A., Duncan, Stewart R.** (Northeast Area Office), **Griffin, Terry W.** (Agricultural Economics), **Lin, Xiaomao**, and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$22,479, "The Quest of 100-Bushel Soybean: On-Farm Approach."

**Ciampitti, Ignacio**, Monsanto Company, \$50,000, "STEM Fellowship for Santiago Damagno 85865760- STEM 16."

**Ciampitti, Ignacio**, North Central Soybean Research Program, \$30,871, "Benchmarking Soybean Production Systems in the North Central USA."

**Ciampitti, Ignacio, and Foster, Anserd J.** (Southwest Area Office), Tessengerlo Kerley, \$756, "Effect of Sulfur Fertilization on Corn and Canola Production in Southwest Kansas."

**Ciampitti, Ignacio, Alavi, Sajid** (Grain Science and Industry), **Campabadal Teran, Carlos** (Grain Science and Industry), **O'Neil III, Howard J.** (Grain Science and Industry), and **Paulk, Chad B.** (Grain Science and Industry), US Soybean Export Council, Inc., \$3,610, "USSEC Addendum to Independent Contractor Master Agreement 17KA02U34A."

**Cramer, Gary L.**, Dow AgroSciences, LLC, \$6,750, "2015 University Cooperator Agreement for Enlist Corn and Enlist Soybean - Protocol NA15P2E002 for Enlist Corn Weed Control Programs PRE fb V4 Post with Residualin COI Trials."

**Cramer, Gary L., Fritz, Allan K., and Lollato, Romulo P.**, Kansas Wheat Alliance, Inc., "Keeping up with Breeding: Improved Management Recommendations at Time of Wheat Variety Release."

**Cramer, Gary L., Lollato, Romulo P., and Ruiz Diaz Suarez, Dorivar A.**, Kansas Wheat Commission, \$2,973, "Kansas Yield-Enhancing Strategies (KYES): II. Variety by Management Interactions."

**Dille, Johanna A., Hay, Marshall M., Peterson, Dallas E., Roozeboom, Kraig L., and Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$3,085, "Control of Pigweed with an Integrated Systems Approach in Soybean."

**Esser, Andrew R., and Pierzynski, Gary M.**, Agrinos, Inc., \$5,250, "Contract for Experimentation Services 2017-02."

**Fick, Walter H., Harmoney, Keith R.** (Agricultural Research Center-Hays), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$5,261, "Educating Kansas Livestock Producers about Drought Risk Management Strategies and Tools."

**Fritz, Allan K., Poland, Jesse A.** (Plant Pathology), and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Alliance, Inc., \$9,000, "Applying Genomic Selection in KSU Wheat Breeding Programs."

**Fritz, Allan K.**, Kansas Wheat Alliance, Inc., \$50,000, "Germplasm Development using Wild Relatives of Wheat."

**Fritz, Allan K.**, Kansas Wheat Alliance, Inc., \$49,155, "Implementation of Advanced Breeding Technologies."

**Fritz, Allan K., Cramer, Gary L., and Lollato, Romulo P.**, Kansas Wheat Alliance, Inc., "Keeping up with Breeding: Improved Management Recommendations at Time of Wheat Variety Release."

**Fritz, Allan K., Aiken, Robert M.** (Northwest Research Extension Center), **SV, Krishna J., and Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Alliance, Inc., \$13,104, "New Selection Strategies for Drought-Tolerant Wheat."

**Fritz, Allan K., Fellers, John P.** (Plant Pathology), and **Trick, Harold N.** (Plant Pathology), Kansas Wheat Commission, \$10,000, "Biotech Approaches for Trait Enhancement in Wheat."

**Fritz, Allan K., DeWolf, Erick D.** (Plant Pathology), **Friebe, Bernd** (Plant Pathology), **Gill, Bikram S.** (Plant Pathology), and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Commission, \$3,000, "Disease Phenotyping: Determining the Reaction of Wheat Lines to Important Diseases."

**Fritz, Allan K.**, Kansas Wheat Commission, \$50,000, "Implementation of Advanced Breeding Technologies."

**Fritz, Allan K.**, Kansas Wheat Commission, \$260,450, "Improvement of Hard Winter Wheat for Kansas."

**Fritz, Allan K., Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), and **SV, Krishna J.**, Kansas Wheat Commission, "Strategies to Develop Wheat Genotypes to Beat Post-Flowering Heat and Drought Stress."

**Fritz, Allan K., Lollato, Romulo P., and Ruiz Diaz Suarez, Dorivar A.**, Kansas Wheat Commission, \$2,111, "Wheat Nutrient Uptake and Partitioning as Affected by Era of Variety Release and Balanced Nutrition."

**Fritz, Allan K., Akhunov, Eduard D.** (Plant Pathology), and **Akhunova, Alina** (Plant Biotechnology Center), Kansas Wheat Commission, "Whole Exome Re-Sequencing of Grass Species for Wheat Breeding in Kansas."

**Fritz, Allan K., Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), and **SV, Krishna J.**, US Agency for International Development, \$17,885, "Development and Enhancing Heat Tolerance in Wheat Using Genomics, Molecular and Physiological Tools."

**Fritz, Allan K., Akhunov, Eduard D.** (Plant Pathology), and **Poland, Jesse A.** (Plant Pathology), US Department of Agriculture, \$196,000, "An Integrated Omics Approach to Accelerating Wheat Quality Improvement."

**Fritz, Allan K.**, US Department of Agriculture, \$24,272, "Multiple Rust-Resistant Wheat - Kansas State University."

**Hay, Marshall M., Dille, Johanna A., Peterson, Dallas E., Roozeboom, Kraig L., and Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$21,596, "Control of Pigweed with an Integrated Systems Approach in Soybean."

**Hettiarachchi, Ganga M., Davis, Lawrence C.** (Biochemistry), **Erickson, Larry E.** (Center for Hazardous Substance Research), and **Roozeboom, Kraig L.**, North Atlantic Treaty Organization (NATO), \$4,301 (includes \$1,993 from In-Kind Contribution - Erickson Salary), "New Phytotechnology for Cleaning Contaminated Military Sites."

**Jugulam, Mithila, and Thompson, Curtis R.**, Kansas Grain Sorghum Commission, \$38,000, "Efficacy of Atrazine, Huskie, and Dicamba on Palmer Amaranth under Temperature Stress."

**Jugulam, Mithila, Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), and **Thompson, Curtis R.**, Kansas Grain Sorghum Commission, \$30,000, "Evaluation of Sorghum Germplasm for Herbicide Tolerance."

**Jugulam, Mithila, Pagadala, P. V. Vara, and Thompson, Curtis R.**, United Sorghum Checkoff Program, \$30,000, "Evaluation of Sorghum Germplasm for Herbicide Tolerance."

**Kluitenberg, Gerard J.**, Binational Agricultural Research and Development Fund (BARD), \$33,000, "Development of Heat-Pulse Sensors for Measuring Fluxes of Water and Solutes Under the Root Zone."

**Kluitenberg, Gerard J., Nelson, Nathan O., Roozeboom, Kraig L., Tomlinson, Peter J., and Williams, Jeffery R.** (Agricultural Economics), Kansas Corn Commission, \$1,000, "Cover Crops and Phosphorus Management to Protect Water Quality in Corn-Soybean Rotations."

**Kluitenberg, Gerard J., Nelson, Nathan O., Roozeboom, Kraig L., and Tomlinson, Peter J.**, Kansas Soybean Commission, "Cover Crops and Phosphorus Management to Protect Water Quality in Soybean Rotation."

**Kluitenberg, Gerard J., Nelson, Nathan O., Presley, DeAnn R., and Tomlinson, Peter J.**, US Department of Agriculture, \$46,860, "Protecting Surface Water with Healthy Soils and Cover Crops."

**Knapp, Mary C., DeWolf, Erick D.** (Plant Pathology), **Lollato, Romulo P., and Redmond, Christopher A.**, Kansas Wheat Commission, \$1,000, "Extension Resources for Kansas Wheat Procedures."

**Lin, Xiaomao, Adee, Eric A., Ciampitti, Ignacio, Duncan, Stewart R.** (Northeast Area Office), **Griffin, Terry W.** (Agricultural Economics), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$1,499, "The Quest of 100-Bushel Soybean: On-Farm Approach."

**Lin, Xiaomao**, National Oceanic and Atmosphere Administration, \$135,625, "Weather Data Library Data Sets."

**Lin, Xiaomao, Aiken, Robert M.** (Northwest Research Extension Center), **Pierzynski, Gary M., Presley, DeAnn R., Roozeboom, Kraig L., and Zambreski, Zachary T.**, US Department of Agriculture, \$2,156, "Adjusting Agricultural Practices in Response to Climate Change - Climate Resilient Agriculture."

**Lin, Xiaomao**, US Department of Agriculture, \$30,832, "Asia and Latin America: Climate Smart Agriculture - Borlaug Fellowship Program."

**Lin, Xiaomao**, US Department of Agriculture, \$50,000, "Modeling Methane Footprints and Emissions in the Southern Great Plains."

**Lin, Xiaomao, Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$28,723, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Lollato, Romulo P., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Griffin, Terry W.** (Agricultural Economics), **Patrignani, Andres, Presley, DeAnn R., Ruiz Diaz Suarez, Dorivar A., and Tomlinson, Peter J.**, American Bakers Association, \$20,000, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Lollato, Romulo P., Asebedo, Antonio R., and Poland, Jesse A.** (Plant Pathology), Kansas Wheat Alliance, Inc., \$5,816, "Developing Massive-parallel Phenotyping Systems for Winter Wheat."

**Lollato, Romulo P., Cramer, Gary L., and Fritz, Allan K.**, Kansas Wheat Alliance, Inc., \$9,000, "Keeping up with Breeding: Improved Management Recommendations at Time of Wheat Variety Release."

**Lollato, Romulo P., Duncan, Stewart R.** (Northeast Area Office), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Wheat Alliance, Inc., \$15,500, "K-State Wheat Demonstration Plots: Enhanced Uniformity for Improved Outreach."

**Lollato, Romulo P., DeWolf, Erick D.** (Plant Pathology), **Knapp, Mary C., and Redmond, Christopher A.**, Kansas Wheat Commission, \$4,000, "Extension Resources for Kansas Wheat Procedures."

**Lollato, Romulo P., Cramer, Gary L., and Ruiz Diaz Suarez, Dorivar A.**, Kansas Wheat Commission, \$38,644, "Kansas Yield-Enhancing Strategies (KYES): II. Variety by Management Interactions."

**Lollato, Romulo P., Fritz, Allan K., and Ruiz Diaz Suarez, Dorivar A.**, Kansas Wheat Commission, \$38,003, "Wheat Nutrient Uptake and Partitioning as Affected by Era of Variety Release and Balanced Nutrition."

**Lollato, Romulo P., Alvarez Santos, Eduardo, and Ruiz Diaz Suarez, Dorivar A.**, Koch Agronomic Services, LLC, \$7,050, "Evaluation of Urea N Fertilizer Volatilization from Topdressing Wheat under Cold Weather Conditions."

**Lollato, Romulo P.**, Monsanto Company, \$19,000, "Service Order No. 47."

**Lollato, Romulo P.**, National Crop Insurance Services, \$10,000, "NCIS Gift."

**Lollato, Romulo P.**, Taminco, Inc., \$54,000, "KSU - Adjust (Plant Growth Regulator) Efficacy Testing - 2017 Season."

**Min, Doohong, Bradford, Barry J.** (Animal Sciences and Industry), **O'Quinn, Travis G.** (Animal Sciences and Industry), **Pendell, Dustin L.** (Agricultural Economics), and **Vipham, Jessie** (Dean of Agriculture and Director of AES), US Agency for International Development, \$31,606, "Linking Cattle Nutrition to Human Nutrition: A Value Chain Approach to Improving the Production, Handling, and Consumption of Animal Source Foods in Ethiopia."

**Min, Doohong**, US Department of Agriculture, \$73,806, "The Silent Decline in Soil Potassium Levels and its Effects on Alfalfa Productivity in the Central and Western US."

**Morris, Geoffrey**, Bill and Melinda Gates Foundation, \$94,184, "Sorghum Genomics Toolbox: TERRA Partnership."

**Morris, Geoffrey**, and **Perumal, Ramasamy** (Agricultural Research Center-Hays), Kansas Grain Sorghum Commission, \$63,200, "Improved Genomic Mapping and Marker-Assisted Selection for Cold Tolerance in Grain Sorghum."

**Morris, Geoffrey, Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), **Perumal, Ramasamy** (Agricultural Research Center-Hays), **SV, Krishna J.**, and **Tesso, Tesfaye**, Kansas Grain Sorghum Commission, \$13,750, "Physiological and Genetic Characterization of Grain Sorghum for Enhancing Terminal Heat and Drought Stress Resilience."

**Morris, Geoffrey**, US Department of Agriculture, \$30,000, "Genotyping of Sorghum for Grain Quality Traits."

**Morris, Geoffrey**, US Department of Agriculture, \$38,429, "Improving Cold Tolerance in Sorghum: A Promising Feedstock for Biofuels and Biobased Products in the Northern Great Plains."

**Morris, Geoffrey**, and **Poland, Jesse A.** (Plant Pathology), US Department of Energy, \$195,652, "A Reference Phenotyping System for Energy Sorghum."

**Nelson, Nathan O.**, Kansas Center for Sustainable Agriculture and Alternative Crops, \$20,000, "CIG Match Funds."

**Nelson, Nathan O., Kluitenberg, Gerard J., Roozeboom, Kraig L., Tomlinson, Peter J., and Williams, Jeffery R.** (Agricultural Economics), Kansas Corn Commission, \$6,000, "Cover Crops and Phosphorus Management to Protect Water Quality in Corn-Soybean Rotations."

**Nelson, Nathan O., Kluitenberg, Gerard J., Roozeboom, Kraig L., and Tomlinson, Peter J.**, Kansas Soybean Commission, \$5,000, "Cover Crops and Phosphorus Management to Protect Water Quality in Soybean Rotation."

**Nelson, Nathan O., Kluitenberg, Gerard J., Presley, DeAnn R., and Tomlinson, Peter J.**, US Department of Agriculture, \$234,300, "Protecting Surface Water with Healthy Soils and Cover Crops."

**Pagadala, P. V. Vara, Jugulam, Mithila, and Thompson, Curtis R.**, United Sorghum Checkoff Program, "Evaluation of Sorghum Germplasm for Herbicide Tolerance."

**Patrignani, Andres, Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Griffin, Terry W.** (Agricultural Economics), **Lollato, Romulo P., Presley, DeAnn R., Ruiz Diaz Suarez, Dorivar A.**, and



**Tomlinson, Peter J.**, American Bakers Association, \$5,000, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Patrignani, Andres**, and **Ciampitti, Ignacio**, Kansas Soybean Commission, \$27,162, "New Technology for Long-Known Challenges: Better Characterizing Soil Moisture Spatial Variability of Soybean-Dominated Landscape Using COSMOS."

**Peterson, Dallas E., Dille, Johanna A., Hay, Marshall M., Roozeboom, Kraig L., and Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$3,085, "Control of Pigweed with an Integrated Systems Approach in Soybean."

**Peterson, Dallas E.**, Monsanto Company, \$7,344, "Service Order No. 46."

**Peterson, Dallas E.**, Monsanto Company, \$41,040, "Service Order No. 48."

**Peterson, Dallas E.**, Monsanto Company, \$8,400, "Service Order No. 49."

**Peterson, Dallas E.**, Syngenta Seeds, Inc., \$13,000, "Sixth Amendment of the University Research Services Agreement."

**Peterson, Dallas E.**, United Soybean Board, \$25,000, "Glyphosate Resistant Weed Project in Kansas."

**Peterson, Dallas E., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Thompson, Curtis R., Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Pierzynski, Gary M., and Esser, Andrew R.**, Agrinos, Inc., \$5,250, "Contract for Experimentation Services 2017-02."

**Pierzynski, Gary M., Middendorf, B. Jan** (Dean of Agriculture and Director of AES), **Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), and **Stewart, Zachary P.** (Dean of Agriculture and Director of AES), International Fertilizer Development Center, \$40,000, "Sustainable Soil Fertility Prioritization in Sub-Saharan Africa."

**Pierzynski, Gary M.**, International Plant Nutrition Institute, \$68,000, "International Plant Nutrition Institute (Ciampitti)."

**Pierzynski, Gary M., and Minton, J. Ernest** (Agricultural Experiment Station), National Ecological Observatory Network, Inc., \$79,785, "Ecological Observation and Access Agreement."

**Pierzynski, Gary M.**, Support Funds, \$36,500, "Fluid Fertilizer Foundation."

**Pierzynski, Gary M., Lilja, Nina K.** (International Agricultural Programs), and **Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), US Agency for International Development, "Innovation Lab on Sustainable Intensification."

**Pierzynski, Gary M., Aiken, Robert M.** (Northwest Research Extension Center), **Lin, Xiaomao, Presley, DeAnn R., Roozeboom, Kraig L., and Zambreski, Zachary T.**, US Department of Agriculture, \$647, "Adjusting Agricultural Practices in Response to Climate Change - Climate Resilient Agriculture."

**Pierzynski, Gary M.**, US Department of Agriculture, \$160,000, "Development of DNA Markers for Resistance to Wheat Diseases."

**Presley, DeAnn R., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Griffin, Terry W.** (Agricultural Economics), **Lollato, Romulo P., Patrignani, Andres, Ruiz Diaz Suarez, Dorivar A., and Tomlinson, Peter J.**, American Bakers Association, \$5,000, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Presley, DeAnn R.**, Kansas Department of Health and Environment, \$13,333, "KSU Agronomy Compost Site Development and Operation and Compost Operator Educational and Technical Assistance."

**Presley, DeAnn R., Aiken, Robert M.** (Northwest Research Extension Center), **Lin, Xiaomao, Pierzynski, Gary M., Roozeboom, Kraig L., and Zambreski, Zachary T.**, US Department of Agriculture, \$647, "Adjusting Agricultural Practices in Response to Climate Change - Climate Resilient Agriculture."

**Presley, DeAnn R.**, US Department of Agriculture, \$25,000, "Implementing Sustainable Landscape Designs for Great Plains Bioenergy Supply Systems."

**Presley, DeAnn R., Kluitenberg, Gerard J., Nelson, Nathan O., and Tomlinson, Peter J.**, US Department of Agriculture, \$70,290, "Protecting Surface Water with Healthy Soils and Cover Crops."

**Presley, DeAnn R., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Rice, Charles W., Ruiz Diaz Suarez, Dorivar A., Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi, Tomlinson, Peter J., and Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Redmond, Christopher A., DeWolf, Erick D.** (Plant Pathology), **Knapp, Mary C., and Lollato, Romulo P.**, Kansas Wheat Commission, \$1,000, "Extension Resources for Kansas Wheat Procedures."

**Rice, Charles W., Haag, Lucas A.** (Northwest Area Office), **Ruiz Diaz Suarez, Dorivar A., Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Corn Commission, \$2,250, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Corn in Kansas."

**Rice, Charles W., Ciampitti, Ignacio, and Ruiz Diaz Suarez, Dorivar A.**, Kansas Corn Commission, \$23,977, "Soil Health Partnership: Kansas."

**Rice, Charles W., Ruiz Diaz Suarez, Dorivar A., Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$7,386, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Soybean in Kansas."

**Rice, Charles W.**, Kansas State University Foundation, \$40,000, "Mary L. Vanier Endowed Professorship."

**Rice, Charles W.**, Monsanto Company, \$186,000, "Soil Carbon Permanence MOA."

**Rice, Charles W.**, TomKat Foundation, \$10,000, "A White Paper on the Science and Practice of Soil Organic Carbon Measurement."

**Rice, Charles W.**, US Agency for International Development, \$168,656, "BHEARD - GHANA PhD (Edwin Akley)."

**Rice, Charles W., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R., Ruiz Diaz Suarez, Dorivar A., Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi, Tomlinson, Peter J., and Waggoner,**

**Justin** (Southwest Area Office), US Department of Agriculture, \$832,921, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Rice, Charles W., Golden, Bill B.** (Agricultural Economics), **Kisekka, Isaya** (Southwest Research Extension Center), **Rogers, Danny H.** (Biological and Agricultural Engineering), and **Sanderson, Matthew R.** (Sociology, Anthropology, and Social Work), US Department of Agriculture, \$386,031, "Sustaining Agriculture through Adaptive Management to Preserve the Ogallala Aquifer under a Changing Climate."

**Roozeboom, Kraig L., Ruiz Diaz Suarez, Dorivar A., and Tomlinson, Peter J.**, Agronomic Science Foundation, \$39,900, "Influence of Cover Crops on Nitrous Oxide Dynamics and Nutrient Stratification in an Established No-Till Wheat-Sorghum-Soybean Cropping System."

**Roozeboom, Kraig L., Kluitenberg, Gerard J., Nelson, Nathan O., Tomlinson, Peter J., and Williams, Jeffery R.** (Agricultural Economics), Kansas Corn Commission, \$2,000, "Cover Crops and Phosphorus Management to Protect Water Quality in Corn-Soybean Rotations."

**Roozeboom, Kraig L., Little, Christopher R.** (Plant Pathology), **SV, Krishna J., and Tesso, Tesfaye**, Kansas Grain Sorghum Commission, \$4,885, "Breeding Sorghum for Improved Dryland Productivity and Utilization."

**Roozeboom, Kraig L., Dille, Johanna A., Hay, Marshall M., Peterson, Dallas E., and Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$1,543, "Control of Pigweed with an Integrated Systems Approach in Soybean."

**Roozeboom, Kraig L., Kluitenberg, Gerard J., Nelson, Nathan O., and Tomlinson, Peter J.**, Kansas Soybean Commission, "Cover Crops and Phosphorus Management to Protect Water Quality in Soybean Rotation."

**Roozeboom, Kraig L., Little, Christopher R.** (Plant Pathology), **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$6,759, "Soybean Production Systems to Control Charcoal Rot and Other Soil-borne Diseases."

**Roozeboom, Kraig L.**, National Crop Insurance Services, \$30,000, "Unrestricted Gift."

**Roozeboom, Kraig L., Davis, Lawrence C.** (Biochemistry), **Erickson, Larry E.** (Center for Hazardous Substance Research), and **Hettiarachchi, Ganga M.**, North Atlantic Treaty Organization (NATO), \$4,301 (includes \$1,993 from In-Kind Contribution - Erickson Salary), "New Phytotechnology for Cleaning Contaminated Military Sites."

**Roozeboom, Kraig L., Aiken, Robert M.** (Northwest Research Extension Center), **Lin, Xiaomao, Pierzynski, Gary M., Presley, DeAnn R., and Zambreski, Zachary T.**, US Department of Agriculture, \$647, "Adjusting Agricultural Practices in Response to Climate Change - Climate Resilient Agriculture."

**Ruiz Diaz Suarez, Dorivar A., Roozeboom, Kraig L., and Tomlinson, Peter J.**, Agronomic Science Foundation, "Influence of Cover Crops on Nitrous Oxide Dynamics and Nutrient Stratification in an Established No-Till Wheat-Sorghum-Soybean Cropping System."

**Ruiz Diaz Suarez, Dorivar A., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Griffin, Terry W.** (Agricultural Economics), **Lollato, Romulo P., Patrignani, Andres, Presley, DeAnn R., and Tomlinson, Peter J.**, American Bakers Association, \$5,000, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Ruiz Diaz Suarez, Dorivar A., Haag, Lucas A.** (Northwest Area Office), **Rice, Charles W., Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Corn Commission, \$13,500, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Corn in Kansas."

**Ruiz Diaz Suarez, Dorivar A., Ciampitti, Ignacio, and Rice, Charles W.**, Kansas Corn Commission, \$5,994, "Soil Health Partnership: Kansas."

**Ruiz Diaz Suarez, Dorivar A., Ciampitti, Ignacio, and Thompson, Curtis R.**, Kansas Grain Sorghum Commission, "Sorghum Production Schools for Kansas."

**Ruiz Diaz Suarez, Dorivar A., Rice, Charles W., Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$14,773, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Soybean in Kansas."

**Ruiz Diaz Suarez, Dorivar A., Cramer, Gary L., and Lollato, Romulo P.**, Kansas Wheat Commission, \$2,973, "Kansas Yield-Enhancing Strategies (KYES): II. Variety by Management Interactions."

**Ruiz Diaz Suarez, Dorivar A., Fritz, Allan K., and Lollato, Romulo P.**, Kansas Wheat Commission, \$2,111, "Wheat Nutrient Uptake and Partitioning as Affected by Era of Variety Release and Balanced Nutrition."

**Ruiz Diaz Suarez, Dorivar A.**, Koch Agronomic Services, LLC, \$8,443, "Evaluation of Experimental Urease Inhibitors in Corn."

**Ruiz Diaz Suarez, Dorivar A., Alvarez Santos, Eduardo, and Lollato, Romulo P.**, Koch Agronomic Services, LLC, \$7,050, "Evaluation of Urea N Fertilizer Volatilization from Topdressing Wheat under Cold Weather Conditions."

**Ruiz Diaz Suarez, Dorivar A.**, US Department of Agriculture, \$8,800, "Acquisition of Goods and Services."

**Ruiz Diaz Suarez, Dorivar A., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R., Rice, Charles W., Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi, Tomlinson, Peter J., and Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Schapaugh Jr, William T., McCornack, Brian P.** (Entomology), **Smith, C. Michael** (Entomology), and **Whitworth, Robert "Jeff" J.** (Entomology), Kansas Soybean Commission, \$16,678, "Development of Genetic, Chemical and Population-Based Tactics to Manage Key Kansas Soybean Insect Pests."

**Schapaugh Jr, William T., Todd, Timothy C.** (Plant Pathology), and **Trick, Harold N.** (Plant Pathology), Kansas Soybean Commission, \$3,758, "Enhancement of Soybean Through Genetic Engineering."

**Schapaugh Jr, William T., Bheemanahallirangappa, Raju, and SV, Krishna J.**, Kansas Soybean Commission, \$3,500, "High-throughput Platform to Enhance Quality of Beans and Add Value to Kansas Soybean Breeding Program."

**Schapaugh Jr, William T., Todd, Timothy C.** (Plant Pathology), and **Trick, Harold N.** (Plant Pathology), Kansas Soybean Commission, \$180,852, "Integrating Germplasm Evaluation, Genetic Engineering, Breeding and High-Throughput Phenotyping to Improve Sustainability of Soybean Production."

**Schapaugh Jr, William T., Flippo, Daniel** (Biological and Agricultural Engineering), **Sharda, Ajay** (Biological and Agricultural Engineering), and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), Kansas Soybean Commission, \$2,378, "Small Unmanned Aircraft Thermal Infrared Imaging System to Identify Soybean Drought Tolerant Varieties."

**Schapaugh Jr, William T.**, Mid-America Research Development Incubator, \$15,000, "Assess Genetic Diversity in Current Germplasm for Amino Acid (AA) Profiles, Specifically; Methionine, Threonine and Lysine."

**Schapaugh Jr, William T.**, Mid-America Research Development Incubator, \$45,000, "Develop New Maturity Group 4 Soybean Varieties with Protein and Oil Levels to Meet Sponsor Criteria for Commercialization."

**Schapaugh Jr, William T.**, North Central Soybean Research Program, \$34,773, "Increasing the Rate of Genetic Gain for Yield in Soybean Breeding Programs."

**Schapaugh Jr, William T.**, United Soybean Board, \$52,660, "Utilizing Unique Genetic Diversity to Combine Elevated Protein Concentration with High Yield in New Varieties and Experimental Lines."

**Stamm, Michael J.**, Monsanto Company, \$5,250, "National Winter Canola Variety Trials."

**Stamm, Michael J.**, US Canola Association, \$7,500, "A Collaborative Effort to Increase Southern Great Plains Canola Acres."

**Stamm, Michael J.**, US Department of Agriculture, \$195,000, "Development and Management of Canola in the Great Plains Region."

**Stamm, Michael J.**, and **SV, Krishna J.**, US Department of Agriculture, \$79,750 (includes \$4,750 from Third Party Match), "Heat and Drought Effects on the Oil Formation of Southern Great Plains Winter Canola."

**Stamm, Michael J.**, and **Bergtold, Jason S.** (Agricultural Economics), US Department of Agriculture, \$5,000, "Oilseed to Jet-Fuel Economics, Outreach, and Extension."

**SV, Krishna J., Flippo, Daniel** (Biological and Agricultural Engineering), **Sharda, Ajay** (Biological and Agricultural Engineering), and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), CNH Industrial America LLC, \$4,865, "Testing and Evaluation Services Agreement."

**SV, Krishna J.**, and **Park, Sunghun** (Horticulture, Forestry and Recreation Resources), Kansas Corn Commission, \$11,061, "Field Performance to Develop Genetically Engineered Heat and Drought Tolerant Kansas Corn."

**SV, Krishna J., Little, Christopher R.** (Plant Pathology), **Roozeboom, Kraig L.**, and **Tesso, Tesfaye**, Kansas Grain Sorghum Commission, \$4,885, "Breeding Sorghum for Improved Dryland Productivity and Utilization."

**SV, Krishna J., Morris, Geoffrey, Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), **Perumal, Ramasamy** (Agricultural Research Center-Hays), and **Tesso, Tesfaye**, Kansas Grain Sorghum Commission, \$22,000, "Physiological and Genetic Characterization of Grain Sorghum for Enhancing Terminal Heat and Drought Stress Resilience."

**SV, Krishna J., Bheemanahallirangappa, Raju**, and **Schapaugh Jr, William T.**, Kansas Soybean Commission, \$17,500, "High-throughput Platform to Enhance Quality of Beans and Add Value to Kansas Soybean Breeding Program."

**SV, Krishna J., Aiken, Robert M.** (Northwest Research Extension Center), **Fritz, Allan K.**, and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Alliance, Inc., "New Selection Strategies for Drought-Tolerant Wheat."

**SV, Krishna J., Fritz, Allan K.**, and **Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), Kansas Wheat Commission, \$45,000, "Strategies to Develop Wheat Genotypes to Beat Post-Flowering Heat and Drought Stress."

**SV, Krishna J.**, and **Park, Sunghun** (Horticulture, Forestry and Recreation Resources), TechAccel, LLC, \$51,562, "Validating "Promising" Rice Transgenic Events Identified with Potential Superior Salt Stress Resilience."

**SV, Krishna J., Fritz, Allan K., and Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), US Agency for International Development, \$41,731, "Development and Enhancing Heat Tolerance in Wheat Using Genomics, Molecular and Physiological Tools."

**SV, Krishna J., and Stamm, Michael J.**, US Department of Agriculture, \$79,750 (includes \$4,750 from Third Party Match), "Heat and Drought Effects on the Oil Formation of Southern Great Plains Winter Canola."

**SV, Krishna J.**, US Department of Agriculture, \$25,000, "Impact of Heat and Drought Stress on Sorghum and Wheat Grain Composition and Chemistry."

**SV, Krishna J.**, US Department of Agriculture, \$116,600, "Tolerance to Environmental Stress in Wheat."

**Swamy, Aavudai Anandhi, Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R., Rice, Charles W., Ruiz Diaz Suarez, Dorivar A., Shoup, Douglas E.** (Southeast Area Office), **Tomlinson, Peter J., and Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Tesso, Tesfaye, Little, Christopher R.** (Plant Pathology), **Roozeboom, Kraig L., and SV, Krishna J.**, Kansas Grain Sorghum Commission, \$78,160, "Breeding Sorghum for Improved Dryland Productivity and Utilization."

**Tesso, Tesfaye, Little, Christopher R.** (Plant Pathology), and **Perumal, Ramasamy** (Agricultural Research Center-Hays), Kansas Grain Sorghum Commission, \$4,264, "Germplasm Screening, Host-Plant Interactions, and Inoculation Techniques for Sorghum Stalk Rot Diseases in Kansas."

**Tesso, Tesfaye, Morris, Geoffrey, Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), **Perumal, Ramasamy** (Agricultural Research Center-Hays), and **SV, Krishna J.**, Kansas Grain Sorghum Commission, \$13,750, "Physiological and Genetic Characterization of Grain Sorghum for Enhancing Terminal Heat and Drought Stress Resilience."

**Thompson, Curtis R., and Jugulam, Mithila**, Kansas Grain Sorghum Commission, "Efficacy of Atrazine, Huskie, and Dicamba on Palmer Amaranth under Temperature Stress."

**Thompson, Curtis R., Jugulam, Mithila, and Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), Kansas Grain Sorghum Commission, "Evaluation of Sorghum Germplasm for Herbicide Tolerance."

**Thompson, Curtis R., Ciampitti, Ignacio, and Ruiz Diaz Suarez, Dorivar A.**, Kansas Grain Sorghum Commission, "Sorghum Production Schools for Kansas."

**Thompson, Curtis R.**, Monsanto Company, \$43,384, "Service Order No. 45."

**Thompson, Curtis R.**, Support Funds, \$59,400, "AGR Multi-Sponsor Research 50."

**Thompson, Curtis R.**, Support Funds, \$251,770, "AGR Support Funds Public Service 35."

**Thompson, Curtis R., Jugulam, Mithila, and Pagadala, P. V. Vara**, United Sorghum Checkoff Program, "Evaluation of Sorghum Germplasm for Herbicide Tolerance."

**Thompson, Curtis R., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E., Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.** (Entomology), and

**Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$13,900, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Tomlinson, Peter J., Roozeboom, Kraig L., and Ruiz Diaz Suarez, Dorivar A.**, Agronomic Science Foundation, "Influence of Cover Crops on Nitrous Oxide Dynamics and Nutrient Stratification in an Established No-Till Wheat-Sorghum-Soybean Cropping System."

**Tomlinson, Peter J., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Griffin, Terry W.** (Agricultural Economics), **Lollato, Romulo P., Patrignani, Andres, Presley, DeAnn R., and Ruiz Diaz Suarez, Dorivar A.**, American Bakers Association, \$10,000, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Tomlinson, Peter J., Kluitenberg, Gerard J., Nelson, Nathan O., Roozeboom, Kraig L., and Williams, Jeffery R.** (Agricultural Economics), Kansas Corn Commission, \$500, "Cover Crops and Phosphorus Management to Protect Water Quality in Corn-Soybean Rotations."

**Tomlinson, Peter J., Kluitenberg, Gerard J., Nelson, Nathan O., and Roozeboom, Kraig L.**, Kansas Soybean Commission, "Cover Crops and Phosphorus Management to Protect Water Quality in Soybean Rotation."

**Tomlinson, Peter J., Kluitenberg, Gerard J., Nelson, Nathan O., and Presley, DeAnn R.**, US Department of Agriculture, \$117,150, "Protecting Surface Water with Healthy Soils and Cover Crops."

**Tomlinson, Peter J., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R., Rice, Charles W., Ruiz Diaz Suarez, Dorivar A., Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi,** and **Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Welch, Stephen M., Albin, Nathan** (Mathematics), and **Steward, David R.** (Civil Engineering), US Department of Agriculture, \$102,000, "PAPM EAGER: Wheat Phenome/Genome Sensing/Modeling via Microwave Scattering Inversion."

**Zambreski, Zachary T., Aiken, Robert M.** (Northwest Research Extension Center), **Lin, Xiaomao, Pierzynski, Gary M., Presley, DeAnn R., and Roozeboom, Kraig L.**, US Department of Agriculture, \$647, "Adjusting Agricultural Practices in Response to Climate Change - Climate Resilient Agriculture."

#### **ANIMAL SCIENCES AND INDUSTRY**

**Amamcharla, Jayendra K.**, Dairy Management, Inc., \$42,677, "Altering the Microstructure to Improve Functionality of Dairy Powders using Micro- and Nano-bubbles."

**Amamcharla, Jayendra K.**, Dairy Management, Inc., \$20,430, "Understanding the Effects of Various Intrinsic and Extrinsic Factors on the Stability of Lactose-Rich Co-products."

**Amamcharla, Jayendra K., Gragg, Sara E., Phebus, Randall K., and Schmidt, Karen A.**, Dairy Management, Inc., \$14,427, "Use of Nano-scale Aqueous Oxone to Remove Biofilms from Selected Dairy Product Contact Surfaces."

**Amamcharla, Jayendra K.**, Dairy Research Institute, \$12,000, "Understanding the Effects of Electromagnetic Fluid Conditioning on Physical, Chemical and Functional Properties of Milk and Milk Products."

**Amamcharla, Jayendra K.**, Dairy Research Institute, \$15,500, "Use of Novel Surface Modification Techniques to Reduce Biofilms on Plate Heat Exchanger Plates."

**Amamcharla, Jayendra K.**, Midwest Dairy Association, \$9,000, "Application of Fluorescence Spectroscopy for Monitoring Changes in Milk Protein Concentrate during Storage."

**Aramouni, Fadi M.**, and **Herald, Thomas J.**, Kansas Department of Agriculture, \$70,000, "Food and Feed Value Added Program Project."

**Aramouni, Fadi M.**, **Bates, Marlin A.** (County Agents - Metropolitan Sector), **Gragg, Sara E.**, **Nwadike, Londa S.** (Director of Cooperative Extension), **Phebus, Randall K.**, **Pliakoni, Eleni** (Horticulture, Forestry and Recreation Resources), and **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Food and Drug Administration, \$400, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

**Beyer, R. Scott**, and **Aldrich, Greg** (Grain Science and Industry), Veterinary Prime, \$2,843, "Evaluation of the Protein Quality of Chicken Proteins."

**Blasi, Dale A.**, Syngenta Crop Protection, LLC, \$93,197, "The Evaluation of Syngenta Enhanced Feed Corn and Corn Processing on Performance and Health of Growing Beef Cattle."

**Boyle, Elizabeth**, Kansas Department of Agriculture, \$25,000, "Value Added Meats Program for Kansas Companies and Entrepreneurs."

**Bradford, Barry J.**, and **Stevenson, Jeffrey S.**, Kansas Dairy Commission, \$500, "Progesterone Response and Reproductive Performance of Lactating Dairy Cows Fed Rumen Protected Glucose."

**Bradford, Barry J.**, National Science Foundation, \$90,017, "Collaborative Research: Inflammation as a Key Component of the Metabolic Adaptations to the Lactating State."

**Bradford, Barry J.**, **Min, Doohong** (Agronomy), **O'Quinn, Travis G.**, **Pendell, Dustin L.** (Agricultural Economics), and **Vipham, Jessie** (Dean of Agriculture and Director of AES), US Agency for International Development, \$63,212, "Linking Cattle Nutrition to Human Nutrition: A Value Chain Approach to Improving the Production, Handling, and Consumption of Animal Source Foods in Ethiopia."

**Bradford, Barry J.**, **Brouk, Micheal J.**, **Delamanha Mendonca, Luis G.**, and **Lee, Charles D.**, US Department of Agriculture, \$5,555, "Development of Integrated Pest Management Strategies for Commercial Dairies: Formulating Dairy Total Mixed Rations that are Resistant to Bird Depredation."

**Bradford, Barry J.**, and **Garcia Orellana, Miriam**, US Department of Agriculture, \$483,500, "Is Orosomucoid a Mechanistic Link Between Inflammation and Impaired Intake During the Transition Period?."

**Bradford, Barry J.**, US Department of Agriculture, \$95,000, "MicroRNA in Colostrum: Immunity Across Generations? Caroline Ylioja Predoctoral Fellowship."

**Bradford, Barry J.**, **Brouk, Micheal J.**, **Campabadal Teran, Carlos** (Grain Science and Industry), **Miller, Brandi M.** (Grain Science and Industry), **O'Neil III, Howard J.** (Grain Science and Industry), and **Thiele, Shawn M.** (Grain Science and Industry), US Soybean Export Council, Inc., \$7,650, "USSEC Addendum to Independent Contractor Master Agreement 17KAO2F54B."

**Brouk, Micheal J.**, Delaval, Inc., \$73,490, "Independent Contractor Agreement."

**Brouk, Micheal J.**, Kansas Dairy Commission, \$5,000, "Evaluation of Feed Flavor Additive to Improve Acceptability of a Total Mixed Ration and Pelleted Concentrate."

**Brouk, Micheal J.**, Kansas Dairy Commission, \$5,000, "Evaluation of Portable Hand-held Near Infrared Spectrophotometer for Determining Silage Moisture."



**Brouk, Micheal J., Bradford, Barry J., Delamanha Mendonca, Luis G., and Lee, Charles D.**, US Department of Agriculture, \$38,888, "Development of Integrated Pest Management Strategies for Commercial Dairies: Formulating Dairy Total Mixed Rations that are Resistant to Bird Depredation."

**Brouk, Micheal J., Bradford, Barry J., Campabadal Teran, Carlos** (Grain Science and Industry), **Miller, Brandi M.** (Grain Science and Industry), **O'Neil III, Howard J.** (Grain Science and Industry), and **Thiele, Shawn M.** (Grain Science and Industry), US Soybean Export Council, Inc., \$7,650, "USSEC Addendum to Independent Contractor Master Agreement 17KAO2F54B."

**Delamanha Mendonca, Luis G., and Stevenson, Jeffrey S.**, Kansas Dairy Commission, \$5,000, "Evaluation of Seasonal Patterns of Heat Detection Rate in Large Dairy Herds Located in Kansas."

**Delamanha Mendonca, Luis G.**, Kansas Dairy Commission, \$5,000, "Maintenance of a Web-based Tool used by Kansas Dairy Producers to Evaluate Key Performance Indicators of Their Herds."

**Delamanha Mendonca, Luis G., Bradford, Barry J., Brouk, Micheal J., and Lee, Charles D.**, US Department of Agriculture, \$5,555, "Development of Integrated Pest Management Strategies for Commercial Dairies: Formulating Dairy Total Mixed Rations that are Resistant to Bird Depredation."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, Ajinomoto Co., Inc, \$6,000, "Evaluation of High SID Tryptophan: Lysine Ratios with Ractopamine HCl on Growth Performance and Carcass Characteristics."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, Ajinomoto Heartland LLC, \$8,000, "Histidine: Lysine Ratios in Diets for 15 to 25 lb Pigs."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, Archer Daniels Midland Company, \$2,000, "Effects of Increasing Standardized Ileal Digestible Lysine during Gestation on Sow Reproductive Performance of Gilts and Sows under Commercial Conditions."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, CTO BiOWiSH Technologies, \$25,000, "Effects of BIOWISH MultiBio 3P in Diets for Finishing Pigs."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, Distributors Processing Inc, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, DSM Nutritional Products AG, "Evaluation of Different Probiotic Products for the Nursery Pig."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, Feed One Co., Ltd., "Feed One Co., LTD. Fellowship."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D.**, and **Woodworth, Jason C.**, Genus PLC, \$4,000, "Determining the Effects of Increasing the Cup Waterer: Pig Ratio on Growth Performance of Growing/finishing Pigs."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Gonzalez, John M., Goodband, Robert D., O'Quinn, Travis G., Tokach, Michael D., and Woodworth, Jason C.**, Heliae Development, LLC, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, International Ingredient Corporation, \$13,000, "Evaluation of Solu-E Inclusion Level on Nursery Pig Performance Protocol #5506."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, Iowa Select Farms, "Iowa Select Farm Fellowship."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, Kemin Industries, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, Micronutrients, "Effect of Increasing Levels of Zn from Intellibond Z on Growth Performance, Carcass Composition, and Economic Return of Pigs Housed in a Commercial Environment."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, Micronutrients, "Effects of Feeding Increasing Levels of Cu from Either Intellibond-C or Mintrex-Cu on Growth Performance of Nursery Pigs."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, PIC North America (PIC USA, Inc.), "Determining the Dietary Phosphorus Requirement of Growing-Finishing Pigs."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, Quality Technology International, Inc., \$25,000, "Effect of Calsporin on Nursing Piglet Intestinal Microflora and Growth Experiment #693."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, SVC Research, LLC, "KSU Applied Swine Nutrition Fellowship."

**DeRouche, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Tokach, Michael D., and Woodworth, Jason C.**, Trouw Nutrition USA, "Evaluation of Elarom-F Plus in Nursery Diets with the Inclusions of Varying Levels of Intellibond C."

**Douthit, Teresa L., Drouillard, James S., and Lattimer, James M.**, Archer Daniels Midland Company, \$13,571, "Digestibility of Enertia s/f® and Soybean Oil in the equine."

**Douthit, Teresa L., Drouillard, James S., Lattimer, James M., and Melgarejo, L Tonatiuh** (Human Nutrition), New Generation Supplements, \$14,436, "Immunomodulation of HorsLic Omega Elite® in Yearling Horses."

**Drouillard, James S., Douthit, Teresa L., and Lattimer, James M.**, Archer Daniels Midland Company, \$13,571, "Digestibility of Enertia s/f® and Soybean Oil in the equine."

**Drouillard, James S., and Gonzalez, John M.**, Kyushu University, \$7,968, "Academic Student Exchange."

**Drouillard, James S., and Lattimer, James M.**, MS Biotec, \$45,000, "Applications for the Probiotic Bacterium, Megasphaera elsdenii, in Monogastric Farm Animals."

**Drouillard, James S.**, MS Biotech, \$17,480, "Fermentation Characteristics and Aerobic Stability of Corn Silage Inoculated with *Megasphaera Elsdenii* NCIMB 41125."

**Drouillard, James S., Douthit, Teresa L., Lattimer, James M., and Melgarejo, L Tonatiuh** (Human Nutrition), New Generation Supplements, \$14,436, "Immunomodulation of HorsLic Omega Elite® in Yearling Horses."

**Drouillard, James S.**, and **Lattimer, James M.**, Provita Supplements, Inc., \$12,756, "Fermentation Characteristics and Aerobic Stability of Inoculated Corn Silages."

**Drouillard, James S.**, and **Lattimer, James M.**, Provita Supplements, Inc., \$8,000, "Provita Supplements Graduate Student Fellowship."

**Drouillard, James S.**, and **Stark, Charles** (Grain Science and Industry), Syngenta Crop Protection, LLC, \$49,308, "Steam Flaking."

**Drouillard, James S.**, US Department of Agriculture, \$47,729, "SBIR Phase II: Innovations in Manufacturing Technology for a Probiotic Containing *Megasphaera elsdenii* NCIMB 41125."

**Garcia Orellana, Miriam**, and **Bradford, Barry J.**, US Department of Agriculture, "Is Orosomucoid a Mechanistic Link Between Inflammation and Impaired Intake During the Transition Period?."

**Gonzalez, John M.**, GBH Labs, LLC, \$57,583, "Effect of a Plasma Product on Fetal and Neonatal Myoblast Activity."

**Gonzalez, John M., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., O'Quinn, Travis G., Tokach, Michael D., and Woodworth, Jason C.**, Heliae Development, LLC, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**Gonzalez, John M.**, and **Drouillard, James S.**, Kyushu University, \$7,968, "Academic Student Exchange."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.**, and **Woodworth, Jason C.**, Ajinomoto Co., Inc, \$6,000, "Evaluation of High SID Tryptophan: Lysine Ratios with Ractopamine HCl on Growth Performance and Carcass Characteristics."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.**, and **Woodworth, Jason C.**, Ajinomoto Heartland LLC, \$8,000, "Histidine: Lysine Ratios in Diets for 15 to 25 lb Pigs."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.**, and **Woodworth, Jason C.**, Archer Daniels Midland Company, \$2,000, "Effects of Increasing Standardized Ileal Digestible Lysine during Gestation on Sow Reproductive Performance of Gilts and Sows under Commercial Conditions."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.**, and **Woodworth, Jason C.**, CTO BiOWiSH Technologies, "Effects of BOWiSH MultiBio 3P in Diets for Finishing Pigs."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.**, and **Woodworth, Jason C.**, Distributors Processing Inc, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, DSM Nutritional Products AG, "Evaluation of Different Probiotic Products for the Nursery Pig."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Feed One Co., Ltd., "Feed One Co., LTD. Fellowship."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Genus PLC, \$4,000, "Determining the Effects of Increasing the Cup Waterer: Pig Ratio on Growth Performance of Growing/finishing Pigs."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Gonzalez, John M., O'Quinn, Travis G., Tokach, Michael D., and Woodworth, Jason C.**, Heliae Development, LLC, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, International Ingredient Corporation, "Evaluation of Solu-E Inclusion Level on Nursery Pig Performance Protocol #5506."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Iowa Select Farms, "Iowa Select Farm Fellowship."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Kemin Industries, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Micronutrients, "Effect of Increasing Levels of Zn from Intellibond Z on Growth Performance, Carcass Composition, and Economic Return of Pigs Housed in a Commercial Environment."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Micronutrients, "Effects of Feeding Increasing Levels of Cu from Either Intellibond-C or Mintrex-Cu on Growth Performance of Nursery Pigs."

**Goodband, Robert D., Amachawadi, Raghavendra G.** (Clinical Sciences), **DeRouchey, Joel M.** (International Agricultural Programs), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Micronutrients, \$5,050, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, PIC North America (PIC USA, Inc.), "Determining the Dietary Phosphorus Requirement of Growing-Finishing Pigs."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Quality Technology International, Inc., "Effect of Calsporin on Nursing Piglet Intestinal Microflora and Growth Experiment #693."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, SVC Research, LLC, "KSU Applied Swine Nutrition Fellowship."

**Goodband, Robert D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D., and Woodworth, Jason C.**, Trouw Nutrition USA, "Evaluation of Elarom-F Plus in Nursery Diets with the Inclusions of Varying Levels of Intellibond C."

**Gragg, Sara E., Amamcharla, Jayendra K., Phebus, Randall K., and Schmidt, Karen A.**, Dairy Management, Inc., \$14,427, "Use of Nano-scale Aqueous Oxone to Remove Biofilms from Selected Dairy Product Contact Surfaces."

**Gragg, Sara E., and Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), US Department of Agriculture, \$28,208, "Multidisciplinary, Experiential SFS, TBT, FSMA, and Trade Facilitation Training for Cochran Fellows from El Salvador, Guatemala, and Honduras."

**Gragg, Sara E., Ellis, Jason D.** (Communications), **Nwadike, Londa S.** (Director of Cooperative Extension), **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), and **Trinetta, Valentina**, US Department of Agriculture, \$22,616, "Strengthening Food Safety Education and Outreach for Kansas and Missouri Fruit and Vegetable Producers."

**Gragg, Sara E., Aramouni, Fadi M., Bates, Marlin A.** (County Agents - Metropolitan Sector), **Nwadike, Londa S.** (Director of Cooperative Extension), **Phebus, Randall K., Pliakoni, Eleni** (Horticulture, Forestry and Recreation Resources), and **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Food and Drug Administration, \$800, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

**Herald, Thomas J., and Aramouni, Fadi M.**, Kansas Department of Agriculture, "Food and Feed Value Added Program Project."

**Houser, Terry A., Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K., Trinetta, Valentina,** and **Woodworth, Jason C.**, National Pork Board, \$2,995, "From Feed to Meat: Investigation of the Prevalence and Distribution of Salmonella Enterica Serotype I 4, [5], 12:i: - A Pathogen of Interest in Pork."

**Hulbert, Lindsey E.**, SwineGuard, Inc. d/b/a SwineTech, \$75,000, "Determining the Stressors of a Technology to prevent Sows from Crushing Piglets."

**Hulbert, Lindsey E.**, SwineGuard, Inc. d/b/a SwineTech, \$25,000, "Swine Tech Fellowship."

**Hulbert, Lindsey E.**, US Department of Defense, \$80,000, "Testing and Validation of Porcine Affective States and Neuro-functional Assessment Tools."

**Jones, Cassandra K., Aldrich, Greg** (Grain Science and Industry), and **Trinetta, Valentina**, Fats and Proteins Research Foundation, Inc., \$26,202, "Assessing Factors Affecting Salmonella in Poultry Fat."

**Jones, Cassandra K., and Li, Yonghui** (Grain Science and Industry), Kansas Corn Commission, \$3,703, "Converting Distiller's Grains to High-Value Healthy Natural Antioxidants."

**Jones, Cassandra K., Amachawadi, Raghavendra G.** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Niederwerder, Megan** (Diagnostic Medicine/Pathobiology), **Stark, Charles** (Grain Science and Industry), **Tokach, Michael D., and Woodworth, Jason C.**, National Pork Board, \$54,641 (includes \$9,747 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Jones, Cassandra K., Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Houser, Terry A., Trinetta, Valentina,** and **Woodworth, Jason C.**, National Pork Board, \$2,995, "From Feed to Meat: Investigation of the Prevalence and Distribution of Salmonella Enterica Serotype I 4, [5], 12:i: - A Pathogen of Interest in Pork."

**Jones, Cassandra K.,** and **Stark, Charles** (Grain Science and Industry), National Pork Board, \$2,500, "Role of Moisture Addition on Pellet Quality in Finishing Pig Feed."

**Jones, Cassandra K., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Niederwerder, Megan** (Veterinary Diagnostic Laboratory), **Rowland, Raymond R. R.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.,** and **Woodworth, Jason C.**, Swine Health Information Center, \$3,498, "Evaluation of the Risk of Transboundary Movement of ASFV via Contaminated Feed Ingredients."

**Jones, Cassandra K., Miller, Brandi M.** (Grain Science and Industry), and **Stark, Charles** (Grain Science and Industry), US Department of Health and Human Services, \$80,436, "Compilation of a Food Safety Preventive Controls Animal Food Training Curriculum."

**Lattimer, James M., Douthit, Teresa L.,** and **Drouillard, James S.,** Archer Daniels Midland Company, \$13,982, "Digestibility of Enertia s/f® and Soybean Oil in the equine."

**Lattimer, James M.,** and **Drouillard, James S.,** MS Biotec, \$45,000, "Applications for the Probiotic Bacterium, Megasphaera elsdenii, in Monogastric Farm Animals."

**Lattimer, James M., Douthit, Teresa L., Drouillard, James S.,** and **Melgarejo, L Tonatiuh** (Human Nutrition), New Generation Supplements, \$14,436, "Immunomodulation of HorsLic Omega Elite® in Yearling Horses."

**Lattimer, James M.,** and **Drouillard, James S.,** Provita Supplements, Inc., \$12,756, "Fermentation Characteristics and Aerobic Stability of Inoculated Corn Silages."

**Lattimer, James M.,** and **Drouillard, James S.,** Provita Supplements, Inc., \$8,000, "Provita Supplements Graduate Student Fellowship."

**Lee, Charles D.,** Kansas Department of Wildlife and Parks, \$46,252, "Extension Education Position Support."

**Lee, Charles D., Bradford, Barry J., Brouk, Micheal J.,** and **Delamanha Mendonca, Luis G.,** US Department of Agriculture, \$5,555, "Development of Integrated Pest Management Strategies for Commercial Dairies: Formulating Dairy Total Mixed Rations that are Resistant to Bird Depredation."

**Nelssen, Jim L.,** DSM Nutritional Products AG, \$15,000, "The Effects of Feeding Vevovital on Growth Performance. Survivabililty and Fecal Characteristics of Growing Pigs."

**Odde, Kenneth G.,** Merck & Company, Inc., \$100,000, "Capturing Value from Superior Livestock Data."

**O'Quinn, Travis G., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Gonzalez, John M., Goodband, Robert D., Tokach, Michael D.,** and **Woodworth, Jason C.,** Heliae Development, LLC, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**O'Quinn, Travis G., Bradford, Barry J., Min, Doohong** (Agronomy), **Pendell, Dustin L.** (Agricultural Economics), and **Vipham, Jessie** (Dean of Agriculture and Director of AES), US Agency for International Development, \$63,212, "Linking Cattle Nutrition to Human Nutrition: A Value Chain Approach to Improving the Production, Handling, and Consumption of Animal Source Foods in Ethiopia."

**Phebus, Randall K., Amamcharla, Jayendra K., Gragg, Sara E., and Schmidt, Karen A.**, Dairy Management, Inc., \$14,427, "Use of Nano-scale Aqueous Oxone to Remove Biofilms from Selected Dairy Product Contact Surfaces."

**Phebus, Randall K.**, Kansas Department of Commerce / Kansas Bioscience Authority, \$50,000, "Comparative Evaluation of Defined Antimicrobial Washes for Raw Poultry Parts to Control Salmonella and Literature Review on Applied Meat and Poultry Antimicrobial Applications."

**Phebus, Randall K., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), **Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$7,135, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Phebus, Randall K., Aramouni, Fadi M., Bates, Marlin A.** (County Agents - Metropolitan Sector), **Gragg, Sara E., Nwadike, Londa S.** (Director of Cooperative Extension), **Pliakoni, Eleni** (Horticulture, Forestry and Recreation Resources), and **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Food and Drug Administration, \$400, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

**Rolf, Megan**, National Cattlemen's Beef Association, \$2,000, "Fact Sheet for Beef Sustainability."

**Schmidt, Karen A., Amamcharla, Jayendra K., Gragg, Sara E., and Phebus, Randall K.**, Dairy Management, Inc., \$14,427, "Use of Nano-scale Aqueous Oxone to Remove Biofilms from Selected Dairy Product Contact Surfaces."

**Smith, J. Scott, Trinetta, Valentina, and Yucel, Umut**, US Department of Health and Human Services, \$29,700, "Development of Validation of Analytical and Physical Testing Methods to Evaluate the Irradiation History of Animal Feeds."

**Stevenson, Jeffrey S., and Delamanha Mendonca, Luis G.**, Kansas Dairy Commission, "Evaluation of Seasonal Patterns of Heat Detection Rate in Large Dairy Herds Located in Kansas."

**Stevenson, Jeffrey S.**, Kansas Dairy Commission, \$5,000, "Factors Associated with Resynchronizing the First Eligible Estrus in Dairy Cattle after a Previous Insemination."

**Stevenson, Jeffrey S., and Bradford, Barry J.**, Kansas Dairy Commission, \$4,500, "Progesterone Response and Reproductive Performance of Lactating Dairy Cows Fed Rumen Protected Glucose."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, Ajinomoto Co., Inc, \$6,000, "Evaluation of High SID Tryptophan: Lysine Ratios with Ractopamine HCl on Growth Performance and Carcass Characteristics."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, Ajinomoto Heartland LLC, \$8,000, "Histidine: Lysine Ratios in Diets for 15 to 25 lb Pigs."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, Archer Daniels Midland Company, \$2,000, "Effects of Increasing Standardized Ileal Digestible Lysine during Gestation on Sow Reproductive Performance of Gilts and Sows under Commercial Conditions."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, CTO BiOWiSH Technologies, "Effects of BIOWISH MultiBio 3P in Diets for Finishing Pigs."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Distributors Processing Inc, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, DSM Nutritional Products AG, "Evaluation of Different Probiotic Products for the Nursery Pig."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Feed One Co., Ltd., \$30,000, "Feed One Co., LTD. Fellowship."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Genus PLC, \$4,000, "Determining the Effects of Increasing the Cup Waterer: Pig Ratio on Growth Performance of Growing/finishing Pigs."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Gonzalez, John M., Goodband, Robert D., O'Quinn, Travis G., and Woodworth, Jason C.**, Heliae Development, LLC, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, International Ingredient Corporation, "Evaluation of Solu-E Inclusion Level on Nursery Pig Performance Protocol #5506."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Iowa Select Farms, "Iowa Select Farm Fellowship."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Kemin Industries, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Micronutrients, "Effect of Increasing Levels of Zn from Intellibond Z on Growth Performance, Carcass Composition, and Economic Return of Pigs Housed in a Commercial Environment."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Woodworth, Jason C.**, Micronutrients, "Effects of Feeding Increasing Levels of Cu from Either Intellibond-C or Mintrex-Cu on Growth Performance of Nursery Pigs."

**Tokach, Michael D., Amachawadi, Raghavendra G.** (Clinical Sciences), **DeRouchey, Joel M.** (International Agricultural Programs), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), and **Woodworth, Jason C.**, Micronutrients, \$10,100, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."



**Tokach, Michael D., Amachawadi, Raghavendra G.** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K., Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Niederwerder, Megan** (Diagnostic Medicine/Pathobiology), **Stark, Charles** (Grain Science and Industry), and **Woodworth, Jason C.**, National Pork Board, \$4,479 (includes \$799 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, PIC North America (PIC USA, Inc.), "Determining the Dietary Phosphorus Requirement of Growing-Finishing Pigs."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, Quality Technology International, Inc., "Effect of Calsporin on Nursing Piglet Intestinal Microflora and Growth Experiment #693."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, SVC Research, LLC, \$60,000, "KSU Applied Swine Nutrition Fellowship."

**Tokach, Michael D., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K., Niederwerder, Megan** (Veterinary Diagnostic Laboratory), **Rowland, Raymond R. R.** (Diagnostic Medicine/Pathobiology), and **Woodworth, Jason C.**, Swine Health Information Center, \$3,498, "Evaluation of the Risk of Transboundary Movement of ASFV via Contaminated Feed Ingredients."

**Tokach, Michael D., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Woodworth, Jason C.**, Trouw Nutrition USA, "Evaluation of Elarom-F Plus in Nursery Diets with the Inclusions of Varying Levels of Intellibond C."

**Trinetta, Valentina, Aldrich, Greg** (Grain Science and Industry), and **Jones, Cassandra K.**, Fats and Proteins Research Foundation, Inc., \$26,202, "Assessing Factors Affecting Salmonella in Poultry Fat."

**Trinetta, Valentina, Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Houser, Terry A., Jones, Cassandra K.**, and **Woodworth, Jason C.**, National Pork Board, \$41,925, "From Feed to Meat: Investigation of the Prevalence and Distribution of Salmonella Enterica Serotype I 4, [5], 12:i: - A Pathogen of Interest in Pork."

**Trinetta, Valentina, Ellis, Jason D.** (Communications), **Gragg, Sara E., Nwadike, Londa S.** (Director of Cooperative Extension), and **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Department of Agriculture, \$22,616, "Strengthening Food Safety Education and Outreach for Kansas and Missouri Fruit and Vegetable Producers."

**Trinetta, Valentina, Smith, J. Scott,** and **Yucel, Umut**, US Department of Health and Human Services, \$9,900, "Development of Validation of Analytical and Physical Testing Methods to Evaluate the Irradiation History of Animal Feeds."

**Weaber, Robert L.**, Wellmark International, \$70,000, "Weaning Weight Differences of Calves on Cows being Red an Altosid IGR Mineral Supplement versus Control."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Tokach, Michael D.**, Ajinomoto Co., Inc, \$6,000, "Evaluation of High SID Tryptophan: Lysine Ratios with Ractopamine HCl on Growth Performance and Carcass Characteristics."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Tokach, Michael D.**, Ajinomoto Heartland LLC, \$8,000, "Histidine: Lysine Ratios in Diets for 15 to 25 lb Pigs."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Archer Daniels Midland Company, \$2,000, "Effects of Increasing Standardized Ileal Digestible Lysine during Gestation on Sow Reproductive Performance of Gilts and Sows under Commercial Conditions."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, CTO BiOWiSH Technologies, "Effects of BOWISH MultiBio 3P in Diets for Finishing Pigs."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Distributors Processing Inc, \$25,000, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, DSM Nutritional Products AG, \$70,000, "Evaluation of Different Probiotic Products for the Nursery Pig."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Feed One Co., Ltd., "Feed One Co., LTD. Fellowship."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Genus PLC, \$4,000, "Determining the Effects of Increasing the Cup Waterer: Pig Ratio on Growth Performance of Growing/finishing Pigs."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Gonzalez, John M., Goodband, Robert D., O'Quinn, Travis G., and Tokach, Michael D.**, Heliae Development, LLC, \$79,500, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, International Ingredient Corporation, "Evaluation of Solu-E Inclusion Level on Nursery Pig Performance Protocol #5506."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Iowa Select Farms, \$60,000, "Iowa Select Farm Fellowship."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Kemin Industries, \$25,000, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Micronutrients, \$50,000, "Effect of Increasing Levels of Zn from Intellibond Z on Growth Performance, Carcass Composition, and Economic Return of Pigs Housed in a Commercial Environment."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., and Tokach, Michael D.**, Micronutrients, \$35,000, "Effects of Feeding Increasing Levels of Cu from Either Intellibond-C or Mintrex-Cu on Growth Performance of Nursery Pigs."

**Woodworth, Jason C., Amachawadi, Raghavendra G.** (Clinical Sciences), **DeRouchey, Joel M.** (International Agricultural Programs), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D., Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), and **Tokach, Michael D.**, Micronutrients, \$25,249, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."

**Woodworth, Jason C., Amachawadi, Raghavendra G.** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K., Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Niederwerder, Megan** (Diagnostic Medicine/Pathobiology), **Stark, Charles** (Grain Science and Industry), and **Tokach, Michael D.**, National Pork Board, \$2,687 (includes \$479 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Woodworth, Jason C., Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Houser, Terry A., Jones, Cassandra K., and Trinetta, Valentina**, National Pork Board, \$2,995, "From Feed to Meat: Investigation of the Prevalence and Distribution of Salmonella Enterica Serotype I 4, [5], 12:i: - A Pathogen of Interest in Pork."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Tokach, Michael D.**, PIC North America (PIC USA, Inc.), \$35,000, "Determining the Dietary Phosphorus Requirement of Growing-Finishing Pigs."

**Woodworth, Jason C.**, PIC North America (PIC USA, Inc.), \$30,000, "KSU Applied Swine Nutrition Fellowship."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Tokach, Michael D.**, Quality Technology International, Inc., "Effect of Calsporin on Nursing Piglet Intestinal Microflora and Growth Experiment #693."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Tokach, Michael D.**, SVC Research, LLC, "KSU Applied Swine Nutrition Fellowship."

**Woodworth, Jason C., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K., Niederwerder, Megan** (Veterinary Diagnostic Laboratory), **Rowland, Raymond R. R.** (Diagnostic Medicine/Pathobiology), and **Tokach, Michael D.**, Swine Health Information Center, \$3,498, "Evaluation of the Risk of Transboundary Movement of ASFV via Contaminated Feed Ingredients."

**Woodworth, Jason C., DeRouchey, Joel M., Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.**, and **Tokach, Michael D.**, Trouw Nutrition USA, \$22,000, "Evaluation of Elarom-F Plus in Nursery Diets with the Inclusions of Varying Levels of Intellibond C."

**Yucel, Umut, Smith, J. Scott, and Trinetta, Valentina**, US Department of Health and Human Services, \$59,399, "Development of Validation of Analytical and Physical Testing Methods to Evaluate the Irradiation History of Animal Feeds."

## COMMUNICATIONS

**Baker, Lauri M., and Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), US Department of Agriculture, \$61,918, "Courting the Consumer: Social-Media Marketing of Farm Products."

**Disberger, Brandie S., Hock, Gaea, and Ulmer, Jonathan**, Kansas Corn Commission, \$2,582, "Ah-Maize-ing Adventure: A corn-focused High Impact Learning Opportunity."

**Disberger, Brandie S., Hock, Gaea, and Ulmer, Jonathan**, Kansas Corn Commission, \$4,232, "Enhancing Pre-Service Instruction with Corn (Ag Ed EPIC Experience)."

**Disberger, Brandie S., Hock, Gaea, and Ulmer, Jonathan**, Pioneer Hi-Bred International, Inc., \$1,650, "Visiting Practicing Professional in PreService CASE Certification."

**Disberger, Brandie S., Hock, Gaea, Ulmer, Jonathan, and Yahnke, Sally J.** (Curriculum and Instruction), US Department of Education, \$45,750, "Innovative CTE Professional Development Model."

**Ellis, Jason D., and Brown, Susan J.** (Biology), US Department of Agriculture, \$242,720, "Developing an Infrastructure and Product Test Pipeline to Deliver Novel Therapies for Citrus Greening Disease."

**Ellis, Jason D., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), **Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,841, "Shiga-toxicogenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Ellis, Jason D., Gragg, Sara E.** (Animal Sciences and Industry), **Nwadike, Londa S.** (Director of Cooperative Extension), **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), and **Trinetta, Valentina** (Animal Sciences and Industry), US Department of Agriculture, \$22,616, "Strengthening Food Safety Education and Outreach for Kansas and Missouri Fruit and Vegetable Producers."

**Hock, Gaea, Disberger, Brandie S., and Ulmer, Jonathan**, Kansas Corn Commission, \$2,661, "Ah-Maize-ing Adventure: A corn-focused High Impact Learning Opportunity."

**Hock, Gaea, Disberger, Brandie S., and Ulmer, Jonathan**, Kansas Corn Commission, \$4,361, "Enhancing Pre-Service Instruction with Corn (Ag Ed EPIC Experience)."

**Hock, Gaea, Disberger, Brandie S., and Ulmer, Jonathan**, Pioneer Hi-Bred International, Inc., \$1,650, "Visiting Practicing Professional in PreService CASE Certification."

**Hock, Gaea, Disberger, Brandie S., Ulmer, Jonathan, and Yahnke, Sally J.** (Curriculum and Instruction), US Department of Education, \$45,750, "Innovative CTE Professional Development Model."

**Ulmer, Jonathan, Disberger, Brandie S., and Hock, Gaea**, Kansas Corn Commission, \$2,582, "Ah-Maize-ing Adventure: A corn-focused High Impact Learning Opportunity."

**Ulmer, Jonathan, Disberger, Brandie S., and Hock, Gaea**, Kansas Corn Commission, \$4,232, "Enhancing Pre-Service Instruction with Corn (Ag Ed EPIC Experience)."

**Ulmer, Jonathan, Disberger, Brandie S., and Hock, Gaea**, Pioneer Hi-Bred International, Inc., \$1,700, "Visiting Practicing Professional in PreService CASE Certification."

**Ulmer, Jonathan, Bhadriraju, Subramanyam** (Grain Science and Industry), **Campabadal Teran, Carlos** (Grain Science and Industry), **Harvey, Jagger J.** (Dean of Agriculture and Director of AES), **Leslie, John F.** (Plant Pathology), **Lilja, Nina K.** (International Agricultural Programs), and **Lindshield, Brian L.** (Human Nutrition), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Ulmer, Jonathan, Disberger, Brandie S., Hock, Gaea, and Yahnke, Sally J.** (Curriculum and Instruction), US Department of Education, \$45,750, "Innovative CTE Professional Development Model."

## **DEAN OF AGRICULTURE AND DIRECTOR OF AES**

**Dalton, Timothy J.**, US Agency for International Development, \$787,231, "Implement a Genomics-Assisted Breeding Program in a Small Breeding Program in a Developing Country."

**Dalton, Timothy J.**, US Agency for International Development, \$2,856,671, "The Management Entity of the Sorghum and Millet Innovation Lab."

**Floros, John D.**, and **Peters, Paula** (Director of Cooperative Extension), University of Missouri, "Memorandum of Agreement."

**Harvey, Jagger J.**, **Bhadriraju, Subramanyam** (Grain Science and Industry), **Campabadal Teran, Carlos** (Grain Science and Industry), **Leslie, John F.** (Plant Pathology), **Lilja, Nina K.** (International Agricultural Programs), **Lindshield, Brian L.** (Human Nutrition), and **Ulmer, Jonathan** (Communications), US Agency for International Development, \$700,000, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Harvey, Jagger J.**, **Campabadal Teran, Carlos** (Grain Science and Industry), and **Leslie, John F.** (Plant Pathology), US Agency for International Development, \$650,000, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss (Honduras Buy-in)."

**Harvey, Jagger J.**, **Leslie, John F.** (Plant Pathology), and **Yu, Jisang** (Agricultural Economics), US Agency for International Development, \$1,999,998, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss (Nepal Buy-In)."

**Middendorf, B. Jan**, **Pagadala, P. V. Vara**, **Pierzynski, Gary M.** (Agronomy), and **Stewart, Zachary P.**, International Fertilizer Development Center, "Sustainable Soil Fertility Prioritization in Sub-Saharan Africa."

**Pagadala, P. V. Vara**, **Middendorf, B. Jan**, **Pierzynski, Gary M.** (Agronomy), and **Stewart, Zachary P.**, International Fertilizer Development Center, \$160,000, "Sustainable Soil Fertility Prioritization in Sub-Saharan Africa."

**Pagadala, P. V. Vara**, **Jugulam, Mithila** (Agronomy), and **Thompson, Curtis R.** (Agronomy), Kansas Grain Sorghum Commission, "Evaluation of Sorghum Germplasm for Herbicide Tolerance."

**Pagadala, P. V. Vara**, **Morris, Geoffrey** (Agronomy), **Perumal, Ramasamy** (Agricultural Research Center-Hays), **SV, Krishna J.** (Agronomy), and **Tesso, Tesfaye** (Agronomy), Kansas Grain Sorghum Commission, "Physiological and Genetic Characterization of Grain Sorghum for Enhancing Terminal Heat and Drought Stress Resilience."

**Pagadala, P. V. Vara**, **Fritz, Allan K.** (Agronomy), and **SV, Krishna J.** (Agronomy), Kansas Wheat Commission, "Strategies to Develop Wheat Genotypes to Beat Post Flowering Heat and Drought Stress."

**Pagadala, P. V. Vara**, **Fritz, Allan K.** (Agronomy), and **SV, Krishna J.** (Agronomy), US Agency for International Development, \$59,616, "Development and Enhancing Heat Tolerance in Wheat Using Genomics, Molecular and Physiological Tools."

**Pagadala, P. V. Vara**, **Lilja, Nina K.** (International Agricultural Programs), and **Pierzynski, Gary M.** (Agronomy), US Agency for International Development, \$5,298,541, "Innovation Lab on Sustainable Intensification."

**Pagadala, P. V. Vara**, and **Reyes, Manuel R.**, US Agency for International Development, "Scaling Up Drip Irrigation, Conservation Agriculture and Rainwater Harvesting for Commercial Vegetable Home Gardens to Specially Benefit Women and Youth."

**Reyes, Manuel R.**, US Agency for International Development, \$15,350, "Applying Drop Irrigation and The SWAT Model in Ethiopia, Tanzania and Ghana."

**Reyes, Manuel R., and Pagadala, P. V. Vara**, US Agency for International Development, \$107,806, "Scaling Up Drip Irrigation, Conservation Agriculture and Rainwater Harvesting for Commercial Vegetable Home Gardens to Specially Benefit Women and Youth."

**Stewart, Zachary P., Middendorf, B. Jan, Pagadala, P. V. Vara, and Pierzynski, Gary M.** (Agronomy), International Fertilizer Development Center, "Sustainable Soil Fertility Prioritization in Sub-Sahara Africa."

**Vipham, Jessie, Bradford, Barry J.** (Animal Sciences and Industry), **Min, Doohong** (Agronomy), **O'Quinn, Travis G.** (Animal Sciences and Industry), and **Pendell, Dustin L.** (Agricultural Economics), US Agency for International Development, \$94,818, "Linking Cattle Nutrition to Human Nutrition: A Value Chain Approach to Improving the Production, Handling, and Consumption of Animal Source Foods in Ethiopia."

**Wiley, Zelia Z., Grauer, Bette** (Dean of Engineering), **Mason, April** (Office of the Provost), **Montelone, Beth A.** (Dean of Arts and Sciences), **Morales, Amanda I.** (Curriculum and Instruction), and **Thurston, Linda P.** (Dean of Education), National Science Foundation, \$25,000, "Pathways to STEM: Kansas Louis Stokes Alliance for Minority Participation."

## ENTOMOLOGY

**Chen, Ming-Shun, Schwarting, Holly N., Smith, C. Michael, and Whitworth, Robert "Jeff" J.**, Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Bird Cherry Oat Aphid."

**Chen, Ming-Shun, Schwarting, Holly N., Smith, C. Michael, and Whitworth, Robert "Jeff" J.**, Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Russian Wheat Aphid."

**Cloyd, Raymond A.**, US Department of Agriculture, \$13,750, "2015 NCR IR-4 Ornamental Horticulture Project."

**Cloyd, Raymond A., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy, Kennelly, Megan** (Plant Pathology), **McCornack, Brian P., Miller, Frannie L., Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.**, and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Cloyd, Raymond A.**, Valent USA Corporation, \$2,000, "Greenhouse Evaluation of Experimental Insecticide."

**Johnson, Wendy, Assefa Mulisa, Yared** (Agronomy), **Ciampitti, Ignacio** (Agronomy), and **McCornack, Brian P.**, Kansas Corn Commission, \$4,453, "Corn Management Decision Guiding Website and Mobile App."

**Johnson, Wendy, McCornack, Brian P., Poland, Jesse A.** (Plant Pathology), and **Smith, C. Michael**, Kansas Wheat Commission, \$4,703, "Integrative and Innovative Approaches to Diminish Barley Yellow Dwarf Epidemics in Kansas Wheat."

**Johnson, Wendy, Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A., DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P., Miller, Frannie L., Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.**, and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$19,460, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**McCornack, Brian P., and Ciampitti, Ignacio** (Agronomy), Kansas Corn Commission, \$67,500, "Beyond the Summer Science Institute - Using Corn in the Curriculum to Advance Inquiry-based Learning."

**McCornack, Brian P., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Flippo, Daniel** (Biological and Agricultural Engineering), **Sharda, Ajay** (Biological and Agricultural Engineering), and **Zukoff, Sarah N.** (Southwest Area Office), Kansas Corn Commission, \$7,598, "Comprehensive Study of Light Wavelength and Image Processing to Automatically Identify Corn Pests."

**McCornack, Brian P., Assefa Mulisa, Yared** (Agronomy), **Ciampitti, Ignacio** (Agronomy), and **Johnson, Wendy**, Kansas Corn Commission, \$26,715, "Corn Management Decision Guiding Website and Mobile App."

**McCornack, Brian P.**, Kansas Soybean Commission, \$48,750, "Agricultural Research Experiences for Teachers (RET) - Using Soybean as a Model System."

**McCornack, Brian P., Schapaugh Jr, William T.** (Agronomy), **Smith, C. Michael**, and **Whitworth, Robert "Jeff" J.**, Kansas Soybean Commission, \$16,678, "Development of Genetic, Chemical and Population-Based Tactics to Manage Key Kansas Soybean Insect Pests."

**McCornack, Brian P., Johnson, Wendy, Poland, Jesse A.** (Plant Pathology), and **Smith, C. Michael**, Kansas Wheat Commission, \$4,703, "Integrative and Innovative Approaches to Diminish Barley Yellow Dwarf Epidemics in Kansas Wheat."

**McCornack, Brian P.**, North Central Soybean Research Program, \$30,000, "Soybean Entomology in the North Central Region: Management and Outreach for New and Existing Pests."

**McCornack, Brian P., Michaud, John P., and Zukoff, Sarah N.** (Southwest Research Extension Center), United Sorghum Checkoff Program, \$13,600, "2017 Sugarcane Aphid (SCA) Research - Best Management Practices."

**McCornack, Brian P.**, US Department of Agriculture, \$70,325, "Areawide Pest Management of the Invasive Sugarcane Aphid in Grain Sorghum."

**McCornack, Brian P., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A., DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy, Kennelly, Megan** (Plant Pathology), **Miller, Frannie L., Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.**, and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Michaud, John P.**, National Sunflower Association, \$12,000, "Efficacy and Economics of Insecticide Seed Treatments for Management of Wireworms and Seed Corn Maggots in Sunflowers."

**Michaud, John P., McCornack, Brian P., and Zukoff, Sarah N.** (Southwest Research Extension Center), United Sorghum Checkoff Program, \$13,200, "2017 Sugarcane Aphid (SCA) Research - Best Management Practices."

**Michaud, John P.**, US Department of Agriculture, \$19,400, "Areawide Pest Management of the Invasive Sugarcane Aphid in Grain Sorghum - Kansas, Sugarcane Aphid Monitoring and Biocontrol."

**Miller, Frannie L.**, CropLife Foundation, \$25,000, "Challenging Opportunities for the Kansas Pesticide Safety Education Program."

**Miller, Frannie L., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A., DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy, Kennelly, Megan** (Plant Pathology), **McCornack, Brian P., Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J., and Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$33,360, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Ruberson, John R.,** Support Funds, \$24,500, "AEN Multi-Sponsor Off-Campus 26."

**Ruberson, John R.,** US Department of Agriculture, \$45,000, "Biology of Dipteran Vectors of diseases Impacting Livestock and Humans."

**Ruberson, John R.,** US Department of Agriculture, \$30,000, "Invasive Mosquito Project."

**Schwarting, Holly N., Chen, Ming-Shun, Smith, C. Michael, and Whitworth, Robert "Jeff" J.,** Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Bird Cherry Oat Aphid."

**Schwarting, Holly N., Chen, Ming-Shun, Smith, C. Michael, and Whitworth, Robert "Jeff" J.,** Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Russian Wheat Aphid."

**Smith, C. Michael, McCornack, Brian P., Schapaugh Jr, William T.** (Agronomy), and **Whitworth, Robert "Jeff" J.,** Kansas Soybean Commission, \$16,678, "Development of Genetic, Chemical and Population-Based Tactics to Manage Key Kansas Soybean Insect Pests."

**Smith, C. Michael, Chen, Ming-Shun, Schwarting, Holly N., and Whitworth, Robert "Jeff" J.,** Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Bird Cherry Oat Aphid."

**Smith, C. Michael, Chen, Ming-Shun, Schwarting, Holly N., and Whitworth, Robert "Jeff" J.,** Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Russian Wheat Aphid."

**Smith, C. Michael, Johnson, Wendy, McCornack, Brian P., and Poland, Jesse A.** (Plant Pathology), Kansas Wheat Commission, \$28,218, "Integrative and Innovative Approaches to Diminish Barley Yellow Dwarf Epidemics in Kansas Wheat."

**Whitworth, Robert "Jeff" J., McCornack, Brian P., Schapaugh Jr, William T.** (Agronomy), and **Smith, C. Michael,** Kansas Soybean Commission, \$16,678, "Development of Genetic, Chemical and Population-Based Tactics to Manage Key Kansas Soybean Insect Pests."

**Whitworth, Robert "Jeff" J., Chen, Ming-Shun, Schwarting, Holly N., and Smith, C. Michael,** Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Bird Cherry Oat Aphid."

**Whitworth, Robert "Jeff" J., Chen, Ming-Shun, Schwarting, Holly N., and Smith, C. Michael,** Kansas Wheat Commission, \$12,500, "Impact of Temperature on Genetic Resistance to Hessian Fly, Wheat Curl Mite and Russian Wheat Aphid."

**Whitworth, Robert "Jeff" J.,** US Department of Agriculture, \$60,000, "Functions of Hessian Fly Effector Proteins in Wheat."



**Whitworth, Robert "Jeff" J., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A., DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy, Kennelly, Megan** (Plant Pathology), **McCornack, Brian P., Miller, Frannie L., Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$13,900, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Zhu, Kun Yan, and Maghirang, Ronaldo G.** (Biological and Agricultural Engineering), US Department of Agriculture, \$404,999, "Improving Efficacy of Aerosol Applications for Control of Stored Product Insects in Wheat and Rice Mills."

**Zolnerowich, Gregory,** National Science Foundation, \$23,046, "Digitization TCN: Lepidoptera of North America Network: Documenting Diversity in the Largest Clade of Herbivores."

**Zurek, Ludek,** Central Life Sciences, \$30,000, "Evaluation of the Role of House Flies and Face Flies in Transmission of Escherichia coli O157 and Pathogens Associated with Bovine Respiratory Disease (BRD) in Cattle Feedlots."

**Zurek, Ludek,** US Department of Agriculture, \$13,671, "Genomics and Metagenomics of Antimicrobial-resistance in the Poultry Production Ecosystem."

**Zurek, Ludek, Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), and **Tonsor, Glynn T.** (Agricultural Economics), US Department of Agriculture, \$460, "Shigatoxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Zurek, Ludek,** Water Environment Research Foundation, \$25,524, "High Quality Biosolids from Wastewater: Templates for Assessing Quality, Demonstrating Use, and Entering Markets."

#### **FOOD SCIENCE INSTITUTE**

**Kastner, Curtis L., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Cernicchiaro, Natalia** (Diagnostic Medicine/Pathobiology), **Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Justin J.** (Diagnostic Medicine/Pathobiology), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), **Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U.** (Diagnostic Medicine/Pathobiology), **Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$2,762, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

#### **GRAIN SCIENCE AND INDUSTRY**

**Alavi, Sajid, and Maichel, Eric W.,** Hampton Creek Inc, "Testing and Evaluation Services Agreement."

**Alavi, Sajid, and Chambers IV, Edgar** (Human Nutrition), PepsiCo, Inc., \$1,250,000, "Kansas State University Product Development Accelerator."

**Alavi, Sajid,** PepsiCo, Inc., \$75,000, "Nucleation and Expansion Phenomena in Direct Expanded Snacks and Half Products/Snack Pellets Using Extrusion: Interactions between Starch, Fiber and Salt.."

**Alavi, Sajid, Campabadal Teran, Carlos, Ciampitti, Ignacio** (Agronomy), **O'Neil III, Howard J.**, and **Paulk, Chad B.**, US Soybean Export Council, Inc., \$3,610, "USSEC Addendum to Independent Contractor Master Agreement 17KA02U34A."

**Aldrich, Greg**, Camlin Fine Sciences, \$84,813, "Evaluation of Antioxidant Preservatives Applied to Chicken Fat and Fish Oil."

**Aldrich, Greg, Jones, Cassandra K.** (Animal Sciences and Industry), and **Trinetta, Valentina** (Animal Sciences and Industry), Fats and Proteins Research Foundation, Inc., "Assessing Factors Affecting Salmonella in Poultry Fat."

**Aldrich, Greg**, Flint Hills Resources LP, \$82,488, "Evaluation of Distillers Dried Grains as a Dietary Ingredient in Dog and Cat Diets."

**Aldrich, Greg**, Renew Biomass, \$84,960, "Evaluation of Miscanthus as a Source of Fiber in Dog and Cat Diets."

**Aldrich, Greg**, Smart Earth Seeds, \$2,000, "The Effect of Diet on the Allergenicity of Cats to Susceptible Humans: A Review of the Literature with a List of Possible Steps Forward."

**Aldrich, Greg**, and **Beyer, R. Scott** (Animal Sciences and Industry), Veterinary Prime, \$8,529, "Evaluation of the Protein Quality of Chicken Proteins."

**Aldrich, Greg**, Zinpro Corporation, \$28,143, "The Effect of Copper Source on Appearance, Spots, Off Colors, Blemishes, and Other Degradation Products in a Canned Pet Food."

**Bhadriraju, Subramanyam, Campabadal Teran, Carlos, Harvey, Jagger J.** (Dean of Agriculture and Director of AES), **Leslie, John F.** (Plant Pathology), **Lilja, Nina K.** (International Agricultural Programs), **Lindshield, Brian L.** (Human Nutrition), and **Ulmer, Jonathan** (Communications), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Smith, Gordon L., and Thiele, Shawn M.**, Kansas Corn Commission, \$30,000, "Market Development Grant - International Grains Program."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Smith, Gordon L.**, Kansas Grain Sorghum Commission, "Market Development Grant - International Grains Program."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Smith, Gordon L., and Thiele, Shawn M.**, Kansas Soybean Commission, "Market Development Grant - International Grains Program."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Smith, Gordon L., and Thiele, Shawn M.**, Kansas Wheat Commission, "Market Development Grant - IGP Institute."

**Campabadal Teran, Carlos**, and **Schwab, Benjamin B.** (Agricultural Economics), US Agency for International Development, \$27,104, "Appropriate-Scale Mechanization Consortium for Sustainable Intensification."

**Campabadal Teran, Carlos, Bhadriraju, Subramanyam, Harvey, Jagger J.** (Dean of Agriculture and Director of AES), **Leslie, John F.** (Plant Pathology), **Lilja, Nina K.** (International Agricultural Programs), **Lindshield, Brian L.** (Human Nutrition), and **Ulmer, Jonathan** (Communications), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Campabadal Teran, Carlos, Harvey, Jagger J.** (Dean of Agriculture and Director of AES), and **Leslie, John F.** (Plant Pathology), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss (Honduras Buy-in)."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, US Department of Agriculture, \$4,627, "Cochran Program for Ethiopia - Introduction to US Wheat Quality and Grading."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, US Department of Agriculture, \$17,270, "USDA SCEP Training Program on Technology Mode of Silage Corn Production and Processing."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Paulk, Chad B., Stark, Charles, and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$8,400, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F44A."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Paulk, Chad B., Stark, Charles, and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$27,200, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54A."

**Campabadal Teran, Carlos, Alavi, Sajid, Ciampitti, Ignacio (Agronomy), O'Neil III, Howard J., and Paulk, Chad B.**, US Soybean Export Council, Inc., \$7,220, "USSEC Addendum to Independent Contractor Master Agreement 17KA02U34A."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$14,400, "USSEC Addendum to Independent Contractor master Agreement 17KA02U54A."

**Campabadal Teran, Carlos, Bradford, Barry J. (Animal Sciences and Industry), Brouk, Micheal J. (Animal Sciences and Industry), Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$20,400, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54B."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$27,972, "USSEC Addendum to Independent Contractor Master Agreement: 17KS02U64A."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Stark, Charles, and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$15,600, "USSEC Addendum to Independent Contractor Master Agreement: 16KA01F64A."

**Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$3,780, "USSEC Addendum to Independent Contractor Master Agreement: 17KA02M54A."

**Jones, Cassandra K., Miller, Brandi M., and Stark, Charles**, US Department of Health and Human Services, "Compilation of a Food Safety Preventive Controls Animal Food Training Curriculum."

**Li, Yonghui, and Jones, Cassandra K. (Animal Sciences and Industry)**, Kansas Corn Commission, \$33,327, "Converting Distiller's Grains to High-Value Healthy Natural Antioxidants."

**Li, Yonghui, and Regan-Miller, Rebecca A.**, PepsiCo, Inc., \$49,709, "Understanding the Functionality of Sodium in PepsiCo Dough Systems."

**Maichel, Eric W., and Alavi, Sajid**, Hampton Creek Inc, \$7,647, "Testing and Evaluation Services Agreement."

**Miller, Brandi M.**, Centers for Disease Control and Prevention, \$3,750, "Flour Fortification Monitoring Course."

**Miller, Brandi M.**, Centers for Disease Control and Prevention, \$3,450, "Food Fortification Initiative."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., Smith, Gordon L., and Thiele, Shawn M.**, Kansas Corn Commission, \$30,000, "Market Development Grant - International Grains Program."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., and Smith, Gordon L.,** Kansas Grain Sorghum Commission, "Market Development Grant - International Grains Program."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., Smith, Gordon L., and Thiele, Shawn M.,** Kansas Soybean Commission, "Market Development Grant - International Grains Program."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., Smith, Gordon L., and Thiele, Shawn M.,** Kansas Wheat Commission, "Market Development Grant - IGP Institute."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., and Thiele, Shawn M.,** US Department of Agriculture, \$11,569, "Cochran Program for Ethiopia - Introduction to US Wheat Quality and Grading."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., and Thiele, Shawn M.,** US Department of Agriculture, \$28,784, "USDA SCEP Training Program on Technology Mode of Silage Corn Production and Processing."

**Miller, Brandi M., Jones, Cassandra K. (Animal Sciences and Industry), and Stark, Charles,** US Department of Health and Human Services, \$5,362, "Compilation of a Food Safety Preventive Controls Animal Food Training Curriculum."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., Paulk, Chad B., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$2,100, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F44A."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., Paulk, Chad B., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$6,800, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54A."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$3,600, "USSEC Addendum to Independent Contractor master Agreement 17KA02U54A."

**Miller, Brandi M., Bradford, Barry J. (Animal Sciences and Industry), Brouk, Micheal J. (Animal Sciences and Industry), Campabadal Teran, Carlos, O'Neil III, Howard J., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$5,100, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54B."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$3,996, "USSEC Addendum to Independent Contractor Master Agreement: 17KS02U64A."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$2,600, "USSEC Addendum to Independent Contractor Master Agreement: 16KA01F64A."

**Miller, Brandi M., Campabadal Teran, Carlos, O'Neil III, Howard J., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$630, "USSEC Addendum to Independent Contractor Master Agreement: 17KA02M54A."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., Smith, Gordon L., and Thiele, Shawn M.,** Kansas Corn Commission, \$30,000, "Market Development Grant - International Grains Program."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., and Smith, Gordon L.,** Kansas Grain Sorghum Commission, "Market Development Grant - International Grains Program."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., Smith, Gordon L., and Thiele, Shawn M.,** Kansas Soybean Commission, "Market Development Grant - International Grains Program."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., Smith, Gordon L., and Thiele, Shawn M.,** Kansas Wheat Commission, "Market Development Grant - IGP Institute."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., and Thiele, Shawn M.,** US Department of Agriculture, \$4,627, "Cochran Program for Ethiopia - Introduction to US Wheat Quality and Grading."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., and Thiele, Shawn M.,** US Department of Agriculture, \$5,757, "USDA SCEP Training Program on Technology Mode of Silage Corn Production and Processing."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., Paulk, Chad B., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$2,100, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F44A."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., Paulk, Chad B., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$6,800, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54A."

**O'Neil III, Howard J., Alavi, Sajid, Campabadal Teran, Carlos, Ciampitti, Ignacio (Agronomy), and Paulk, Chad B.,** US Soybean Export Council, Inc., \$16,245, "USSEC Addendum to Independent Contractor Master Agreement 17KA02U34A."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$14,400, "USSEC Addendum to Independent Contractor master Agreement 17KA02U54A."

**O'Neil III, Howard J., Bradford, Barry J. (Animal Sciences and Industry), Brouk, Micheal J. (Animal Sciences and Industry), Campabadal Teran, Carlos, Miller, Brandi M., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$5,100, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54B."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$3,996, "USSEC Addendum to Independent Contractor Master Agreement: 17KS02U64A."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$2,600, "USSEC Addendum to Independent Contractor Master Agreement: 16KA01F64A."

**O'Neil III, Howard J., Campabadal Teran, Carlos, Miller, Brandi M., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$7,560, "USSEC Addendum to Independent Contractor Master Agreement: 17KA02M54A."

**Paulk, Chad B., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$3,150, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F44A."

**Paulk, Chad B., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Stark, Charles, and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$10,200, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54A."

**Paulk, Chad B., Alavi, Sajid, Campabadal Teran, Carlos, Ciampitti, Ignacio (Agronomy), and O'Neil III, Howard J.,** US Soybean Export Council, Inc., \$5,415, "USSEC Addendum to Independent Contractor Master Agreement 17KA02U34A."

**Regan-Miller, Rebecca A.,** Kansas Wheat Commission, \$135,000, "Kansas Wheat Quality Lab: KAES Wheat Breeding Quality Evaluation Program 2017."

**Regan-Miller, Rebecca A., and Li, Yonghui**, PepsiCo, Inc., \$3,742, "Understanding the Functionality of Sodium in PepsiCo Dough Systems."

**Shi, Yong Cheng**, Sappi North America, \$110,000, "Modification of Starch for Applications in Paper Industry."

**Smith, Gordon L., and Thiele, Shawn M.**, Bay State Milling Company, "Teasting and Evaluation Services Agreement."

**Smith, Gordon L., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, Kansas Corn Commission, \$30,000, "Market Development Grant - International Grains Program."

**Smith, Gordon L., Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.**, Kansas Grain Sorghum Commission, \$30,000, "Market Development Grant - International Grains Program."

**Smith, Gordon L., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, Kansas Soybean Commission, \$100,000, "Market Development Grant - International Grains Program."

**Smith, Gordon L.**, Kansas State University Foundation, \$195,000, "Grain Science and Industry Buhler Instructor of Milling."

**Smith, Gordon L., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.**, Kansas Wheat Commission, \$100,000, "Market Development Grant - IGP Institute."

**Smith, Gordon L., and Thiele, Shawn M.**, Praxair, Inc., "Testing and Evaluation of Pneumatic Conveying System."

**Stark, Charles, Amachawadi, Raghavendra G.** (Diagnostic Medicine/Pathobiology), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Niederwerder, Megan** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$2,687 (includes \$479 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Stark, Charles, and Jones, Cassandra K.** (Animal Sciences and Industry), National Pork Board, \$2,500, "Role of Moisture Addition on Pellet Quality in Finishing Pig Feed."

**Stark, Charles**, Novus International, \$28,500, "Novus Particle Dispersion and Pelleting Efficiency."

**Stark, Charles, and Drouillard, James S.** (Animal Sciences and Industry), Syngenta Crop Protection, LLC, \$49,308, "Steam Flaking."

**Stark, Charles, Jones, Cassandra K.** (Animal Sciences and Industry), and **Miller, Brandi M.**, US Department of Health and Human Services, \$21,450, "Compilation of a Food Safety Preventive Controls Animal Food Training Curriculum."

**Stark, Charles, Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Paulk, Chad B., and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$3,150, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F44A."

**Stark, Charles, Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Paulk, Chad B., and Thiele, Shawn M.**, US Soybean Export Council, Inc., \$10,200, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54A."

**Stark, Charles, Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Thiele, Shawn M.,** US Soybean Export Council, Inc., \$2,600, "USSEC Addendum to Independent Contractor Master Agreement: 16KA01F64A."

**Thiele, Shawn M., and Smith, Gordon L.,** Bay State Milling Company, \$6,000, "Teasting and Evaluation Services Agreement."

**Thiele, Shawn M.,** Hampton Creek Inc, \$8,904, "Hampton Creek Inc Testing & Evaluation Services Agreement."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Smith, Gordon L.,** Kansas Corn Commission, \$30,000, "Market Development Grant - International Grains Program."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Smith, Gordon L.,** Kansas Soybean Commission, "Market Development Grant - International Grains Program."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Smith, Gordon L.,** Kansas Wheat Commission, "Market Development Grant - IGP Institute."

**Thiele, Shawn M., and Smith, Gordon L.,** Praxair, Inc., \$2,000, "Testing and Evaluation of Pneumatic Conveying System."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.,** US Department of Agriculture, \$25,451, "Cochran Program for Ethiopia - Introduction to US Wheat Quality and Grading."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.,** US Department of Agriculture, \$5,757, "USDA SCEP Training Program on Technology Mode of Silage Corn Production and Processing."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Paulk, Chad B., and Stark, Charles,** US Soybean Export Council, Inc., \$2,100, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F44A."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., Paulk, Chad B., and Stark, Charles,** US Soybean Export Council, Inc., \$6,800, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54A."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.,** US Soybean Export Council, Inc., \$3,600, "USSEC Addendum to Independent Contractor master Agreement 17KA02U54A."

**Thiele, Shawn M., Bradford, Barry J. (Animal Sciences and Industry), Brouk, Micheal J. (Animal Sciences and Industry), Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.,** US Soybean Export Council, Inc., \$5,100, "USSEC Addendum to Independent Contractor Master Agreement 17KA02F54B."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.,** US Soybean Export Council, Inc., \$3,996, "USSEC Addendum to Independent Contractor Master Agreement: 17KS02U64A."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., O'Neil III, Howard J., and Stark, Charles,** US Soybean Export Council, Inc., \$2,600, "USSEC Addendum to Independent Contractor Master Agreement: 16KA01F64A."

**Thiele, Shawn M., Campabadal Teran, Carlos, Miller, Brandi M., and O'Neil III, Howard J.,** US Soybean Export Council, Inc., \$630, "USSEC Addendum to Independent Contractor Master Agreement: 17KA02M54A."

**Vadlani, Praveen V.**, Kansas State University Foundation, \$40,000, "Grain Science & Industry Lortscher Professorship."

#### **HORTICULTURE, FORESTRY AND RECREATION RESOURCES**

**Baldwin (Blocksome), Carolyn E.**, Kansas Department of Health and Environment, \$163,634, "Flint Hills Smoke Emissions Unmanned Aerial Vehicle Project."

**Baldwin (Blocksome), Carolyn E.**, US Environmental Protection Agency, \$15,000, "Kansas Flint Hills Smoke Management Plan."

**Barden, Charles J.**, National Wild Turkey Federation, \$2,000, "Using Prescribed Fire and Thinning to Encourage Oak Regeneration in the Flint Hills."

**Barden, Charles J.**, US Department of Agriculture, \$25,500, "Stream Bank Best Management Practices on Tribal Lands in Northeastern Kansas."

**Barden, Charles J., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Rahmani, Vahid** (Biological and Agricultural Engineering), and **Sheshukov, Aleksey Y.** (Biological and Agricultural Engineering), US Department of the Interior, \$1,940, "Kansas Water Resources Research Institute 2016."

**Barden, Charles J.**, and **Moore, Trisha L.** (Biological and Agricultural Engineering), Water Environment Research Foundation, \$49,992, "Forestry-stormwater Programs: Advancing Science and Application."

**Boyer, Cheryl R.**, and **Baker, Lauri M.** (Communications), US Department of Agriculture, \$61,918, "Courting the Consumer: Social-Media Marketing of Farm Products."

**Boyer, Cheryl R., Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared, Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S., Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Fry, Jack D., Hoyle, Jared,** and **Kennelly, Megan** (Plant Pathology), Heart of America GCSA, \$1,700, "Turf Research."

**Fry, Jack D.**, and **Kennelly, Megan** (Plant Pathology), National Turfgrass Evaluation Program, Inc., \$1,500, "2012 National Tall Fescue Test Ancillary Trial-Brown Patch Tolerance (TF-12-16)."

**Fry, Jack D.**, National Turfgrass Evaluation Program, Inc., \$1,000, "2014 National Bentgrass (Fairway/Tee) Test; BTF-14-01."

**Fry, Jack D.**, National Turfgrass Evaluation Program, Inc., \$1,500, "2014 National Bentgrass (Putting Green) Test; BTG-14-10."

**Fry, Jack D.**, National Turfgrass Evaluation Program, Inc., \$1,500, "Research Support Agreement (Grant-in-Aid) for the 2013 National Bermudagrass Test BG-13-04."

**Fry, Jack D.**, National Turfgrass Evaluation Program, Inc., \$2,500, "Research Support Agreement (Grant-in-Aid) for the 2013 National Zoysiagrass Test ZG-13-04."

**Fry, Jack D.**, National Turfgrass Evaluation Program, Inc., \$1,000, "Research Support Agreement (Grant-In-Aid) for the 2016 National Perennial Ryegrass Test."



**Fry, Jack D.**, National Turfgrass Evaluation Program, Inc., \$600, "Turfgrass Testing - Kentucky Bluegrass."

**Fry, Jack D.**, and **Kennelly, Megan** (Plant Pathology), US Golf Association, Inc., \$7,482, "Development of Fine-Textured, Large Patch-Resistant Zoysiagrass Cultivars with Enhanced Cold Hardiness for the Transition Zone."

**Griffin, Jason**, Schmidt, J. Frank, Family Charitable Foundation, \$4,000, "Evaluation of Ornamental Species for the Great Plains."

**Hoyle, Jared, Fry, Jack D.**, and **Kennelly, Megan** (Plant Pathology), Heart of America GCSA, \$1,650, "Turf Research."

**Hoyle, Jared**, Support Funds, \$57,800, "AHF Support Funds Research 26."

**Hoyle, Jared, Boyer, Cheryl R., Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S., Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Miller, Chad T.**, and **Williams, Kimberly A.**, Gloeckner Foundation, Inc. (Fred C.), \$4,000, "Understanding and Abating Intumescence Development in Angelonia and Solanum spp.."

**Park, Sunghun**, Kansas Corn Commission, \$32,533, "A Genetic Engineering Strategy to Develop Heat, Drought, and Cold Tolerant Kansas Corn."

**Park, Sunghun**, and **SV, Krishna J.** (Agronomy), Kansas Corn Commission, \$21,472, "Field Performance to Develop Genetically Engineered Heat and Drought Tolerant Kansas Corn."

**Park, Sunghun**, and **SV, Krishna J.** (Agronomy), TechAccel, LLC, \$26,562, "Validating "Promising" Rice Transgenic Events Identified with Potential Superior Salt Stress Resilience."

**Park, Sunghun, DeWolf, Erick D.** (Plant Pathology), **Stack, James P.** (Plant Pathology), **Trick, Harold N.** (Plant Pathology), and **Valent, Barbara S.** (Plant Pathology), US Department of Agriculture, "Novel Strategies for Managing Blast Diseases on Rice and Wheat."

**Park, Sunghun, Oliveira Garcia, Ely** (Plant Pathology), and **Valent, Barbara S.** (Plant Pathology), US Department of Agriculture, \$50,746, "On the Mechanism of Translocation of Effectors into Living Rice Cells by the Blast Fungus Magnaporthe Oryzae."

**Pliakoni, Eleni**, and **Rivard, Cary L.**, US Department of Agriculture, \$110,445, "Growing New Roots: Grafting to Enhance Resiliency in US Vegetable Industries."

**Pliakoni, Eleni, Rivard, Cary L.**, and **Shoemaker, Candice A.**, US Department of Agriculture, "Urban Food Systems: Linking Inter-disciplinary Students to a Complex Food System."

**Pliakoni, Eleni, Aramouni, Fadi M.** (Animal Sciences and Industry), **Bates, Marlin A.** (County Agents - Metropolitan Sector), **Gragg, Sara E.** (Animal Sciences and Industry), **Nwadike, Londa S.** (Director of Cooperative Extension), **Phebus, Randall K.** (Animal Sciences and Industry), and **Rivard, Cary L.**, US Food and Drug Administration, \$400, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

**Ricketts, Andrew M.**, National Wild Turkey Federation, \$2,520, "Habitat Improvements for the Future of Wildlife Management."

**Rivard, Cary L.**, US Department of Agriculture, \$200,000, "A Multi-regional Approach for Sustained Soil Health in Organic High Tunnels: Nutrient Management, Economics, and Educational Programming."

**Rivard, Cary L.**, and **Pliakoni, Eleni**, US Department of Agriculture, \$110,445, "Growing New Roots: Grafting to Enhance Resiliency in US Vegetable Industries."

**Rivard, Cary L.**, **Ellis, Jason D.** (Communications), **Gragg, Sara E.** (Animal Sciences and Industry), **Nwadike, Londa S.** (Director of Cooperative Extension), and **Trinetta, Valentina** (Animal Sciences and Industry), US Department of Agriculture, \$22,616, "Strengthening Food Safety Education and Outreach for Kansas and Missouri Fruit and Vegetable Producers."

**Rivard, Cary L.**, and **Nwadike, Londa S.** (Director of Cooperative Extension), US Department of Agriculture, \$13,341, "Strengthening Food Safety Education for Kansas Fruit and Vegetable Producers."

**Rivard, Cary L.**, **Pliakoni, Eleni**, and **Shoemaker, Candice A.**, US Department of Agriculture, "Urban Food Systems: Linking Inter-disciplinary Students to a Complex Food System."

**Rivard, Cary L.**, **Aramouni, Fadi M.** (Animal Sciences and Industry), **Bates, Marlin A.** (County Agents - Metropolitan Sector), **Gragg, Sara E.** (Animal Sciences and Industry), **Nwadike, Londa S.** (Director of Cooperative Extension), **Phebus, Randall K.** (Animal Sciences and Industry), and **Pliakoni, Eleni**, US Food and Drug Administration, \$2,000, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

**Sharp, Ryan L.**, Kansas Department of Wildlife and Parks, \$4,651, "Visitor and Public Attitudes Towards Tuttle Creek State Park."

**Sharp, Ryan L.**, US Department of the Interior, \$224,141, "Research to Inform Visitor Use Management Planning at Theodore Roosevelt National Park."

**Sharp, Ryan L.**, US Department of the Interior, \$13,341, "Visitor Flow, Pattern and Resource Usage Proposal Fort Larned National Historic Site."

**Sharp, Ryan L.**, US Department of the Interior, \$44,909, "Visitor Use Study Proposal: Brown v. Board of Education National Historic Site."

**Shoemaker, Candice A.**, Support Funds, \$1,000, "AHF Multi Sponsor Extension 0."

**Shoemaker, Candice A.**, Support Funds, \$80,000, "AHF Support Funds Research 0."

**Shoemaker, Candice A.**, **Pliakoni, Eleni**, and **Rivard, Cary L.**, US Department of Agriculture, \$119,604, "Urban Food Systems: Linking Inter-disciplinary Students to a Complex Food System."

**Upham, Ward S.**, **Boyer, Cheryl R.**, **Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared**, **Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Williams, Kimberly A.**, and **Miller, Chad T.**, Gloeckner Foundation, Inc. (Fred C.), \$4,000, "Understanding and Abating Intumescence Development in Angelonia and Solanum spp.."

## **INTERNATIONAL AGRICULTURAL PROGRAMS**

**DeRouchev, Joel M., Amachawadi, Raghavendra G.** (Clinical Sciences), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Micronutrients, \$5,050, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."

**Lilja, Nina K., Bhadriraju, Subramanyam** (Grain Science and Industry), **Campabadal Teran, Carlos** (Grain Science and Industry), **Harvey, Jagger J.** (Dean of Agriculture and Director of AES), **Leslie, John F.** (Plant Pathology), **Lindshield, Brian L.** (Human Nutrition), and **Ulmer, Jonathan** (Communications), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Lilja, Nina K., Pagadala, P. V. Vara** (Dean of Agriculture and Director of AES), and **Pierzynski, Gary M.** (Agronomy), US Agency for International Development, "Innovation Lab on Sustainable Intensification."

**Lilja, Nina K., Amanor-Boadu, Vincent R.** (Agricultural Economics), and **Featherstone, Allen M.** (Agricultural Economics), US Agency for International Development, \$66,135, "Strengthening the Capacity of the Department of Agribusiness and Natural Resource Economics (DANRE) in the College of Agricultural and Environmental Sciences (CAES), Makerere University."

## **KS CTR FOR AG RSRCES & THE ENV / KS WATER RSRCE RSRCH INST**

**Devlin, Daniel L.,** City of Hays, KS, \$9,000, "Storm Water Educational Outreach Efforts."

**Devlin, Daniel L.,** Kansas Department of Health and Environment, \$720,368, "Kansas Watershed Specialists SFY17-19."

**Devlin, Daniel L.,** Kansas Department of Health and Environment, \$475,500, "KS WRAPS --- Big Creek/Middle Smoky Hill River Watersheds WRAPS (Kanopolis Reservoir) Implementation Years 8 - 10."

**Devlin, Daniel L.,** Kansas Department of Health and Environment, \$205,720 (includes \$31,720 from Saline County Conservation District BMP), "Upper Lower Smoky Hill River WRAPS Implementation SFY17-19."

**Devlin, Daniel L.,** and **Golden, Bill B.** (Agricultural Economics), Kansas Water Office, \$6,250, "Monitoring the Impacts of Sheridan County 6 Local Enhanced Management Area."

**Devlin, Daniel L.,** and **Golden, Bill B.** (Agricultural Economics), Kansas Water Office, \$750, "Monitoring the Impacts of Willis Technology Farms - KWO Contract 16-128."

**Devlin, Daniel L., Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R.** (Agronomy), **Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), **Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi** (Agronomy), **Tomlinson, Peter J.** (Agronomy), and **Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, \$949,142, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Devlin, Daniel L., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$62,233, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Devlin, Daniel L.**, US Department of the Interior, \$45,000, "Direction of Peer Review and Selection Panel Activities for FY 2017 U.S. Geological Survey - National Institutes for Water Resources National Competitive Grants Program."

**Devlin, Daniel L., Barden, Charles J.** (Horticulture, Forestry and Recreation Resources), **Rahmani, Vahid** (Biological and Agricultural Engineering), and **Sheshukov, Aleksey Y.** (Biological and Agricultural Engineering), US Department of the Interior, \$9,699, "Kansas Water Resources Research Institute 2016."

**Devlin, Daniel L., Hutchinson, Stacy L.** (Biological and Agricultural Engineering), and **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), US Department of the Interior, \$14,830, "Water Research for the Fort Riley Net Zero Initiative."

**Devlin, Daniel L.**, US Environmental Protection Agency, \$475,500, "Little Arkansas River WRAPS: Implementation SFY 17-19."

**Graber, Ronald W., and Moore, Trisha L.** (Biological and Agricultural Engineering), City of Wichita, KS, \$5,340, "Sedimentation Abatement -- Establishing an Offsite BMP Program with the City of Wichita, KS."

#### **NORTHWEST RESEARCH EXTENSION CENTER**

**Aiken, Robert M., Little, Christopher R.** (Plant Pathology), and **Perumal, Ramasamy** (Agricultural Research Center-Hays), Kansas Grain Sorghum Commission, \$9,900, "Development of Sorghum Germplasm with Enhanced Drought Tolerance and Higher Grain Yield."

**Aiken, Robert M., Fritz, Allan K.** (Agronomy), **SV, Krishna J.** (Agronomy), and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Alliance, Inc., \$2,856, "New Selection Strategies for Drought-Tolerant Wheat."

**Aiken, Robert M.**, The Land Institute, \$41,408, "Water Productivity and Genetic Variation of Silghium Integri-folium."

**Aiken, Robert M., Lin, Xiaomao** (Agronomy), **Pierzynski, Gary M.** (Agronomy), **Presley, DeAnn R.** (Agronomy), **Roozeboom, Kraig L.** (Agronomy), and **Zambreski, Zachary T.** (Agronomy), US Department of Agriculture, \$647, "Adjusting Agricultural Practices in Response to Climate Change - Climate Resilient Agriculture."

**Aiken, Robert M., Aguilar, Jonathan P.** (Southwest Area Office), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R., Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$28,723, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Aiken, Robert M.**, West Central, Inc., \$7,000, "Redline, PGR and Enzymes for In-furrow in Corn: Validation/Established Research."

**Lamm, Freddie R., and O'Brien, Daniel M.** (Northwest Area Office), Kansas Corn Commission, \$14,250, "Efficient Irrigation Technologies for Corn - A Comparison."

**Lamm, Freddie R., Golden, Bill B.** (Agricultural Economics), **Kisekka, Isaya** (Southwest Research Extension Center), **O'Brien, Daniel M.** (Northwest Area Office), and **Schlegel, Alan J.** (Southwest Research Extension Center), Kansas Grain Sorghum Commission, \$25,500, "Sorghum Yield and Profitability Relative to Water Supply and Irrigation Management."

**Lamm, Freddie R., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$52,658, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

#### **OFFICE OF ACADEMIC PROGRAMS**

**Boggs, Donald L.,** Kansas FFA Foundation, \$103,827, "FFA Foundation Executive Director."

#### **PLANT BIOTECHNOLOGY CENTER**

**Akhunova, Alina, Akhunov, Eduard D.** (Plant Pathology), and **Fritz, Allan K.** (Agronomy), Kansas Wheat Commission, "Whole Exome Re-Sequencing of Grass Species for Wheat Breeding in Kansas."

**Akhunova, Alina, and Akhunov, Eduard D.** (Plant Pathology), US Department of Agriculture, \$37,501, "Validation, Characterization, and Deployment of QTL for Grain Yield Components in Wheat."

**DeWolf, Erick D.,** US Department of Agriculture, \$63,193, "A Predictive Model to Increase Adoption of IPM of a Mite-Virus Disease Complex in Wheat."

#### **PLANT PATHOLOGY**

**Akhunov, Eduard D.,** Heartland Plant Innovations, Inc., \$48,758, "Collaborative Research to Enhance the Flavor and Nutrition of Whole Wheat Foods."

**Akhunov, Eduard D., Akhunova, Alina** (Plant Biotechnology Center), and **Fritz, Allan K.** (Agronomy), Kansas Wheat Commission, \$60,000, "Whole Exome Re-Sequencing of Grass Species for Wheat Breeding in Kansas."

**Akhunov, Eduard D., Fritz, Allan K.** (Agronomy), and **Poland, Jesse A.,** US Department of Agriculture, \$392,000, "An Integrated Omics Approach to Accelerating Wheat Quality Improvement."

**Akhunov, Eduard D., and Trick, Harold N.,** US Department of Agriculture, \$228,000, "Genome Editing for Improving Wheat Yield and Yield-Related Traits."

**Akhunov, Eduard D., and Akhunova, Alina** (Plant Biotechnology Center), US Department of Agriculture, \$91,814, "Validation, Characterization, and Deployment of QTL for Grain Yield Components in Wheat."

**Cook, David D.,** US Department of Defense, \$248,025, "Transcriptome Engineering for Enhanced Agronomic Defense, Response and Performance."

**Cruz Sancan, Christian D.,** Grains Research and Development Corporation, \$113,824, "Biosecurity Preparedness of the Grains Industry Against Wheat Blast."

**DeWolf, Erick D., Friebe, Bernd, Fritz, Allan K.** (Agronomy), **Gill, Bikram S., and Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Commission, \$24,000, "Disease Phenotyping: Determining the Reaction of Wheat Lines to Important Diseases."

**DeWolf, Erick D., Knapp, Mary C.** (Agronomy), **Lollato, Romulo P.** (Agronomy), and **Redmond, Christopher A.** (Agronomy), Kansas Wheat Commission, \$4,000, "Extension Resources for Kansas Wheat Procedures."

**DeWolf, Erick D.**, Koch Agronomic Services, LLC, \$1,980, "MBI-106 12 Biofungicide."

**DeWolf, Erick D., Park, Sunghun** (Horticulture, Forestry and Recreation Resources), **Stack, James P., Trick, Harold N.**, and **Valent, Barbara S.**, US Department of Agriculture, "Novel Strategies for Managing Blast Diseases on Rice and Wheat."

**DeWolf, Erick D., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A.** (Entomology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy** (Entomology), **Kennelly, Megan, McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$13,900, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Dobesh, Sharon**, and **Stack, James P.**, US Department of Agriculture, \$13,800, "National Survey of Honey Bee Pests and Diseases."

**Dorn, Kevin M.**, and **Poland, Jesse A.**, US Department of Agriculture, \$75,830, "Exploring the Genomic Landscape of Perenniality within the Triticeae."

**Draper, Martin A.**, US Department of Agriculture, \$40,755, "Acquisition of Goods and Services."

**Draper, Martin A.**, US Department of Agriculture, \$40,000, "Wheat Rust Resistance Research."

**Fellers, John P., Fritz, Allan K.** (Agronomy), and **Trick, Harold N.**, Kansas Wheat Commission, "Biotech Approaches for Trait Enhancement in Wheat."

**Fellers, John P.**, and **Trick, Harold N.**, TechAccel, LLC, \$43,880, "Developing New Resistance to Wheat Viruses."

**Friebe, Bernd, Gill, Bikram S.**, and **Koo, Dalhoe**, Kansas Wheat Commission, \$18,540, "Chromosome Engineering and Development of Wheat Germplasm Resistant to Barley Yellow Dwarf Virus."

**Friebe, Bernd, DeWolf, Erick D., Fritz, Allan K.** (Agronomy), **Gill, Bikram S.**, and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Commission, "Disease Phenotyping: Determining the Reaction of Wheat Lines to Important Diseases."

**Gill, Bikram S.**, General Mills, Inc., \$50,000, "Partner Agreement for I/UCRC."

**Gill, Bikram S.**, Heartland Plant Innovations, Inc., \$50,000, "Partner Agreement for I/UCR."

**Gill, Bikram S.**, Kansas Department of Agriculture, \$210,000, "Partner Agreement for I/UCRC."

**Gill, Bikram S.**, Kansas Wheat Alliance, Inc., \$50,000, "Partner Agreement for I/UCRC."

**Gill, Bikram S., Friebe, Bernd**, and **Koo, Dalhoe**, Kansas Wheat Commission, \$4,120, "Chromosome Engineering and Development of Wheat Germplasm Resistant to Barley Yellow Dwarf Virus."

**Gill, Bikram S., DeWolf, Erick D., Friebe, Bernd, Fritz, Allan K.** (Agronomy), and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Commission, "Disease Phenotyping: Determining the Reaction of Wheat Lines to Important Diseases."

**Gill, Bikram S., Kalia, Bhanu, Lin, Guifang, Liu, Sanzhen, and Wilson, Duane L.**, Kansas Wheat Commission, "New Technology for Rapid Molecular Mapping and Deployment of Yellow Rust Resistance in Kansas Wheat."

**Gill, Bikram S.**, Kansas Wheat Commission, \$50,000, "Partner Agreement for I/UCRC."

**Gill, Bikram S., and Poland, Jesse A.**, National Science Foundation, \$50,250, "I/UCRC: Collaborative Research: Wheat Genetics Resource Center: A Public-Private Consortium."

**Gill, Bikram S.**, Pioneer Hi-Bred International, Inc., \$50,000, "Partner Agreement for I/UCRC."

**Gill, Bikram S.**, Syngenta Seeds, Inc., \$50,000, "Partner Agreement for I/UCRC."

**Kalia, Bhanu, Gill, Bikram S., Lin, Guifang, Liu, Sanzhen, and Wilson, Duane L.**, Kansas Wheat Commission, "New Technology for Rapid Molecular Mapping and Deployment of Yellow Rust Resistance in Kansas Wheat."

**Kennelly, Megan, Fry, Jack D.** (Horticulture, Forestry and Recreation Resources), and **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), Heart of America GCSA, \$1,650, "Turf Research."

**Kennelly, Megan, and Fry, Jack D.** (Horticulture, Forestry and Recreation Resources), National Turfgrass Evaluation Program, Inc., \$1,500, "2012 National Tall Fescue Test Ancillary Trial-Brown Patch Tolerance (TF-12-16)."

**Kennelly, Megan, Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D., Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy** (Entomology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$22,240, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

**Kennelly, Megan, and Fry, Jack D.** (Horticulture, Forestry and Recreation Resources), US Golf Association, Inc., \$7,482, "Development of Fine-Textured, Large Patch-Resistant Zoysiagrass Cultivars with Enhanced Cold Hardiness for the Transition Zone."

**Koo, Dalhoe, Friebe, Bernd, and Gill, Bikram S.**, Kansas Wheat Commission, \$18,540, "Chromosome Engineering and Development of Wheat Germplasm Resistant to Barley Yellow Dwarf Virus."

**Leslie, John F.**, International Institute for Tropical Agriculture, \$139,600, "Collaboration Agreement."

**Leslie, John F.**, Support Funds, \$12,000, "APP Multi-Sponsor Public Service 35."

**Leslie, John F.**, Support Funds, \$3,250, "APP Multi-Sponsor Research 50."

**Leslie, John F., Bhadriraju, Subramanyam** (Grain Science and Industry), **Campabadal Teran, Carlos** (Grain Science and Industry), **Harvey, Jagger J.** (Dean of Agriculture and Director of AES), **Lilja, Nina K.** (International Agricultural Programs), **Lindshield, Brian L.** (Human Nutrition), and **Ulmer, Jonathan** (Communications), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Leslie, John F., Campabadal Teran, Carlos** (Grain Science and Industry), and **Harvey, Jagger J.** (Dean of Agriculture and Director of AES), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss (Honduras Buy-in)."

**Leslie, John F., Harvey, Jagger J.** (Dean of Agriculture and Director of AES), and **Yu, Jisang** (Agricultural Economics), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss (Nepal Buy-In)."

**Lin, Guifang, Gill, Bikram S., Kalia, Bhanu, Liu, Sanzhen,** and **Wilson, Duane L.**, Kansas Wheat Commission, "New Technology for Rapid Molecular Mapping and Deployment of Yellow Rust Resistance in Kansas Wheat."

**Little, Christopher R., Roozeboom, Kraig L.** (Agronomy), **SV, Krishna J.** (Agronomy), and **Tesso, Tesfaye** (Agronomy), Kansas Grain Sorghum Commission, \$9,770, "Breeding Sorghum for Improved Dryland Productivity and Utilization."

**Little, Christopher R., Aiken, Robert M.** (Northwest Research Extension Center), and **Perumal, Ramasamy** (Agricultural Research Center-Hays), Kansas Grain Sorghum Commission, \$9,900, "Development of Sorghum Germplasm with Enhanced Drought Tolerance and Higher Grain Yield."

**Little, Christopher R., Perumal, Ramasamy** (Agricultural Research Center-Hays), and **Tesso, Tesfaye** (Agronomy), Kansas Grain Sorghum Commission, \$34,111, "Germplasm Screening, Host-Plant Interactions, and Inoculation Techniques for Sorghum Stalk Rot Diseases in Kansas."

**Little, Christopher R.,** and **Adee, Eric A.** (Agronomy), Kansas Soybean Commission, \$32,130, "SDS: Resistance Screening, ILeVO Treatment, Survival on Corn Residue, and Pathogen Variability."

**Little, Christopher R., Roozeboom, Kraig L.** (Agronomy), **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$10,256, "Soybean Production Systems to Control Charcoal Rot and Other Soil-borne Diseases."

**Little, Christopher R.,** United Soybean Board, \$51,390, "Diseases of Soybean: Characterization and Education."

**Liu, Sanzhen, Gill, Bikram S., Kalia, Bhanu, Lin, Guifang,** and **Wilson, Duane L.,** Kansas Wheat Commission, \$35,000, "New Technology for Rapid Molecular Mapping and Deployment of Yellow Rust Resistance in Kansas Wheat."

**Liu, Sanzhen,** US Department of Agriculture, \$76,000, "Improvement of Hard Winter Wheat for FHB Resistance."

**Oliveira Garcia, Ely, Park, Sunghun** (Horticulture, Forestry and Recreation Resources), and **Valent, Barbara S.,** US Department of Agriculture, "On the Mechanism of Translocation of Effectors into Living Rice Cells by the Blast Fungus *Magnaporthe Oryzae*."

**Poland, Jesse A.,** Bill and Melinda Gates Foundation, \$89,021, "Delivering Genetic Gain in Wheat."

**Poland, Jesse A., Fritz, Allan K.** (Agronomy), and **Zhang, Guorong** (Agricultural Research Center-Hays), Kansas Wheat Alliance, Inc., \$27,000, "Applying Genomic Selection in KSU Wheat Breeding Programs."

**Poland, Jesse A., Asebedo, Antonio R.** (Agronomy), and **Lollato, Romulo P.** (Agronomy), Kansas Wheat Alliance, Inc., \$5,816, "Developing Massive-parallel Phenotyping Systems for Winter Wheat."

**Poland, Jesse A., Johnson, Wendy** (Entomology), **McCornack, Brian P.** (Entomology), and **Smith, C. Michael** (Entomology), Kansas Wheat Commission, \$56,437, "Integrative and Innovative Approaches to Diminish Barley Yellow Dwarf Epidemics in Kansas Wheat."

**Poland, Jesse A.,** Monsanto Company, \$50,918, "Monsanto Beachell-Borlaug International Scholars Program (Ms. Emily Delorean's PhD Study)."



**Poland, Jesse A., and Neilsen, Mitchell L.** (Computer Science), National Science Foundation, \$903,462, "BREAD PHENO: High-Throughput Phenotyping with Smart Phones. #phenoApps."

**Poland, Jesse A., and Gill, Bikram S.**, National Science Foundation, \$50,250, "I/UCRC: Collaborative Research: Wheat Genetics Resource Center: A Public-Private Consortium."

**Poland, Jesse A.**, US Agency for International Development, \$574,519, "Rapid Development of Climate Resilient Wheat Varieties for South Asia using Genomic Selection."

**Poland, Jesse A., Akhunov, Eduard D., and Fritz, Allan K.** (Agronomy), US Department of Agriculture, \$392,000, "An Integrated Omics Approach to Accelerating Wheat Quality Improvement."

**Poland, Jesse A., and Dorn, Kevin M.**, US Department of Agriculture, \$75,830, "Exploring the Genomic Landscape of Perenniality within the Triticeae."

**Poland, Jesse A.**, US Department of Agriculture, \$118,800, "Further Development of Field Book and PhenoApps for Use in Specialty Crops."

**Poland, Jesse A.**, US Department of Agriculture, \$300,000, "Wheat Yield Prediction and Advanced Selection Methodologies through Field-Based High-throughput Phenotyping with UAVs."

**Poland, Jesse A., and Morris, Geoffrey** (Agronomy), US Department of Energy, \$96,366, "A Reference Phenotyping System for Energy Sorghum."

**Stack, James P.**, US Department of Agriculture, \$539,983, "Great Plains Diagnostic Network."

**Stack, James P.**, US Department of Agriculture, \$50,000, "National Plant Diagnostic Network."

**Stack, James P., and Dobesh, Sharon**, US Department of Agriculture, "National Survey of Honey Bee Pests and Diseases."

**Stack, James P., DeWolf, Erick D., Park, Sunghun** (Horticulture, Forestry and Recreation Resources), **Trick, Harold N., and Valent, Barbara S.**, US Department of Agriculture, "Novel Strategies for Managing Blast Diseases on Rice and Wheat."

**Stack, James P.**, US Department of Agriculture, \$44,000, "Regional Center Plant Diagnostics Facility."

**Todd, Timothy C., Schapaugh Jr, William T.** (Agronomy), and **Trick, Harold N.**, Kansas Soybean Commission, \$15,032, "Enhancement of Soybean Through Genetic Engineering."

**Todd, Timothy C., Schapaugh Jr, William T.** (Agronomy), and **Trick, Harold N.**, Kansas Soybean Commission, \$58,511, "Integrating Germplasm Evaluation, Genetic Engineering, Breeding and High-Throughput Phenotyping to Improve Sustainability of Soybean Production."

**Trick, Harold N., Schapaugh Jr, William T.** (Agronomy), and **Todd, Timothy C.**, Kansas Soybean Commission, \$56,372, "Enhancement of Soybean Through Genetic Engineering."

**Trick, Harold N., Schapaugh Jr, William T.** (Agronomy), and **Todd, Timothy C.**, Kansas Soybean Commission, \$26,596, "Integrating Germplasm Evaluation, Genetic Engineering, Breeding and High-Throughput Phenotyping to Improve Sustainability of Soybean Production."

**Trick, Harold N., Fellers, John P., and Fritz, Allan K.** (Agronomy), Kansas Wheat Commission, \$40,000, "Biotech Approaches for Trait Enhancement in Wheat."

**Trick, Harold N., and Fellers, John P.**, TechAccel, LLC, \$4,876, "Developing New Resistance to Wheat Viruses."

**Trick, Harold N.**, TechAccel, LLC, \$50,000, "Improving Heat Tolerance of Wheat During Grain Fill."

**Trick, Harold N., and Akhunov, Eduard D.**, US Department of Agriculture, \$72,000, "Genome Editing for Improving Wheat Yield and Yield-Related Traits."

**Trick, Harold N., DeWolf, Erick D., Park, Sunghun** (Horticulture, Forestry and Recreation Resources), **Stack, James P.**, and **Valent, Barbara S.**, US Department of Agriculture, "Novel Strategies for Managing Blast Diseases on Rice and Wheat."

**Valent, Barbara S., DeWolf, Erick D., Park, Sunghun** (Horticulture, Forestry and Recreation Resources), **Stack, James P.**, and **Trick, Harold N.**, US Department of Agriculture, \$1,100,000, "Novel Strategies for Managing Blast Diseases on Rice and Wheat."

**Valent, Barbara S., Oliveira Garcia, Ely, and Park, Sunghun** (Horticulture, Forestry and Recreation Resources), US Department of Agriculture, \$583,574, "On the Mechanism of Translocation of Effectors into Living Rice Cells by the Blast Fungus Magnaporthe Oryzae."

**Whitfield, Anna E.**, US Department of Agriculture, \$34,800, "Collaborative Research to Control Thrips and Tospovirus."

**Wilson, Duane L., Gill, Bikram S., Kalia, Bhanu, Lin, Guifang, and Liu, Sanzhen**, Kansas Wheat Commission, "New Technology for Rapid Molecular Mapping and Deployment of Yellow Rust Resistance in Kansas Wheat."

#### **SOUTHEAST AGRICULTURAL RESEARCH CENTER**

**Sassenrath, Gretchen F., Haag, Lucas A.** (Northwest Area Office), **Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Corn Commission, \$2,250, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Corn in Kansas."

**Sassenrath, Gretchen F., Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$7,386, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Soybean in Kansas."

**Sassenrath, Gretchen F., Ciampitti, Ignacio** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$2,933, "Improving Soybean Yield in the Double Crop Soybean System."

**Sassenrath, Gretchen F., Little, Christopher R.** (Plant Pathology), **Roozeboom, Kraig L.** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$5,827, "Soybean Production Systems to Control Charcoal Rot and Other Soil-borne Diseases."

**Sassenrath, Gretchen F., Hallaq, Thomas G.** (School of Journalism and Mass Communications), and **Kulesza, Stacey E.** (Civil Engineering), National Science Foundation, \$12,549, "Erodibility of Claypan Soils: Identifying Erosion Mechanisms for Sustainable Reduction of Sediment Loss."

#### **SOUTHWEST RESEARCH EXTENSION CENTER**

**Currie, Randall S.**, United Sorghum Checkoff Program, \$6,000, "Sorghum Pre-Plant and Pre-Weed Control Trial."

**Gillen, Robert L.**, Support Funds, \$56,400, "ASW Support Funds Research 36."

**Holman, Johnathon D.**, National Crop Insurance Services, \$5,000, "NCIS Gift."

**Holman, Johnathon D.**, Support Funds, \$77,248, "ASW Testing of Forage Cultivars."

**Holman, Johnathon D., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya, Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J., Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$23,936, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Kisekka, Isaya,** Foundation for Food and Agriculture Research, \$300,000, "Advances in Water Limited Irrigation Management."

**Kisekka, Isaya, Foster, Anserd J.** (Southwest Area Office), and **Golden, Bill B.** (Agricultural Economics), Kansas Corn Commission, \$5,910, "Exploring the Value of Plant Analysis to Enhance Water Use Efficiency in Southwest Kansas."

**Kisekka, Isaya,** and **Golden, Bill B.** (Agricultural Economics), Kansas Corn Commission, \$33,413, "Mobile Drip Irrigation for Sustaining Corn Production with Limited Water."

**Kisekka, Isaya, Golden, Bill B.** (Agricultural Economics), **Lamm, Freddie R.** (Northwest Research Extension Center), **O'Brien, Daniel M.** (Northwest Area Office), and **Schlegel, Alan J.,** Kansas Grain Sorghum Commission, \$30,600, "Sorghum Yield and Profitability Relative to Water Supply and Irrigation Management."

**Kisekka, Isaya,** Monsanto Company, \$12,330, "Service Order No. 50."

**Kisekka, Isaya, Golden, Bill B.** (Agricultural Economics), **Rice, Charles W.** (Agronomy), **Rogers, Danny H.** (Biological and Agricultural Engineering), and **Sanderson, Matthew R.** (Sociology, Anthropology, and Social Work), US Department of Agriculture, \$84,225, "Sustaining Agriculture through Adaptive Management to Preserve the Ogallala Aquifer under a Changing Climate."

**Kisekka, Isaya, Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D., Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J., Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$86,168, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Schlegel, Alan J.,** and **Haag, Lucas A.** (Northwest Area Office), Deere & Company, \$14,720, "No-till Opener Benchmarking Study."

**Schlegel, Alan J., Golden, Bill B.** (Agricultural Economics), **Kisekka, Isaya, Lamm, Freddie R.** (Northwest Research Extension Center), and **O'Brien, Daniel M.** (Northwest Area Office), Kansas Grain Sorghum Commission, \$25,500, "Sorghum Yield and Profitability Relative to Water Supply and Irrigation Management."

**Schlegel, Alan J., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D., Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya, Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$19,149, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Schlegel, Alan J.,** Valent BioSciences, Corporation, \$12,000, "Cooperator Agreement."

**Schlegel, Alan J.,** Valent BioSciences, Corporation, \$17,680, "Testing Agricultural Chemical."

**Zukoff, Sarah N., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Flippo, Daniel** (Biological and Agricultural Engineering), **McCornack, Brian P.** (Entomology), and **Sharda, Ajay** (Biological and Agricultural Engineering), Kansas Corn Commission, \$3,799, "Comprehensive Study of Light Wavelength and Image Processing to Automatically Identify Corn Pests."

**Zukoff, Sarah N.,** Monsanto Company, \$882, "Service Order #44."

**Zukoff, Sarah N.,** United Sorghum Checkoff Program, \$7,500, "2016 Sugarcane Aphid (SCA) Research-Best Management Practices."

**Zukoff, Sarah N., McCornack, Brian P.** (Entomology), and **Michaud, John P.** (Entomology), United Sorghum Checkoff Program, \$13,200, "2017 Sugarcane Aphid (SCA) Research - Best Management Practices."

## **COLLEGE OF ARCHITECTURE, PLANNING AND DESIGN**

### **DEAN OF ARCHITECTURE, PLANNING AND DESIGN**

**Thompson, Richard H.,** and **Winslow III, William P.** (Landscape Architecture/Regional and Community Planning), Kansas Association of Broadcasters Foundation, \$5,480, "Cobb Memorial/Kansas Association of Broadcasters Plaza Project."

### **LANDSCAPE ARCHITECTURE/REGIONAL AND COMMUNITY PLANNING**

**Beamish, Anne E., Canfield, Jessica,** and **Gibson, Huston,** City of Emporia, Kansas, \$1,520, "Emporia Peter Pan Park Plan Project (EP5)."

**Belanger, Blake M.,** Clay County Economic Development Group, \$3,935, "Urban Design Strategies for Clay Center, Kansas."

**Belanger, Blake M.,** and **Hahn, Howard D.,** Wichita Downtown Development Corporation, \$5,000, "Wichita Downtown Riverfront Visioning."

**Canfield, Jessica, Beamish, Anne E.,** and **Gibson, Huston,** City of Emporia, Kansas, \$1,520, "Emporia Peter Pan Park Plan Project (EP5)."

**Chamberlain, Brent C.,** US Department of Defense, \$111,338, "Early Career: Investigating the Influence of Wayfinding Interventions on Spatial Memory; Domain: learning in Formal and Informal Environments.."

**Gibson, Huston, Beamish, Anne E.,** and **Canfield, Jessica,** City of Emporia, Kansas, \$1,566, "Emporia Peter Pan Park Plan Project (EP5)."

**Hahn, Howard D., and Belanger, Blake M.**, Wichita Downtown Development Corporation, \$5,000, "Wichita Downtown Riverfront Visioning."

**Kim, Hyung Jin, and Newmark, Gregory**, US Department of Agriculture, \$12,402, "Rural Food Deserts by Transportation Networks."

**Newmark, Gregory, and Kim, Hyung Jin**, US Department of Agriculture, \$12,402, "Rural Food Deserts by Transportation Networks."

**Newmark, Gregory**, US Department of Transportation, \$31,900, "Dwight David Eisenhower Transportation Fellowship Program Graduate Fellowship. Fellow: Emma Rearick."

**Winslow III, William P., and Thompson, Richard H.** (Dean of Architecture, Planning and Design), Kansas Association of Broadcasters Foundation, \$5,480, "Cobb Memorial/Kansas Association of Broadcasters Plaza Project."

## **COLLEGE OF ARTS AND SCIENCES**

### **ART**

**Scuilla, Jason, and Bossmann, Stefan** (Chemistry), National Endowment for the Arts, \$15,000, "Visual Arts: Transforming Printmaking through Chemical Innovation."

### **BIOCHEMISTRY**

**Chakravorty, Somnath, and Klebba, Phillip E.**, US Department of Health and Human Services, "Iron Deprivation of Cancer Cells by Aposiderophores."

**Chen, Jianhan, Prakash, Om, and Zolkiewski, Michal**, US Department of Health and Human Services, \$194,906, "Multi-scale Enhanced Sampling of Disordered Proteins."

**Chen, Jianhan, and Schmit, Jeremy D.** (Physics), US Department of Health and Human Services, \$95,256, "Theoretical and Computational Modeling of Amyloid Aggregation."

**Davis, Lawrence C., Erickson, Larry E.** (Center for Hazardous Substance Research), **Hettiarachchi, Ganga M.** (Agronomy), and **Roozeboom, Kraig L.** (Agronomy), North Atlantic Treaty Organization (NATO), \$11,366 (includes \$5,268 from In-Kind Contribution - Erickson Salary), "New Phytotechnology for Cleaning Contaminated Military Sites."

**Durrett, Timothy P.**, US Department of Energy, \$132,272, "Sustainable Biofuel from the Great Plains to the Semi-arid West: Improved Germplasm for Camelina Oilseed."

**Finnigan, Gregory C.**, Microscopy Society of America, \$3,000, "Systemic Characterization of Septin Protein Interactions at the Yeast Bud Neck During the Cell Cycle Using an Evolved Tripartite Split GFP - Emily Turnquist."

**Finnigan, Gregory C.**, US Department of Health and Human Services, \$18,750, "K-INBRE Recruitment Package-Finnigan."

**Garcia, Brandon L., Geisbrecht, Brian V., Prakash, Om, and Tomich, John M.**, US Department of Health and Human Services, \$28,875, "Novel Staphylococcus Inhibitors of Neutrophil Granule Enzymes."

**Geisbrecht, Brian V., and Li, Ping** (Chemistry), US Department of Health and Human Services, \$73,441, "Molecular Study of PHA Biosynthesis: Production of Biodegradable Polymers for Medical Applications."

**Geisbrecht, Brian V., Garcia, Brandon L., Prakash, Om, and Tomich, John M.**, US Department of Health and Human Services, \$202,125, "Novel Staphylococcus Inhibitors of Neutrophil Granule Enzymes."

**Geisbrecht, Brian V.**, US Department of Health and Human Services, \$167,405, "The Multiple States of IpaB Shigella Type III Secretion."

**Geisbrecht, Erika R.**, US Department of Health and Human Services, \$331,304, "Mechanisms Underlying Muscle Development in Drosophila AR060788."

**Geisbrecht, Erika R.**, US Department of Health and Human Services, \$13,500, "Protein Tyrosine Phosphatase Signaling in Muscle Maintenance."

**Gorman, Maureen J.**, National Science Foundation, \$401,526, "Collaborative Research: Mechanisms of Iron Transport in Insects."

**Kanost, Michael R.**, US Department of Health and Human Services, \$355,465, "Proteinase Systems in Insect Hemolymph."

**Klebba, Phillip E., and Chakravorty, Somnath**, US Department of Health and Human Services, \$37,500, "Iron Deprivation of Cancer Cells by Aposiderophores."

**Misra, Saurav**, US Department of Health and Human Services, \$8,400, "Control Mechanisms of the Nitric Oxide Synthases."

**Ng, Ho Leung**, US Department of Health and Human Services, \$18,750, "K-INBRE Recruitmant Package."

**Prakash, Om, Chen, Jianhan, and Zolkiewski, Michal**, US Department of Health and Human Services, \$25,988, "Multi-scale Enhanced Sampling of Disordered Proteins."

**Prakash, Om, Garcia, Brandon L., Geisbrecht, Brian V., and Tomich, John M.**, US Department of Health and Human Services, \$28,875, "Novel Staphylococcus Inhibitors of Neutrophil Granule Enzymes."

**Tomich, John M.**, US Department of Health and Human Services, \$7,790, "K-INBRE Cor Facility Support - Acquisition of a Labconco Benchtop Freeze Dryer Unit."

**Tomich, John M., Garcia, Brandon L., Geisbrecht, Brian V., and Prakash, Om**, US Department of Health and Human Services, \$28,875, "Novel Staphylococcus Inhibitors of Neutrophil Granule Enzymes."

**Zolkiewski, Michal**, US Department of Health and Human Services, \$387,500, "High-throughput Assays for Inhibitors of the Hsp100 Molecular Chaperones."

**Zolkiewski, Michal, Chen, Jianhan, and Prakash, Om**, US Department of Health and Human Services, \$38,981, "Multi-scale Enhanced Sampling of Disordered Proteins."

## **BIOLOGY**

**Asano, Katsura**, US Department of Health and Human Services, \$443,394, "The Role of Translational Control in Metabolic Stress Response."

**Asano, Katsura**, US Department of Health and Human Services, \$30,000, "The Role of Translational Control in Metabolic Stress Response."

**Blair, John M., Dodds, Walter K., Joern, Anthony, and Nippert, Jesse B.**, National Science Foundation, \$619,850, "LTER: Long-Term Research on Grassland Dynamics - Assessing Sensitivity and Resilience to Global Change."

**Boyle, Alice**, Biology Graduate Student Association, \$500, "BGSA Research Grant Award for Elsie."

**Boyle, Alice**, National Science Foundation, \$200,000, "EAGER: Climatic Drivers of Demography and Reproductive Behavior of Tropical Birds."

**Boyle, Alice**, National Science Foundation, \$7,931, "RCN: Enabling Comparative Studies of the Process and Products of Sexual Selection in a Genomic Context."

**Boyle, Alice**, Southwestern Association of Naturalists, \$1,000, "Howard McCarley Student Research Award for Sarah Winnicki for Project Entitle "Differential Growth and Development of Grassland-obligate Songbirds: Effects of Brown-Headed Cowbird (*Molothrus ater*) Brood Parasitism."

**Briggs, John M.**, National Ecological Observatory Network, Inc., \$9,773, "Ecological Observation and Access Agreement for Aquatic Ecological Monitoring at the Konza Prairie Biological Station."

**Brown, Susan J.**, and **Ellis, Jason D.** (Communications), US Department of Agriculture, \$5,825,290, "Developing an Infrastructure and Product Test Pipeline to Deliver Novel Therapies for Citrus Greening Disease."

**Brown, Susan J.**, US Department of Health and Human Services, \$536,200, "Bioinformatics Core - KINBRE."

**Bryant, William B.**, **Michel, Kristin**, and **Olson, Bradley J.**, US Department of Health and Human Services, \$150,000, "Somatic Gene Therapy for Mosquitoes."

**Chapes, Stephen K.**, National Aeronautics and Space Administration, \$139,736, "Collection of Immune/Stress-related Tissues from Mice Flown on ISS."

**Chapes, Stephen K.**, National Aeronautics and Space Administration, \$65,638, "Impact of Spaceflight on Primary and Secondary Antibody Responses."

**Chapes, Stephen K.**, US Department of Health and Human Services, \$31,500, "K-INBRE Star Trainees (ST) K. Gomendoza, N. Lusk, K. Weingartner."

**Chapes, Stephen K.**, US Department of Health and Human Services, \$21,000, "KINBRE Star Trainees: Brokesh; Moore."

**Chapes, Stephen K.**, US Department of Health and Human Services, \$48,000, "KINBRE Summer Scholars (Apley, Gillaspie, Patterson, Turnquist, Wilden, Cotton, Pettit)."

**Chapes, Stephen K.**, US Department of Health and Human Services, \$45,000, "KINBRE Summer Scholars (Aube, Covarrubial, Lusk, Zych, Weingartener, Michalski, Johnson)."

**Chapes, Stephen K.**, US Department of Health and Human Services, \$30,000, "K-INBRE Undergraduate Coordinator Office Campus Coordinator Award - S.K. Chapes."

**Chapes, Stephen K.**, US Department of Health and Human Services, \$150,000, "Undergraduate Coordinator Office - KINBRE."

**Chen, Yujun**, and **McDonald, Jocelyn A.**, US Department of Health and Human Services, "Investigation of Protein Phosphatase Function in Collective Cell Migration."

**Dodds, Walter K.**, **Blair, John M.**, **Joern, Anthony**, and **Nippert, Jesse B.**, National Science Foundation, \$169,050, "LTER: Long-Term Research on Grassland Dynamics - Assessing Sensitivity and Resilience to Global Change."

**Fleming, Sherry D.**, Sigma Xi, KSU Chapter, \$400, "KSU Sigma XI GIAR Award for Haley Smalley for Project Entitled "The Change in CH-12.LX Cell Phenotype in Culture Over Time"."

**Gido, Keith B.**, US Department of the Interior, \$280,000, "Gizzard Shad in Small Impoundments."

**Gido, Keith B.**, US Department of the Interior, \$126,392, "Multi-scale Factors Influencing Occurrences of Topeka Shiner (*Notropis topeka*) in the Flint Hills, Kansas."

**Govind, Revathi**, US Department of Health and Human Services, \$43,187, "Curtailling Virulence of *Clostridium Difficile*."

**Haukos, David A.**, Kansas Department of Wildlife and Parks, \$40,000, "Establishment and Operation of the Kansas Cooperative Fish and Wildlife Research Unit."

**Haukos, David A.**, US Department of Agriculture, \$191,304, "Use of Grazing Management and Prescribed Fire for Conservation of Lesser Prairie Chickens."

**Haukos, David A.**, US Department of the Interior, \$855,563, "Assessment of Lesser Prairie-Chicken Response to Translocation."

**Haukos, David A.**, US Department of the Interior, \$721,253 (includes \$17,280 from Star Seed Co.), "Ring-necked Pheasant Use of Cover Crops in Western Kansas."

**Herman, Michael A., Joern, Anthony, Johnson, Loretta C., and Sandercock, Brett K.**, US Department of Education, \$19,199, "Integrative Graduate Training for New Frontiers in Ecology, Evolution, and Genomics."

**Herman, Michael A.**, US Department of Health and Human Services, \$3,750, "KINBRE DRPP Mentor."

**Hu, Xueyun, and Schrick, Kathrin**, US Department of Health and Human Services, "Modulation of Homeodomain Transcription Factors by Lipid Metabolites in Plants."

**Joern, Anthony, Blair, John M., Dodds, Walter K., and Nippert, Jesse B.**, National Science Foundation, \$169,050, "LTER: Long-Term Research on Grassland Dynamics - Assessing Sensitivity and Resilience to Global Change."

**Joern, Anthony, Herman, Michael A., Johnson, Loretta C., and Sandercock, Brett K.**, US Department of Education, \$19,199, "Integrative Graduate Training for New Frontiers in Ecology, Evolution, and Genomics."

**Johnson, Loretta C.**, Sigma Xi Scientific Research Society, \$1,000, "Sigma XI Award for Jacob Alsdurf for Project entitled "Genetic Variation Underlying Drought Response in a Dominant Grass Across the Great Plains' Climate Gradient."

**Johnson, Loretta C.**, Sigma Xi Scientific Research Society, \$500, "Sigma Xi Award for Samantha Sharpe for Project Entitled "Rapid Adaptation in a Contaminated Environment: Evolutionary Adaptive Response of Old Field Grass *Andropogon Virginicus* to Heavy Metals in Abandoned Lead and Zinc Mines"."

**Johnson, Loretta C., Herman, Michael A., Joern, Anthony, and Sandercock, Brett K.**, US Department of Education, \$64,981, "Integrative Graduate Training for New Frontiers in Ecology, Evolution, and Genomics."

**Jumpponen, Ari M.**, US Department of Agriculture, \$46,579, "Microbiomes and Their Metaproteome-Inferred Functions in Four Switchgrass Varieties Cultivated Under Two Densities For Soil Conservation."

**McDonald, Jocelyn A.**, US Department of Health and Human Services, \$100,572, "Consequence of Collective Cell Invasion in Glioblastoma."



**McDonald, Jocelyn A., and Chen, Yujun**, US Department of Health and Human Services, \$37,500, "Investigation of Protein Phosphatase Function in Collective Cell Migration."

**Michel, Kristin, Bryant, William B., and Olson, Bradley J.**, US Department of Health and Human Services, \$18,750, "Somatic Gene Therapy for Mosquitoes."

**Nippert, Jesse B., Blair, John M., Dodds, Walter K., and Joern, Anthony**, National Science Foundation, \$169,050, "LTER: Long-Term Research on Grassland Dynamics - Assessing Sensitivity and Resilience to Global Change."

**Olson, Bradley J., Bryant, William B., and Michel, Kristin**, US Department of Health and Human Services, \$18,750, "Somatic Gene Therapy for Mosquitoes."

**Peng, Chen, and Yang, Zhilong**, US Department of Health and Human Services, "Identification of Resting Cell-specific Antiviral Responses to Vaccinia virus Infection."

**Platt, Thomas G., and Hansen, Ryan R.** (Chemical Engineering), National Science Foundation, \$120,000, "PAPM EAGER: Microwell Array Platform for High-Throughput Screening and Discovery of Microbial Interactions."

**Roelofs, Jeroen**, US Department of Health and Human Services, \$270,000, "Mechanism of Degradation of the Proteasome through Autophagy."

**Sandercock, Brett K., Herman, Michael A., Joern, Anthony, and Johnson, Loretta C.**, US Department of Education, \$44,305, "Integrative Graduate Training for New Frontiers in Ecology, Evolution, and Genomics."

**Schrick, Kathrin**, National Science Foundation, \$321,000, "START Lipid/Sterol Binding Domains in Homeodomain Transcription Factors from Plants."

**Schrick, Kathrin**, Sigma Xi Scientific Research Society, \$1,000, "Sigma XI Award for Vaithish Velazhahan project entitled "Investigating the Molecular Mechanisms Underlying the Anti-Cancerous Action of Flavonoids."

**Schrick, Kathrin**, US Department of Health and Human Services, \$42,000, "Ligandbinding and Structural Studies of the START Domain from HD-Zip Proteins."

**Schrick, Kathrin, and Hu, Xueyun**, US Department of Health and Human Services, \$37,500, "Modulation of Homeodomain Transcription Factors by Lipid Metabolites in Plants."

**Spooner, Brian S.**, Kansas State University Foundation, \$213,976, "Biology Research Career Development Core."

**Spooner, Brian S.**, Kansas State University Foundation, \$40,435, "Biology Summer Graduate Fellowships."

**Spooner, Brian S.**, Kansas State University Foundation, \$100,878, "Cancer Center Research Awards."

**Tobler, Michael**, National Science Foundation, \$254,676, "Collaborative Research: Physiological Adaptation to Extreme Environments: Genes, Function, and Evolutionary Patterns."

**Tobler, Michael**, US Department of Defense, \$121,365, "A Comparative Approach to Understanding the Physiological Effects and Processing of Hydrogen Sulfide."

**Vediyappan, Govindsamy**, American Heart Association, Inc., \$77,000, "Candida Albicans Hyphal Growth and Virulence Inhibition."

**Veeman, Michael**, US Department of Health and Human Services, \$308,137, "Morphogenetic Effector Networks in Ciona Notochord."

**Wallace, Nicholas**, US Department of Health and Human Services, \$36,270, "Targeted Therapies against HPV+ Head and Neck Cancers."

**Wallace, Nicholas**, US Department of Health and Human Services, \$49,437, "Targeted Therapies Against HPV+ Head and Neck Cancers."

**Yang, Zhilong**, US Department of Health and Human Services, \$210,000, "Genomic and Chemical Approaches for Developing Novel Anti-poxvirus Strategies."

**Yang, Zhilong**, and **Peng, Chen**, US Department of Health and Human Services, \$37,500, "Identification of Resting Cell-specific Antiviral Responses to Vaccinia virus Infection."

**Yang, Zhilong**, US Department of Health and Human Services, \$187,500, "Selective Translation Conferred by the Poly(A) Leader of Vaccinia Virus mRNAs."

**Zeglin, Lydia H.**, Biology Graduate Student Association, \$500, "Biology Graduate Student Association (BGSA) Special Summer Research Grant Award for Christine Carson entitled "Microbe Management: Grassland Soil Microbial Community Turnover in Response to Long-Term Nitrogen Management"."

**Zinovyeva, Anna Y.**, US Department of Health and Human Services, \$225,000, "Modulation of MicroRNA Activity by a Conserved RNA Binding Protein."

## **CHEMISTRY**

**Aakeroy, Christer B.**, Boehringer Ingelheim Vetmedica, Inc., \$60,099, "Development of Structural Informatics Tools for Solid Form Risk Assessment and Co-crystal Design."

**Aakeroy, Christer B.**, Cambridge Crystallographic Data Centre, Inc., \$50,000, "Conquering Crystallizability in Early Development: Solid Form Information Tools and Strategies for Additive Design."

**Aakeroy, Christer B.**, Eli Lilly & Company, \$54,922, "Conquering Crystallizability in Early Development: Solid Form Informatics Tools and Strategies for Additive Design."

**Aakeroy, Christer B.**, US Department of Defense, \$145,000, "Theory and Experiment of Cocrystals: Principles, Synthesis and Properties."

**Aikens, Christine M.**, US Department of Defense, \$71,997, "Foundations of Nanoscale Energy Transfer in Molecular Plasmonics."

**Aikens, Christine M.**, US Department of Energy, \$119,704, "Understanding Electron Transfer in Plasmon-Enhanced Photocatalysis using Nonadiabatic Electron Dynamics."

**Bossmann, Stefan**, and **Scuilla, Jason** (Art), National Endowment for the Arts, \$5,000, "Visual Arts: Transforming Printmaking through Chemical Innovation."

**Bossmann, Stefan**, and **Culbertson, Christopher T.**, National Science Foundation, \$92,771, "Integrating Optical Fiber Bridges in Microfluidic Devices for Ultrasensitive Analyses of Biomarkers in Single Cells."

**Bossmann, Stefan**, US Department of Health and Human Services, \$150,000, "HTS for Copper-Activated Inhibitors Against MRSA."

**Bossmann, Stefan**, US Department of Health and Human Services, \$60,000, "The Necrosis-Inducing Toxin of Mycobacterium Tuberculosis."

**Chikan, Viktor, Liu, Bin** (Chemical Engineering), and **Pfromm, Peter H.** (Chemical Engineering), US Department of Energy, \$118,115, "Step Catalysis to Synthesize Fossil-Free Ammonia at Atmospheric Pressure."

**Culbertson, Christopher T.**, and **Bossmann, Stefan**, National Science Foundation, \$92,771, "Integrating Optical Fiber Bridges in Microfluidic Devices for Ultrasensitive Analyses of Biomarkers in Single Cells."

**Culbertson, Christopher T.**, National Science Foundation, \$60,000, "Microanalytical Methods for Investigation of the Inflammatory Response."

**Higgins, Daniel A.**, Kansas Soybean Commission, \$4,078, "Analytical Testing for Metals and Glycerin in KSU Biodiesel Fuel."

**Higgins, Daniel A.**, Kansas State University Foundation, \$134,190, "Center for Basic Cancer Research: Fraternal Order of Eagles Fund."

**Higgins, Daniel A.**, National Science Foundation, \$40,000, "Collaborative Research: Characterization of Functionally-Graded Sol-Gel-Derived Silica Films on Multiple Length Scales, from Single Molecules to Macroscopic Properties."

**Higgins, Daniel A.**, and **Hohn, Keith L.** (Chemical Engineering), National Science Foundation, \$225,000, "SusChEM: Single Molecule Studies of Aldol Condensation on Heterogeneous Catalysts."

**Higgins, Daniel A.**, and **Ito, Takashi**, US Department of Energy, \$157,231, "SISGR: Molecular-Level Investigation of Diffusion Behaviors within Cylindrical Nanoscale Pores."

**Hua, Duy H.**, Research Foundation Itsuu Laboratory, \$15,000, "Syntheses of Two Substituted Isoindolones A and B for the Inhibition of Firefly Luciferase."

**Hua, Duy H.**, US Department of Health and Human Services, \$170,416, "Development of Patented Tricyclic Pyrone Molecules for the Treatment of Alzheimer's Disease."

**Huang, Gaochao**, and **Li, Ping**, US Department of Health and Human Services, "Identification of NTMT1 Substrates and Subsequent Interacting Partners in Tumorigenesis."

**Ito, Takashi**, and **Higgins, Daniel A.**, US Department of Energy, \$157,231, "SISGR: Molecular-Level Investigation of Diffusion Behaviors within Cylindrical Nanoscale Pores."

**Jankowiak, Ryszard J.**, US Department of Energy, \$203,225, "Mutants of Light Harvesting Antennas and Reaction Centers: Disorder, Excitonic Structure, Electron Transfer, and Excitation Energy Transfer Dynamics."

**Li, Ping**, and **Huang, Gaochao**, US Department of Health and Human Services, \$37,500, "Identification of NTMT1 Substrates and Subsequent Interacting Partners in Tumorigenesis."

**Li, Ping**, and **Geisbrecht, Brian V.** (Biochemistry), US Department of Health and Human Services, \$358,565, "Molecular Study of PHA Biosynthesis: Production of Biodegradable Polymers for Medical Applications."

**McLaurin, Emily**, National Science Foundation, \$271,772, "CAREER: Microwave-Assisted Ionic Liquid Etching of Colloidal III-V Semiconductor Nanocrystals."

**Smith, Paul E.**, US Department of Health and Human Services, \$260,542, "Residue Based Contributions to Protein Stability and Association."

**Smith, Paul E.**, US Department of Health and Human Services, \$53,966, "Towards Exome Analyses: Surprising Outcomes from Mutating Nonconserved Positions."

**Smith, Paul E.**, W. M. Keck Foundation, \$14,250, "Defining the Rules for Rheostatic Modulation of Protein Function."

## **COMMUNICATION STUDIES**

**Shaffer, Timothy J.**, Kettering Foundation, \$44,000, "Boundary-Spanning Organization Research Agreement."

**Shaffer, Timothy J.**, and **Procter, David E.** (Center for Engagement and Community Development), Kettering Foundation, \$15,000, "Design and Implement the First Stage of an Experiment on the Use of Deliberation as a Central Form of Community Engagement."

## **DEAN OF ARTS AND SCIENCES**

**Montelone, Beth A.**, **Grauer, Bette** (Dean of Engineering), **Mason, April** (Office of the Provost), **Morales, Amanda I.** (Curriculum and Instruction), **Thurston, Linda P.** (Dean of Education), and **Wiley, Zelia Z.** (Dean of Agriculture and Director of AES), National Science Foundation, \$150,000, "Pathways to STEM: Kansas Louis Stokes Alliance for Minority Participation."

## **ECONOMICS**

**Gaulke, Amanda P.**, Spencer Foundation, \$40,850, "Student Loan Repayment."

## **ENGLISH**

**Hedrick, Donald K.**, and **Northway, Kara**, National Endowment for the Arts, \$3,000, "Community and Digital Outreach through Undergraduate Service Learning."

**Northway, Kara**, and **Hedrick, Donald K.**, National Endowment for the Arts, \$3,000, "Community and Digital Outreach through Undergraduate Service Learning."

## **GEOGRAPHY**

**Harrington Jr, John A.**, F. Price Cossman Memorial Trust, \$24,700 (includes \$500 from In-Kind Contribution), "Plants, Peoples, Places, and Patterns: An Institute for K-12 Teachers on Kansas Ecological Cultures."

**Harrington Jr, John A.**, National Geographic Education Foundation, \$40,053, "Kansas 2016-2017 Alliance Grant."

**Harrington Jr, John A.**, National Science Foundation, \$20,000, "Learning Progressions for Places and Regions: A Workshop (Thomas B. Larsen)."

**McLauchlan, Kendra K.**, National Science Foundation, \$70,437, "Collaborative Research: SG: Fire, Climate, and Vegetation Change in an Oak Savanna Ecosystem from Annual to Millennial Time Scales."

## **GEOLOGY**

**Brueseke, Matthew E.**, National Science Foundation, \$4,880, "Collaborative Research: Investigating the Lost Arc: Geological Constraints on ~25 Million Years of Magmatism Along an Arc-transform Junction, Wrangell Volcanic Belt, Alaska."

## **HISTORY**

**Lynn-Sherow, Bonnie**, Kansas State University Foundation, \$205,000, "Chapman Center for Personnel."

## **MATHEMATICS**

**Albin, Nathan**, and **Korten, Marianne**, National Science Foundation, \$8,330, "Collaborative Research: Prairie Analysis Seminar 2015-2017."

**Albin, Nathan**, **Steward, David R.** (Civil Engineering), and **Welch, Stephen M.** (Agronomy), US Department of Agriculture, \$99,000, "PAPM EAGER: Wheat Phenome/Genome Sensing/Modeling via Microwave Scattering Inversion."

**Auckly, David R.**, US Department of Defense, \$49,997, "The Navajo Nation Math Circles Project."

**Bennett, Andrew G., Allen, David B.** (Curriculum and Instruction), **Martinie, Sherri L.** (Curriculum and Instruction), **Spencer, Craig**, and **Thiele, Julie M.** (Curriculum and Instruction), Kansas State Department of Education, \$23,286, "Kansas Can Excel in Math and Science Project."

**Bennett, Andrew G., Allen, David B.** (Curriculum and Instruction), **Benson, Brian A., Jaber-Douraki, Majid, Martinie, Sherri L.** (Curriculum and Instruction), and **Spencer, Craig**, US Department of Education, \$12,000, "Achieving the Vision of Excellent Mathematics Teaching and Learning (ACHIEVE)."

**Benson, Brian A., Allen, David B.** (Curriculum and Instruction), **Bennett, Andrew G., Jaber-Douraki, Majid, Martinie, Sherri L.** (Curriculum and Instruction), and **Spencer, Craig**, US Department of Education, \$14,000, "Achieving the Vision of Excellent Mathematics Teaching and Learning (ACHIEVE)."

**Jaber-Douraki, Majid, Gehring, Ronette** (Anatomy and Physiology), **Lin, Zhoumeng** (Anatomy and Physiology), and **Riviere, Jim** (Anatomy and Physiology), US Department of Agriculture, \$61,200, "Food Animal Residue Avoidance Databank (FARAD)."

**Jaber-Douraki, Majid, Allen, David B.** (Curriculum and Instruction), **Bennett, Andrew G., Benson, Brian A., Martinie, Sherri L.** (Curriculum and Instruction), and **Spencer, Craig**, US Department of Education, \$12,000, "Achieving the Vision of Excellent Mathematics Teaching and Learning (ACHIEVE)."

**Korten, Marianne**, and **Albin, Nathan**, National Science Foundation, \$8,330, "Collaborative Research: Prairie Analysis Seminar 2015-2017."

**Korten, Marianne**, and **Yetter, David**, National Science Foundation, \$44,835, "REU Site: Summer Undergraduate Mathematics Research (SUMaR) at K-State."

**Li, Xiannan**, Simons Foundation, \$42,000, "Inspirations from Prime Number Theory."

**Mazin, Mikhail**, Simons Foundation, \$42,000, "Rational Slope Catalan Combinatorics, Parking Functions, and Ane Permutati."

**Naibo, Virginia M.**, National Science Foundation, \$59,397, "Methods and Applications for Bilinear Operators."

**Natarajan, Rekha, Martinie, Sherri L.** (Curriculum and Instruction), and **Spencer, Craig**, National Science Foundation, \$227,609, "K-State Mathematics Education Collaborative."

**Rojkovskaia, Natalia**, National Science Foundation, \$23,128, "International Conference Representation Theory at the Crossroads of Modern Mathematics."

**Spencer, Craig, Allen, David B.** (Curriculum and Instruction), **Bennett, Andrew G., Martinie, Sherri L.** (Curriculum and Instruction), and **Thiele, Julie M.** (Curriculum and Instruction), Kansas State Department of Education, \$23,286, "Kansas Can Excel in Math and Science Project."

**Spencer, Craig, Martinie, Sherri L.** (Curriculum and Instruction), and **Natarajan, Rekha**, National Science Foundation, \$234,951, "K-State Mathematics - Education Collaborative."

**Spencer, Craig, Allen, David B.** (Curriculum and Instruction), **Bennett, Andrew G., Benson, Brian A., Jaber-Douraki, Majid**, and **Martinie, Sherri L.** (Curriculum and Instruction), US Department of Education, \$12,000, "Achieving the Vision of Excellent Mathematics Teaching and Learning (ACHIEVE)."

**Turchin, Victor**, Simons Foundation, \$42,000, "Embedding Spaces, Functor Calculus, Operads, and Graph-Complexes."

**Yetter, David, and Korten, Marianne**, National Science Foundation, \$44,835, "REU Site: Summer Undergraduate Mathematics Research (SUMaR) at K-State."

### **MUSIC, THEATRE, AND DANCE**

**Pinkall, Bryan R.**, Master Teacher, Inc., \$15,950, "Summer Choral Institute."

### **PHYSICS**

**Ben-Itzhak, Itzhak**, National Science Foundation, \$51,280, "Collaborative Research: Imaging and Controlling Ultrafast Dynamics of Atoms, Molecules, and Nanostructures."

**Ben-Itzhak, Itzhak**, US Department of Energy, \$2,650,000, "Structure and Dynamics of Atoms. Ions, Molecules, and Surfaces."

**Berg, Matthew J.**, National Science Foundation, \$398,177, "CAREER: In Situ Study of Aerosol in the Coarse Mode with Digital Holography."

**Berg, Matthew J.**, US Army, \$83,966, "Extracting Scattering Observables from Digital Holograms: Application to Aerosol Particle Characterization."

**Berg, Matthew J.**, US Department of Defense, \$24,462, "The 16th Electromagnetic and Light Scattering Conference."

**Chakrabarti, Amitabha, and Sorensen, Christopher M.**, National Science Foundation, \$55,028, "Studies of Light Scattering by Particles of Arbitrary Shape."

**Corwin, Kristan L., and Washburn, Brian R.**, US Department of Defense, \$57,500, "Research on Gas Filled Hollow Core Fiber Lasers."

**Flanders, Bret N.**, US Department of Health and Human Services, \$98,230, "Conducting Polymer Nanowires for Neural Modulation."

**Ivanov, Andrew G.**, National Science Foundation, \$24,964, "US CMS Operations at the LHC."

**Ivanov, Andrew G.**, US Department of Energy, \$39,890, "LHC CMS Detector Upgrade FPIX Subsystem for 2014."

**Ivanov, Andrew G.**, US Department of Energy, \$150,000, "Quest for a Top Quart Partner and Upgrade of the Pixel Detector Readout Chain at the CMS."

**Kaadze, Ketino**, US Department of Energy, \$14,000, "Fellowship for 2016 Senior CMS LPC Distinguished Researcher."

**Kaadze, Ketino**, US Department of Energy, \$35,133, "LHC CMS Detector Upgrade HCAL Subsystem."

**Khalil, Sadia**, US Department of Energy, \$10,000, "Fermilab Partial Salary Support for Dr. Sadia Khalil to Collaborate on the CMS Experiment."

**Lin, Chii-Dong**, US Department of Defense, \$75,000, "Isolated Soft-X-ray Attosecond Pulse Generation Using Synthesized Strong-Field Infrared Pulses."

**Mohammadi, Abdollah**, US Department of Energy, \$40,821, "Fellowship for 2017 LPC Distinguished Researcher Program."

**Ratra, Bharat**, National Science Foundation, \$30,806, "Quarknet."

**Samushia, Lado**, California Institute of Technology, \$11,015, "Cosmology with the WFIRST High Latitude Survey - 2017."

**Samushia, Lado**, Jet Propulsion Laboratory, \$10,697, "Cosmology with the WFIRST High Latitude Survey."

**Samushia, Lado**, National Aeronautics and Space Administration, \$23,516, "Constraining Dark Energy and Modified Gravity with Euclid."

**Sayre, Eleanor C.**, National Science Foundation, \$32,381, "A Model of Educational Transformation: Developing a Community of Faculty Implementing Next Generation Physical Science and Everyday Thinking."

**Schmit, Jeremy D.**, AMGEN, Inc., \$40,000, "Amgen - Preclinical Research Program."

**Schmit, Jeremy D.**, and **Chen, Jianhan** (Biochemistry), US Department of Health and Human Services, \$184,909, "Theoretical and Computational Modeling of Amyloid Aggregation."

**Sorensen, Christopher M.**, and **Chakrabarti, Amitabha**, National Science Foundation, \$128,400, "Studies of Light Scattering by Particles of Arbitrary Shape."

**Washburn, Brian R.**, and **Corwin, Kristan L.**, US Department of Defense, \$57,500, "Research on Gas Filled Hollow Core Fiber Lasers."

#### **POLITICAL SCIENCE**

**Ciftci, Sabri**, Templeton Religion Trust, \$9,650, "Seeking Justice from Cairo to Istanbul: Islam, Social Justice, and Democracy in the Middle East."

#### **PSYCHOLOGICAL SCIENCES**

**Cain, Mary E.**, American Psychological Association, \$1,000, "The Effects of Differential Rearing on Post Synaptic Glutamate Receptors and Incubation of Drug Craving (Erik Garcia)."

**Kirkpatrick, Kimberly**, US Department of Health and Human Services, \$303,750, "Timing, Reward Processing and Choice."

**Lee, Jin**, Liberty Mutual Research Institute for Safety, \$12,000, "Statistical Analysis Support for the Safety Climate Projects of Liberty Mutual Research Institute for Safety."

**Monaco, Gregory E.**, National Science Foundation, \$44,363, "BD SPOKES: SPOKE: MIDWEST: Digital Agriculture - Unmanned Aircraft Systems, Plant Science, and Education."

#### **SCHOOL OF JOURNALISM AND MASS COMMUNICATIONS**

**Hallaq, Thomas G.**, **Kulesza, Stacey E.** (Civil Engineering), and **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), National Science Foundation, \$9,127, "Erodibility of Claypan Soils: Identifying Erosion Mechanisms for Sustainable Reduction of Sediment Loss."

**Muturi, Nancy W.**, and **Kidd, Tandalayo** (Human Nutrition), US Department of Agriculture, \$100,000, "Community-Based Participatory Research (CBPR) Model in Preventing Overweight and Obesity Among 6th-8th Grade Youth in Low-Income Racial/Ethnic Communities."

**Wolgast, Stephen L.**, Collegian Media Group, \$55,435, "Student Publications Positions."

## **SOCIOLOGY, ANTHROPOLOGY, AND SOCIAL WORK**

**Goe, W. Richard, and Steinmetz, Kevin**, National Science Foundation, \$140,154, "SBE: Small: Technological Con-Artistry: An Analysis of Social Engineering."

**Kulcsar, Laszlo, Cornelison, Laci J.** (Dean of Human Ecology), **Doll, Gayle** (Dean of Human Ecology), **Gfeller, Stephanie** (Dean of Human Ecology), and **Kaup, Migette L.** (Apparel, Textiles, and Interior Design), US Department of Health and Human Services, \$14,724, "Peak 2.0 Evaluation."

**Kurtz, Don L.**, International Association of Directors of Law Enforcement Standards and Training, \$5,902, "Blue Courage Training Assessment."

**Lockett, Lorenza, and Williams, L. Susan**, Riley County, KS Police Department, \$10,000, "Procedural Justice Policing in a College Town: Citizens and Officers Speak Out."

**Logan, Brad R., and Ritterbush, Lauren W.**, US Department of the Interior, \$11,782, "National Register of Historic Places Evaluation of the Allen Site (14RY661), Riley County, Kansas."

**Middendorf, Gerad D., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Presley, DeAnn R.** (Agronomy), **Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), **Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi** (Agronomy), **Tomlinson, Peter J.** (Agronomy), and **Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, \$116,222, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Middendorf, Gerad D., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), and **Hutchinson, Stacy L.** (Biological and Agricultural Engineering), US Department of the Interior, \$14,830, "Water Research for the Fort Riley Net Zero Initiative."

**Ritterbush, Lauren W., and Logan, Brad R.**, US Department of the Interior, \$5,050, "National Register of Historic Places Evaluation of the Allen Site (14RY661), Riley County, Kansas."

**Sanderson, Matthew R., Golden, Bill B.** (Agricultural Economics), **Kisekka, Isaya** (Southwest Research Extension Center), **Rice, Charles W.** (Agronomy), and **Rogers, Danny H.** (Biological and Agricultural Engineering), US Department of Agriculture, \$77,206, "Sustaining Agriculture through Adaptive Management to Preserve the Ogallala Aquifer under a Changing Climate."

**Steinmetz, Kevin, and Goe, W. Richard**, National Science Foundation, \$210,232, "SBE: Small: Technological Con-Artistry: An Analysis of Social Engineering."

**Williams, L. Susan, and Lockett, Lorenza**, Riley County, KS Police Department, \$15,000, "Procedural Justice Policing in a College Town: Citizens and Officers Speak Out."

## **STATISTICS**

**Gadbury, Gary L.**, Shell Oil Company U.S., \$5,000, "Shell U.S. Proposal for Applied Statistics at K-State."

**Hefley, Trevor**, US Department of the Interior, \$68,250, "Statistical Methods for Assessing Spatio-Temporal Disease Risk from Sparse Data."

**Wang, Weiqun, and Wu, Cen**, Johnson Center for Basic Cancer Research, \$1,956, "Integrative Lipid-Environment Analysis for Cancer Prevention Studies."

**Wu, Cen, and Wang, Weiqun**, Johnson Center for Basic Cancer Research, \$3,632, "Integrative Lipid-Environment Analysis for Cancer Prevention Studies."



# COLLEGE OF BUSINESS ADMINISTRATION

## MANAGEMENT

**Jackson, Chad A.**, and **Tucker, Jeffrey W.** (Advanced Manufacturing Institute), Kansas Department of Commerce, \$47,500, "Jumpstart Program."

# COLLEGE OF EDUCATION

## CURRICULUM AND INSTRUCTION

**Allen, David B.**, **Bennett, Andrew G.** (Mathematics), **Martinie, Sherri L.**, **Spencer, Craig** (Mathematics), and **Thiele, Julie M.**, Kansas State Department of Education, \$23,286, "Kansas Can Excel in Math and Science Project."

**Allen, David B.**, **Bennett, Andrew G.** (Mathematics), **Benson, Brian A.** (Mathematics), **Jaberi-Douraki, Majid** (Mathematics), **Martinie, Sherri L.**, and **Spencer, Craig** (Mathematics), US Department of Education, \$10,000, "Achieving the Vision of Excellent Mathematics Teaching and Learning (ACHIEVE)."

**Burenheide, Bradley**, and **Vontz, Thomas**, US Department of Education, \$69,779, "James Madison Legacy Project (JMLP) of the We the People Program (WTP)."

**Goodson, F. Todd**, and **Vontz, Thomas**, Kansas Board of Regents, \$71,109, "Transitions to Teaching."

**Martinie, Sherri L.**, **Allen, David B.**, **Bennett, Andrew G.** (Mathematics), **Spencer, Craig** (Mathematics), and **Thiele, Julie M.**, Kansas State Department of Education, \$23,286, "Kansas Can Excel in Math and Science Project."

**Martinie, Sherri L.**, **Natarajan, Rekha** (Mathematics), and **Spencer, Craig** (Mathematics), National Science Foundation, \$271,663, "K-State Mathematics - Education Collaborative."

**Martinie, Sherri L.**, **Allen, David B.**, **Bennett, Andrew G.** (Mathematics), **Benson, Brian A.** (Mathematics), **Jaberi-Douraki, Majid** (Mathematics), and **Spencer, Craig** (Mathematics), US Department of Education, \$140,000, "Achieving the Vision of Excellent Mathematics Teaching and Learning (ACHIEVE)."

**Morales, Amanda I.**, **Grauer, Bette** (Dean of Engineering), **Mason, April** (Office of the Provost), **Montelone, Beth A.** (Dean of Arts and Sciences), **Thurston, Linda P.** (Dean of Education), and **Wiley, Zelia Z.** (Dean of Agriculture and Director of AES), National Science Foundation, \$25,000, "Pathways to STEM: Kansas Louis Stokes Alliance for Minority Participation."

**Thiele, Julie M.**, **Allen, David B.**, **Bennett, Andrew G.** (Mathematics), **Martinie, Sherri L.**, and **Spencer, Craig** (Mathematics), Kansas State Department of Education, \$62,097, "Kansas Can Excel in Math and Science Project."

**Vontz, Thomas**, and **Goodson, F. Todd**, Kansas Board of Regents, \$71,109, "Transitions to Teaching."

**Vontz, Thomas**, and **Burenheide, Bradley**, US Department of Education, \$69,779, "James Madison Legacy Project (JMLP) of the We the People Program (WTP)."

**Yahnke, Sally J.**, **Disberger, Brandie S.** (Communications), **Hock, Gaea** (Communications), and **Ulmer, Jonathan** (Communications), US Department of Education, \$45,750, "Innovative CTE Professional Development Model."

## DEAN OF EDUCATION

**Dalton, Andrew**, US Department of Education, \$424,505, "KANCO 2."

**Havlicek, Barbara J.**, Kansas Foundation for Agriculture in the Classroom, \$141,655, "Kansas Foundation for Agriculture in the Classroom."

**Havlicek, Barbara J.**, Schools for Quality Education, Inc., \$7,000, "Schools for Quality Education."

**Herrera, Socorro G.**, Mexican Ministry of Education, \$453,060, "SUMMIT."

**Herrera, Socorro G.**, USD 259, Wichita, \$36,000, "Wichita Schools ESL Professional Development."

**Herrera, Socorro G.**, USD 512, Shawnee Mission, \$45,000, "Shawnee Mission, Multi-Campus Professional Development for Teachers of CLD Students - Year 2."

**Shuman, Cindy**, National Science Foundation, \$12,080, "Adapting Socio-ecological Systems to Increased Climate Variability."

**Shuman, Cindy**, National Science Foundation, \$98,800, "Experimental Program to Stimulate Competitive Research (EPSCoR) Delaware (DE) Track-1: Meeting Delaware's 21st Century Water and Energy Challenges through Research, Education, and Innovation. - Evaluation."

**Shuman, Cindy**, National Science Foundation, \$15,000, "NSF INCLUDES: Mississippi Alliance for Women in Computing (MAWC) - Evaluation."

**Shuman, Cindy**, National Science Foundation, \$300,000, "RII Track 1: Center for Root & Rhizobiome Innovation (CRR) - Evaluation."

**Shuman, Cindy**, National Science Foundation, \$104,000, "RII Track-1: Louisiana Consortium for Innovation in Manufacturing and Materials."

**Shuman, Cindy**, National Science Foundation, \$30,000, "Track-2: The Smart MATERIAL Design, Analysis, and Processing (SMATDAP) Consortium: Building Next-generation Polymers and the Tools to Accelerate Cost-effective Commercial Production Accelerate Cost-effective Commercial Production - Evaluation."

**Shuman, Cindy**, US Department of Defense, \$25,000, "Braiding STEM Early."

**Shuman, Cindy**, US Department of Defense, \$75,000, "DoDEA AVID Academic Support Enhancing STEM - Evaluation."

**Shuman, Cindy**, US Department of Education, \$22,000, "Minority Science and Engineering Program: Undergraduate Research as a Tool to Engage, Retain and Graduate - Evaluation."

**Shuman, Cindy**, US Department of Education, \$225,000, "Project Prepare, Advocate, Collaborate, and Empower (PACE) - Evaluation."

**Shuman, Cindy**, US Department of Health and Human Services, \$90,000, "Building Integrated Pathways to Independence for Diverse Biomedical Researchers (Project Pathways) - Evaluation."

**Shuman, Cindy**, US Department of Labor, \$110,989, "Johnson County Community College: Accelerated, Collaborative Technology Training Services (JCCC-ACTTS) - Evaluation."

**Thurston, Linda P., Grauer, Bette** (Dean of Engineering), **Mason, April** (Office of the Provost), **Montelone, Beth A.** (Dean of Arts and Sciences), **Morales, Amanda I.** (Curriculum and Instruction), and **Wiley, Zelia Z.** (Dean of Agriculture and Director of AES), National Science Foundation, \$100,000, "Pathways to STEM: Kansas Louis Stokes Alliance for Minority Participation."

## **EDUCATIONAL LEADERSHIP**

**Doll, Richard**, Kansas State Department of Education, \$3,700, "Kansas Educational Leadership Institute."

**Doll, Richard**, US Department of Education, \$260,000, "Kansas Educational Leadership Institute (KELI)."

## **SPECIAL EDUCATION, COUNSELING, AND STUDENT AFFAIRS**

**Rubin, Lisa, Connole, Ian J.** (Intercollegiate Athletics State), and **Pinkett, Cori L.** (Intercollegiate Athletics State), Association for Applied Sport Psychology, \$223, "Developing Student Athletes into Leaders: Analyzing the Impact of a Leadership Academy."

## **COLLEGE OF ENGINEERING**

### **ADVANCED MANUFACTURING INSTITUTE**

**Kramer, Bradley A.**, and **Tucker, Jeffrey W.**, Kansas Department of Commerce, \$10,000, "Project 17 Kansas Department of Commerce Matching Funds."

**Kramer, Bradley A.**, and **Tucker, Jeffrey W.**, US Department of Commerce, \$63,500 (includes \$10,000 from In Kind Contribution KSU IC, and \$3,500 from In Kind Contribution KSU Olathe), "Kansas State University Olathe Innovation Accelerator University Center Program Grant."

**Tucker, Jeffrey W.**, and **Jackson, Chad A.** (Management), Kansas Department of Commerce, \$47,500, "Jumpstart Program."

**Tucker, Jeffrey W.**, Kansas Department of Commerce, \$100,000, "Kansas Department of Commerce and Kansas State University/Advanced Manufacturing Institute Incentive Agreement."

**Tucker, Jeffrey W.**, and **Kramer, Bradley A.**, Kansas Department of Commerce, \$40,000, "Project 17 Kansas Department of Commerce Matching Funds."

**Tucker, Jeffrey W.**, Support Funds, \$24,250, "Advanced Manufacturing Institute - Manufacturing Learning Center."

**Tucker, Jeffrey W.**, and **Kramer, Bradley A.**, US Department of Commerce, \$571,500 (includes \$90,000 from In Kind Contribution KSU IC, and \$31,500 from In Kind Contribution KSU Olathe), "Kansas State University Olathe Innovation Accelerator University Center Program Grant."

### **BIOLOGICAL AND AGRICULTURAL ENGINEERING**

**Bigham, Kari A.**, and **Moore, Trisha L.**, Kansas Department of Agriculture, \$20,718, "Tuttle Creek Watershed Streambank Site Assessment."

**Brokesh, Edwin L.**, **Griffin, Terry W.** (Agricultural Economics), **Lollato, Romulo P.** (Agronomy), **Patrignani, Andres** (Agronomy), **Presley, DeAnn R.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), and **Tomlinson, Peter J.** (Agronomy), American Bakers Association, \$2,500, "Sustainable Kansas Wheat - Pilot Project, A Field-to-Market Field Print Calculator Project."

**Brokesh, Edwin L.**, **Flippo, Daniel**, **McCornack, Brian P.** (Entomology), **Sharda, Ajay**, and **Zukoff, Sarah N.** (Southwest Area Office), Kansas Corn Commission, \$5,699, "Comprehensive Study of Light Wavelength and Image Processing to Automatically Identify Corn Pests."

**Brokesh, Edwin L.**, Kansas Soybean Commission, \$17,076, "K-State Biodiesel Initiative KSBC Plan Implementation and KSBI Monitoring and Documentation Project."

**Brokesh, Edwin L., Flippo, Daniel, Griffin, Terry W.** (Agricultural Economics), and **Sharda, Ajay**, Mahindra & Mahindra Limited, \$23,923, "Testing and Evaluation Services Agreement."

**Ebert, Kerri L., and Hadley, Gregg L.** (Agriculture and Natural Resources), US Department of Agriculture, \$500, "Kansas SARE - Kansas 2015 PDP."

**Ebert, Kerri L., and Hadley, Gregg L.** (Agriculture and Natural Resources), US Department of Agriculture, \$55,000, "Kansas SARE - Kansas 2017 PDP."

**Flippo, Daniel, Sharda, Ajay, SV, Krishna J.** (Agronomy), and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), CNH Industrial America LLC, \$4,865, "Testing and Evaluation Services Agreement."

**Flippo, Daniel, Brokesh, Edwin L., McCornack, Brian P.** (Entomology), **Sharda, Ajay**, and **Zukoff, Sarah N.** (Southwest Area Office), Kansas Corn Commission, \$11,397, "Comprehensive Study of Light Wavelength and Image Processing to Automatically Identify Corn Pests."

**Flippo, Daniel, Schapaugh Jr, William T.** (Agronomy), **Sharda, Ajay**, and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), Kansas Soybean Commission, \$951, "Small Unmanned Aircraft Thermal Infrared Imaging System to Identify Soybean Drought Tolerant Varieties."

**Flippo, Daniel, Brokesh, Edwin L., Griffin, Terry W.** (Agricultural Economics), and **Sharda, Ajay**, Mahindra & Mahindra Limited, \$23,923, "Testing and Evaluation Services Agreement."

**He, Mei**, Kansas State University Foundation, \$2,670, "Cancer Research - Olathe."

**He, Mei**, and **McGill, Jodi L.** (Diagnostic Medicine/Pathobiology), US Department of Agriculture, \$297,132, "Reprogramming Extracellular Nanovesicles as Highly Potent Vaccines against Bovine Respiratory Disease."

**He, Mei**, US Department of Health and Human Services, \$57,023, "Microfluidic Engineering of Immunogenic Exosomes for Personalized Cancer Vaccine."

**Hutchinson, Stacy L., and Golden, Bill B.** (Agricultural Economics), City of Wichita, KS, \$2,500, "Agreement for Consulting Services."

**Hutchinson, Stacy L., and Parameswaran, Prathap** (Civil Engineering), US Department of Defense, \$1,500, "Anaerobic Membrane Bioreactor (AnMBR) for Sustainable Wastewater Treatment."

**Hutchinson, Stacy L., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), and **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), US Department of the Interior, \$29,660, "Water Research for the Fort Riley Net Zero Initiative."

**Maghirang, Ronaldo G.,** The Andersons, Inc., \$50,000, "Determining Time, Aeration, and Loading Cycle Effects on Grain Packing."

**Maghirang, Ronaldo G., and Zhu, Kun Yan** (Entomology), US Department of Agriculture, \$95,000, "Improving Efficacy of Aerosol Applications for Control of Stored Product Insects in Wheat and Rice Mills."

**Maghirang, Ronaldo G.,** US Department of Agriculture, \$85,000, "Modeling of Stored Product Packing and Fumigation."

**Maghirang, Ronaldo G., Erickson, Larry E.** (Center for Hazardous Substance Research), and **Griswold, Wendy M.** (Center for Hazardous Substance Research), US Environmental Protection Agency, \$4,091, "Shared Air/Shared Action (SA2): Community Empowerment through Low-Cost Air Pollution Monitoring."

**Moore, Trisha L., and Graber, Ronald W.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), City of Wichita, KS, \$16,020, "Sedimentation Abatement -- Establishing an Offsite BMP Program with the City of Wichita, KS."

**Moore, Trisha L., and Bigham, Kari A.,** Kansas Department of Agriculture, \$1,090, "Tuttle Creek Watershed Streambank Site Assessment."

**Moore, Trisha L., and Barden, Charles J.** (Horticulture, Forestry and Recreation Resources), Water Environment Research Foundation, \$49,992, "Forestry-stormwater Programs: Advancing Science and Application."

**Rahmani, Vahid,** Kansas Board of Regents, \$7,611, "Using NASA Data and Modeling Resources to Improve Management Strategies for Water Scarcity Issues in Kansas."

**Rahmani, Vahid,** National Aeronautics and Space Administration, \$7,589, "Using NASA Data and Modeling Resources to Improve Management Strategies for Water Scarcity Issues in Kansas."

**Rahmani, Vahid, Barden, Charles J.** (Horticulture, Forestry and Recreation Resources), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), and **Sheshukov, Aleksey Y.,** US Department of the Interior, \$1,492, "Kansas Water Resources Research Institute 2016."

**Rahmani, Vahid,** US Environmental Protection Agency, \$25,496, "Development of Wetlands in Aging Reservoirs: Opportunities to Enhance Wetland Capacity and Improve Water Quality."

**Rogers, Danny H., Golden, Bill B.** (Agricultural Economics), **Kisekka, Isaya** (Southwest Research Extension Center), **Rice, Charles W.** (Agronomy), and **Sanderson, Matthew R.** (Sociology, Anthropology, and Social Work), US Department of Agriculture, \$7,019, "Sustaining Agriculture through Adaptive Management to Preserve the Ogallala Aquifer under a Changing Climate."

**Rogers, Danny H., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$9,574, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Sharda, Ajay, Flippo, Daniel, SV, Krishna J.** (Agronomy), and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), CNH Industrial America LLC, \$82,705, "Testing and Evaluation Services Agreement."

**Sharda, Ajay,** Deere & Company, \$4,650, "Quantifying Nozzle Flow and Pressure."

**Sharda, Ajay, Brokesh, Edwin L., Flippo, Daniel, McCornack, Brian P.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), Kansas Corn Commission, \$5,699, "Comprehensive Study of Light Wavelength and Image Processing to Automatically Identify Corn Pests."

**Sharda, Ajay, Flippo, Daniel, Schapaugh Jr, William T.** (Agronomy), and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), Kansas Soybean Commission, \$41,853, "Small Unmanned Aircraft Thermal Infrared Imaging System to Identify Soybean Drought Tolerant Varieties."

**Sharda, Ajay, Brokesh, Edwin L., Flippo, Daniel,** and **Griffin, Terry W.** (Agricultural Economics), Mahindra & Mahindra Limited, \$179,422, "Testing and Evaluation Services Agreement."

**Sharda, Ajay**, Smithbucklin Corporation, \$14,010, "Isolated Soy Protein for Use as Seed Flow Lubricant."

**Sharda, Ajay**, and **Prabhakar, Pavithra** (Computer Science), US Department of Agriculture, \$374,976, "Develop Canopy Sensing and Computational Systems for Real-Time Control and Feedback of Irrigation Technology."

**Sheshukov, Aleksey Y.**, **Barden, Charles J.** (Horticulture, Forestry and Recreation Resources), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), and **Rahmani, Wahid**, US Department of the Interior, \$1,791, "Kansas Water Resources Research Institute 2016."

**Slocombe, John W.**, US Department of Agriculture, \$180,000, "Kansas AgrAbility Project."

**Wang, Donghai**, **Deines, Timothy W.** (Industrial and Manufacturing Systems Engineering), and **Zhang, Meng (Peter)** (Industrial and Manufacturing Systems Engineering), National Science Foundation, \$6,240, "Increasing Sugar Yield in Biofuel Manufacturing through Control of Cellulosic Biomass Particle Size."

#### **CENTER FOR HAZARDOUS SUBSTANCE RESEARCH**

**Erickson, Larry E.**, **Davis, Lawrence C.** (Biochemistry), **Hettiarachchi, Ganga M.** (Agronomy), and **Roozeboom, Kraig L.** (Agronomy), North Atlantic Treaty Organization (NATO), \$10,752 (includes \$4,983 from In-Kind Contribution - Erickson Salary), "New Phytotechnology for Cleaning Contaminated Military Sites."

**Erickson, Larry E.**, **Griswold, Wendy M.**, and **Maghirang, Ronaldo G.** (Biological and Agricultural Engineering), US Environmental Protection Agency, \$28,639, "Shared Air/Shared Action (SA2): Community Empowerment through Low-Cost Air Pollution Monitoring."

**Griswold, Wendy M.**, **Erickson, Larry E.**, and **Maghirang, Ronaldo G.** (Biological and Agricultural Engineering), US Environmental Protection Agency, \$49,096, "Shared Air/Shared Action (SA2): Community Empowerment through Low-Cost Air Pollution Monitoring."

**Leven, Blase A.**, US Environmental Protection Agency, \$1,636,364, "Technical Assistance to Brownfields Communities - US EPA Regions 5, 6, 7, 8 & National."

#### **CHEMICAL ENGINEERING**

**Amama, Placidus B.**, National Science Foundation, \$111,092, "CAREER: Rational Design of Efficient Carbon Nanotube-Supported TiO<sub>2</sub> Photocatalysts for Air Purification."

**Amama, Placidus B.**, **Chen, James M.** (Mechanical and Nuclear Engineering), **Day, Dwight D.** (Electrical and Computer Engineering), **Edgar, James H.**, **Fateh, Fariba** (Electrical and Computer Engineering), **Hosni, Mohammad H.** (Mechanical and Nuclear Engineering), and **Mirafzal, Behrooz** (Electrical and Computer Engineering), National Science Foundation, \$1,500, "Planning I/UCRC Kansas State University: Center for On-the-Move Energy Technologies (COMET)."

**Edgar, James H.**, National Science Foundation, \$5,500, "Hexagonal Boron Nitride Crystal Growth from Solution: A Study of Fundamentals."

**Edgar, James H.**, **Amama, Placidus B.**, **Chen, James M.** (Mechanical and Nuclear Engineering), **Day, Dwight D.** (Electrical and Computer Engineering), **Fateh, Fariba** (Electrical and Computer Engineering), **Hosni, Mohammad H.** (Mechanical and Nuclear Engineering), and **Mirafzal, Behrooz** (Electrical and Computer Engineering), National Science Foundation, \$2,100, "Planning I/UCRC Kansas State University: Center for Onthe-Move Energy Technologies (COMET)."

**Hansen, Ryan R.**, and **Platt, Thomas G.** (Biology), National Science Foundation, \$180,000, "PAPM EAGER: Microwell Array Platform for High-Throughput Screening and Discovery of Microbial Interactions."

**Hohn, Keith L., and Higgins, Daniel A.** (Chemistry), National Science Foundation, \$225,000, "SusChEM: Single Molecule Studies of Aldol Condensation on Heterogeneous Catalysts."

**Liu, Bin, Chikan, Viktor** (Chemistry), and **Pfromm, Peter H.**, US Department of Energy, \$78,743, "Step Catalysis to Synthesize Fossil-Free Ammonia at Atmospheric Pressure."

**Pfromm, Peter H., Chikan, Viktor** (Chemistry), and **Liu, Bin**, US Department of Energy, \$196,859, "Step Catalysis to Synthesize Fossil-Free Ammonia at Atmospheric Pressure."

**Schlup, John R., and Eckels, Steven J.** (Institute for Environmental Research), Hemlock Semiconductor Corporation, \$12,256, "Economic and Environmental Implications of Implementing Alternate Refrigerants for R-22 for Low to Medium Temperature Chiller Application in a Large Industrial Setting."

#### **CIVIL ENGINEERING**

**Dissanayake, Sunanda**, Kansas Department of Transportation, \$146,500, "Calibrating the HSM Safety Prediction Tools for Kansas Freeways, Interchanges, and Urban and Suburban Arterial Intersections."

**Dissanayake, Sunanda, and Fitzsimmons, Eric J.**, Kansas Department of Transportation, \$26,152, "Continued Updating the Lane Closure Guide for Urban Highways in Kansas."

**Fitzsimmons, Eric J., and Dissanayake, Sunanda**, Kansas Department of Transportation, \$31,964, "Continued Updating the Lane Closure Guide for Urban Highways in Kansas."

**Fitzsimmons, Eric J.**, US Department of Transportation, \$3,573, "Self De-icing LED Signals."

**Hossain, Mustaque A.**, Kansas Department of Transportation, \$40,000, "Administration of KDOT/KTRAN Program."

**Hossain, Mustaque A.**, Kansas Department of Transportation, \$85,000, "Durable High Early Strength Concrete."

**Hossain, Mustaque A.**, Kansas Department of Transportation, \$19,962, "Evaluation of Carbon Char in Hot-Mix Asphalt Mixture."

**Hossain, Mustaque A.**, US Department of Transportation, \$30,902, "Implementation of the AASHTO Mechanistic-Empirical Design Guide (AASHTOWare Pavement me Design) for Pavement Rehabilitation."

**Kulesza, Stacey E., Hallaq, Thomas G.** (School of Journalism and Mass Communications), and **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), National Science Foundation, \$92,408, "Erodibility of Claypan Soils: Identifying Erosion Mechanisms for Sustainable Reduction of Sediment Loss."

**Kulesza, Stacey E., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.**, and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$19,149, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Mathews, Alexander P.**, National Science Foundation, \$22,575, "Eager: A Novel Bioprocess for the Valorization of Waste and Biomass."

**Parameswaran, Prathap**, Bio Huma Netics, Inc., \$7,775, "Assessing the Denitrification Potential of PROBIOTIC SOLUTIONS for Sustainable Wastewater Treatment."

**Parameswaran, Prathap**, Black & Veatch Corporation, \$12,342, "Characterization and Evaluation of Biodegradability of a Complex Industrial Waste."

**Parameswaran, Prathap**, and **Hutchinson, Stacy L.** (Biological and Agricultural Engineering), US Department of Defense, \$1,500, "Anaerobic Membrane Bioreactor (AnMBR) for Sustainable Wastewater Treatment."

**Rasheed, Hayder A.**, Kansas Department of Transportation, \$69,750, "Initial Analytical Investigation of Overhead Sign Trusses with Respect to Remaining Fatigue Life and Predictive Methods for Inspection."

**Rasheed, Hayder A.**, Kansas Department of Transportation, \$37,945, "KDOT COLUMN EXPERT: Shear Capacity of Circular Bridge Piers Confined with FRP Wrapping."

**Steward, David R.**, and **Hendricks, Nathan P.** (Agricultural Economics), US Department of Agriculture, \$174,971, "Mixed Approaches Towards Effective Collective Management of Groundwater Resources."

**Steward, David R.**, **Albin, Nathan** (Mathematics), and **Welch, Stephen M.** (Agronomy), US Department of Agriculture, \$99,000, "PAPM EAGER: Wheat Phenome/Genome Sensing/Modeling via Microwave Scattering Inversion."

**Steward, David R.**, **Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.**, **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$19,149, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Stokes, Robert W.**, US Department of Transportation, \$100,000, "Traffic Assistance Services for Kansas (TASK) Program (FY 2015 - 2017)."

## COMPUTER SCIENCE

**Amariuca, George**, **Andresen, Daniel A.**, **DeLoach, Scott A.**, **Hatcliff, John M.**, **Munir, Arslan**, and **Vasserman, Eugene**, National Science Foundation, \$55,870, "Building the National Cyber Workforce: New SFS Program at Kansas State University."

**Andresen, Daniel A.**, **Amariuca, George**, **DeLoach, Scott A.**, **Hatcliff, John M.**, **Munir, Arslan**, and **Vasserman, Eugene**, National Science Foundation, \$83,805, "Building the National Cyber Workforce: New SFS Program at Kansas State University."

**DeLoach, Scott A.**, **Amariuca, George**, **Andresen, Daniel A.**, **Hatcliff, John M.**, **Munir, Arslan**, and **Vasserman, Eugene**, National Science Foundation, \$139,675, "Building the National Cyber Workforce: New SFS Program at Kansas State University."

**Hatcliff, John M.**, **Amariuca, George**, **Andresen, Daniel A.**, **DeLoach, Scott A.**, **Munir, Arslan**, and **Vasserman, Eugene**, National Science Foundation, \$55,870, "Building the National Cyber Workforce: New SFS Program at Kansas State University."



**Hatcliff, John M., Ranganath, Venkatesh, and Robby, -**, National Science Foundation, \$56,000, "FDA SIR: Architecturally-Integrated Hazard Analyses for Medical Application Platforms."

**Hatcliff, John M., Robby, -**, and **Vasserman, Eugene**, US Department of Defense, \$203,512, "Methodologies and Tools for Securing Medical Device Systems in Integrated Clinical Environments (ICE, Phase 2 SBIR for topic DHP15-004."

**Hatcliff, John M.**, and **Vasserman, Eugene**, US Department of Homeland Security, \$74,243, "Cyber Physical System Security (CPSSEC)."

**Hatcliff, John M., Mizuno, Masaaki, and Neilsen, Mitchell L.**, US Department of the Interior, \$101,680, "Modeling Security/Safety Interactions in Buildings for Compositional Security/Safety Control."

**Hsu, William H.**, US Department of Energy, \$90,000, "Capability Inference based on Dynamic Topic Modeling and Text Information Extraction."

**Hsu, William H.**, and **Carraway, Kurt J.** (Salina Applied Aviation Research Center), Westar Energy, \$39,819, "Westar Task Order #5."

**Mizuno, Masaaki, Hatcliff, John M.**, and **Neilsen, Mitchell L.**, US Department of the Interior, \$104,761, "Modeling Security/Safety Interactions in Buildings for Compositional Security/Safety Control."

**Munir, Arslan, Amariuca, George, Andresen, Daniel A., DeLoach, Scott A., Hatcliff, John M.**, and **Vasserman, Eugene**, National Science Foundation, \$55,870, "Building the National Cyber Workforce: New SFS Program at Kansas State University."

**Munir, Arslan**, National Science Foundation, \$159,234, "CRII: CPS: Design of Secure and Dependable Next Generation Automotive Cyber-physical Systems."

**Neilsen, Mitchell L.**, Bill and Melinda Gates Foundation, \$35,000, "Mobile Application Development for High-throughput Phenotyping."

**Neilsen, Mitchell L.**, and **Poland, Jesse A.** (Plant Pathology), National Science Foundation, \$159,435, "BREAD PHENO: High-Throughput Phenotyping with Smart Phones. #phenoApps."

**Neilsen, Mitchell L.**, US Department of Agriculture, \$35,000, "Enhancement of Software Tools SITES, WinDAM, WinTR-20, and Pond EFT."

**Neilsen, Mitchell L.**, US Department of Energy, \$83,334, "Thermal Battery Model Interface Development."

**Neilsen, Mitchell L., Hatcliff, John M.**, and **Mizuno, Masaaki**, US Department of the Interior, \$101,680, "Modeling Security/Safety Interactions in Buildings for Compositional Security/Safety Control."

**Prabhakar, Pavithra**, National Science Foundation, \$30,800, "Verification Mentoring Workshop III."

**Prabhakar, Pavithra**, and **Sharda, Ajay** (Biological and Agricultural Engineering), US Department of Agriculture, \$124,992, "Develop Canopy Sensing and Computational Systems for Real-Time Control and Feedback of Irrigation Technology."

**Prabhakar, Pavithra**, US Department of Defense, \$175,000, "Formal Synthesis of Robust, Optimal Controllers for Autonomous Underwater Vehicles."

**Ranganath, Venkatesh, Hatcliff, John M.**, and **Robby, -**, National Science Foundation, \$12,000, "FDA SIR: Architecturally-Integrated Hazard Analyses for Medical Application Platforms."

**Robby, -, Hatcliff, John M., and Ranganath, Venkatesh**, National Science Foundation, \$12,000, "FDA SIR: Architecturally-Integrated Hazard Analyses for Medical Application Platforms."

**Robby, -, Hatcliff, John M., and Vasserman, Eugene**, US Department of Defense, \$67,837, "Methodologies and Tools for Securing Medical Device Systems in Integrated Clinical Environments (ICE, Phase 2 SBIR for topic DHP15-004."

**Vasserman, Eugene, Amariuca, George, Andresen, Daniel A., DeLoach, Scott A., Hatcliff, John M., and Munir, Arslan**, National Science Foundation, \$279,351, "Building the National Cyber Workforce: New SFS Program at Kansas State University."

**Vasserman, Eugene**, National Science Foundation, \$190,907, "CAREER: Safety and Security for Next-generation World-scale Real-time Medical Systems."

**Vasserman, Eugene, Hatcliff, John M., and Robby, -**, US Department of Defense, \$67,837, "Methodologies and Tools for Securing Medical Device Systems in Integrated Clinical Environments (ICE, Phase 2 SBIR for topic DHP15-004."

**Vasserman, Eugene, and Hatcliff, John M.**, US Department of Homeland Security, \$60,744, "Cyber Physical System Security (CPSSEC)."

#### **DEAN OF ENGINEERING**

**Grauer, Bette, Mason, April** (Office of the Provost), **Montelone, Beth A.** (Dean of Arts and Sciences), **Morales, Amanda I.** (Curriculum and Instruction), **Thurston, Linda P.** (Dean of Education), and **Wiley, Zelia Z.** (Dean of Agriculture and Director of AES), National Science Foundation, \$75,000, "Pathways to STEM: Kansas Louis Stokes Alliance for Minority Participation."

#### **ELECTRICAL AND COMPUTER ENGINEERING**

**Day, Dwight D., Amama, Placidus B.** (Chemical Engineering), **Chen, James M.** (Mechanical and Nuclear Engineering), **Edgar, James H.** (Chemical Engineering), **Fateh, Fariba, Hosni, Mohammad H.** (Mechanical and Nuclear Engineering), and **Mirafzal, Behrooz**, National Science Foundation, \$2,100, "Planning I/UCRC Kansas State University: Center for On-the-Move Energy Technologies (COMET)."

**Fateh, Fariba, Amama, Placidus B.** (Chemical Engineering), **Chen, James M.** (Mechanical and Nuclear Engineering), **Day, Dwight D., Edgar, James H.** (Chemical Engineering), **Hosni, Mohammad H.** (Mechanical and Nuclear Engineering), and **Mirafzal, Behrooz**, National Science Foundation, \$1,500, "Planning I/UCRC Kansas State University: Center for On-the-Move Energy Technologies (COMET)."

**Fund, Andrew D., and Kuhn, William B.**, US Department of Energy, \$56,000, "RF Design/Layout of High-Frequency Electronics in Advanced PC Board Technologies."

**Gruenbacher, Don M., Bahadori, Amir** (Mechanical and Nuclear Engineering), **McNeil, Walter J.** (Mechanical and Nuclear Engineering), and **Natarajan, Balasubramaniam**, US Department of Defense, \$20,000, "Radiological Systems Research for Detection, Localization, and Isotope Identification."

**Kim, Jungkwun**, ABCo Electronics Co LTD, \$3,519, "Development of a Compact High-Efficiency Inductor for Wearable and Smart Devices."

**Kim, Jungkwun**, Korean Institute for the Advancement of Technology, \$225,000, "Development of a Tilt-rotation UV Exposure System for 3D Microlithography/Printing."

**Kim, Sungo**, Samsung Electronic Co., LTD, \$100,000, "GRO Research Agreement: Fully Transparent Flexible and High Strength Mica Substrates."

**Kuhn, William B., and Fund, Andrew D.**, US Department of Energy, \$84,000, "RF Design/Layout of High-Frequency Electronics in Advanced PC Board Technologies."

**Miller, Ruth D., and White, Warren J.** (Mechanical and Nuclear Engineering), National Renewable Energy Laboratory, \$2,500, "Kansas State University Wind Turbine Design Team 2016."

**Miller, Ruth D., and Carter, David A.** (Kansas Industrial Extension Services), National Renewable Energy Laboratory, "Wind for Schools."

**Miller, Ruth D., and White, Warren N.** (Mechanical and Nuclear Engineering), US Department of Energy, \$5,000, "Kansas State University Wind Turbine Design Team 2018."

**Miller, Ruth D.**, Westar Energy, \$16,791, "Photovoltaic Systems Online Power and Energy Display."

**Mirafzal, Behrooz, and Pahwa, Anil**, Black & Veatch Corporation, \$58,105, "Dynamic Modeling of Microgrids for Voltage-Frequency Stability Analysis."

**Mirafzal, Behrooz**, National Science Foundation, \$5,250, "CAREER: Toward Grid-Interactive Converters with Diagnostic, Remedial, and Lifetime Prognostic Features for the Next Generation of Power Grids."

**Mirafzal, Behrooz, Amama, Placidus B.** (Chemical Engineering), **Chen, James M.** (Mechanical and Nuclear Engineering), **Day, Dwight D., Edgar, James H.** (Chemical Engineering), **Fateh, Fariba, and Hosni, Mohammad H.** (Mechanical and Nuclear Engineering), National Science Foundation, \$4,200, "Planning I/UCRC Kansas State University: Center for On-the-Move Energy Technologies (COMET)."

**Natarajan, Balasubramaniam, Bahadori, Amir** (Mechanical and Nuclear Engineering), **Gruenbacher, Don M., and McNeil, Walter J.** (Mechanical and Nuclear Engineering), US Department of Defense, \$20,000, "Radiological Systems Research for Detection, Localization, and Isotope Identification."

**Pahwa, Anil, and Mirafzal, Behrooz**, Black & Veatch Corporation, \$24,902, "Dynamic Modeling of Microgrids for Voltage-Frequency Stability Analysis."

**Pahwa, Anil**, Sunflower Electric Power Corp. & Electric Power Research Ins, \$75,000, "Thermal Loading to Prevent Ice on Transmission Lines."

**Prakash, Punit**, Broncus Medical Inc, \$42,714, "Broncoscopic Microwave Ablation of Lung Tumors: Antenna Design and Characterization towards Pilot Clinical Study."

**Prakash, Punit**, Hologic, Inc., \$53,833, "Investigation of Microwave Endometrial Ablation (MEA): Phase II."

**Prakash, Punit**, Kansas State University Foundation, \$14,400, "Software Real-Time Magnetic Resonance Imaging."

**Prakash, Punit**, National Science Foundation, \$50,000, "I-Corps: Directional Microwave Antenna for Precise Thermal Tissue Ablation."

**Prakash, Punit**, National University of Ireland Galway, \$24,292, "Phase II -- In vivo Assessment of RFA Device for Treating Rhinitis."

**Prakash, Punit**, National University of Ireland Galway, \$27,614, "Proof-of-principle Assessment of Biopolar Radiofrequency of Ablation of Nasal Targets."

**Scoglio, Caterina M.**, US Department of Agriculture, \$7,500, "Long-distance Dispersal and Disease Outbreaks: Effects of Initial Prevalence, Basic Reproduction Number, and Control Tactics."

**Thompson, David E.**, US Department of Energy, \$131,573, "Real-Time Navigation System Simulation Advancement."

**Wu, Hongyu**, US Department of Energy, \$10,040, "HEMS Code to Support Smart Home Hardware-in-the-Loop Experiments."

#### **INDUSTRIAL AND MANUFACTURING SYSTEMS ENGINEERING**

**Deines, Timothy W., Wang, Donghai** (Biological and Agricultural Engineering), and **Zhang, Meng (Peter)**, National Science Foundation, \$3,120, "Increasing Sugar Yield in Biofuel Manufacturing through Control of Cellulosic Biomass Particle Size."

**Heier Stamm, Jessica L.**, National Science Foundation, \$500,000, "CAREER: Measuring the Impact of Supply Chain Coordination Structures on the Effectiveness of Disaster Preparedness and Response."

**Kramer, Bradley A.**, National Science Foundation, \$49,000, "Workshop: 2017 NSF CAREER Proposal Writing Workshop."

**Lin, Dong**, and **Zhang, Meng (Peter)**, Foot Locker Retail, Inc., \$837, "3D Printing of Models for Foot Locker Junction City Distribution Facility."

**Zhang, Meng (Peter)**, and **Lin, Dong**, Foot Locker Retail, Inc., \$837, "3D Printing of Models for Foot Locker Junction City Distribution Facility."

**Zhang, Meng (Peter), Deines, Timothy W., and Wang, Donghai** (Biological and Agricultural Engineering), National Science Foundation, \$6,240, "Increasing Sugar Yield in Biofuel Manufacturing through Control of Cellulosic Biomass Particle Size."

#### **INSTITUTE FOR ENVIRONMENTAL RESEARCH**

**Eckels, Steven J., and Schlup, John R.** (Chemical Engineering), Hemlock Semiconductor Corporation, \$12,256, "Economic and Environmental Implications of Implementing Alternate Refrigerants for R-22 for Low to Medium Temperature Chiller Application in a Large Industrial Setting."

**Eckels, Steven J.**, Support Funds, \$8,444, "Thermal Properties of Textile Products."

**Hosni, Mohammad H.**, US Department of Health and Human Services, \$113,836, "Aircraft Cabin Microbial Research."

#### **KANSAS INDUSTRIAL EXTENSION SERVICES**

**Carter, David A., and Miller, Ruth D.** (Electrical and Computer Engineering), National Renewable Energy Laboratory, \$20,000, "Wind for Schools."

**Carter, David A.**, US Department of Energy, \$360,875, "Kansas Corporation Commission and Kansas State University for Energy Education Services."

**Goode, Barbara L., and Larson, Nancy J.**, US Environmental Protection Agency, \$23,500, "Development and Management of the National Small Business Ombudsman/Small Business Environmental Assistance Provider 507 Program Website."

**Hanson, Brian R., Snead, Bruce C., and Snyder, Kristina E.**, US Environmental Protection Agency, \$57,750, "National Radon Program Services (NRPS)."

**Hanson, Brian R., and Snead, Bruce C.**, US Environmental Protection Agency, \$121,498 (includes \$45,000 from Contractual / In Kind Costs), "Radon Projects for Kansas."

**Larson, Nancy J., and Goode, Barbara L.**, US Environmental Protection Agency, \$70,500, "Development and Management of the National Small Business Ombudsman/Small Business Environmental Assistance Provider 507 Program Website."

**Larson, Nancy J.**, US Environmental Protection Agency, \$443,600 (includes \$195,679 from Industry Match), "Kansas Partners Identify and Implement P2 Strategies that Address National Emphasis Areas."

**Larson, Nancy J.**, US Environmental Protection Agency, \$239,000, "Small Business Environmental Assistance Program 2017."

**Snead, Bruce C.**, US Department of Health and Human Services, \$5,400 (includes \$2,700 from Private Sector), "Training for the Nebraska State Radon Program 2017."

**Snead, Bruce C.**, US Environmental Protection Agency, \$7,500, "Kansas State University - Missouri Radon Training."

**Snead, Bruce C., Hanson, Brian R., and Snyder, Kristina E.**, US Environmental Protection Agency, \$91,000, "National Radon Program Services (NRPS)."

**Snead, Bruce C., and Hanson, Brian R.**, US Environmental Protection Agency, \$121,498 (includes \$45,000 from Contractual / In Kind Costs), "Radon Projects for Kansas."

**Snyder, Kristina E., Hanson, Brian R., and Snead, Bruce C.**, US Environmental Protection Agency, \$26,250, "National Radon Program Services (NRPS)."

#### **MECHANICAL AND NUCLEAR ENGINEERING**

**Bahadori, Amir, Gruenbacher, Don M.** (Electrical and Computer Engineering), **McNeil, Walter J.**, and **Natarajan, Balasubramaniam** (Electrical and Computer Engineering), US Department of Defense, \$25,000, "Radiological Systems Research for Detection, Localization, and Isotope Identification."

**Bahadori, Amir, Bindra, Hitesh, McNeil, Walter J., and Roberts, Jeremy A.**, US Nuclear Regulatory Commission, \$98,455, "Kansas State University Nuclear Research Fellowship Program."

**Beck, B. Terry, and Bindra, Hitesh**, US Department of Energy, \$120,396, "Development of Reactor Thermal-hydraulics and Safety Research Facilities at Kansas State University."

**Betz, Amy R.**, National Science Foundation, \$211,243, "Collaborative Research: Understanding, Mitigating, and Controlling Frost Formation Through the Use of Biphilic and Hybrid Surfaces Under Static and Dynamic Conditions."

**Betz, Amy R.**, National Science Foundation, \$9,000, "The 15th International Conference on Nanochannels, Microchannels and Minichannels (August 27-31, 2017 in Cambridge, MA)."

**Bindra, Hitesh**, US Department of Energy, \$719,320, "A Computational-Experimental Study to Simulate Mixing and Thermal Stratification in SFRs."

**Bindra, Hitesh, and Beck, B. Terry**, US Department of Energy, \$120,396, "Development of Reactor Thermal-hydraulics and Safety Research Facilities at Kansas State University."

**Bindra, Hitesh**, US Department of Energy, \$55,228, "Experimental Investigation of Forced Convection and Natural Circulation Cooling of a VHTR Core under Normal Operation and Accident Scenario."

**Bindra, Hitesh, Bahadori, Amir, McNeil, Walter J., and Roberts, Jeremy A.**, US Nuclear Regulatory Commission, \$98,455, "Kansas State University Nuclear Research Fellowship Program."

**Cai, Liang-Wu**, Honeywell Federal Manufacturing & Technologies, LLC, \$1,000, "Design of Force Indicating/Limiting Stacking Press."

**Cai, Liang-Wu**, Honeywell Federal Manufacturing & Technologies, LLC, \$500, "Developing Vacuum Compatible Rotating Fixture for PVD Coating."

**Cai, Liang-Wu**, Honeywell Federal Manufacturing & Technologies, LLC, \$1,000, "Senior Design Class: Design of Force Indicating/Limiting Staking Press."

**Cai, Liang-Wu**, Honeywell Federal Manufacturing & Technologies, LLC, \$1,000, "Senior Design Class: Developing Vacuum Compatible Rotating Fixture for PVD Coating."

**Chen, James M.**, and **Leseman, Zayd C.**, National Science Foundation, \$220,000, "A First-Principles Study of Electro-Mechanical Coupling in Triboelectric Nanogenerators."

**Chen, James M.**, **Amama, Placidus B.** (Chemical Engineering), **Day, Dwight D.** (Electrical and Computer Engineering), **Edgar, James H.** (Chemical Engineering), **Fateh, Fariba** (Electrical and Computer Engineering), **Hosni, Mohammad H.**, and **Mirafzal, Behrooz** (Electrical and Computer Engineering), National Science Foundation, \$1,500, "Planning I/UCRC Kansas State University: Center for On-the-Move Energy Technologies (COMET)."

**Chen, James M.**, US Department of Defense, \$120,000, "A Multiscale Morphing Continuum Analysis on Energy Cascade of Compressible Turbulence."

**Derby, Melanie M.**, National Science Foundation, \$500,000, "CAREER: Altering Transient Soil Evaporation Mechanisms through Hydrophobicity."

**Derby, Melanie M.**, OneSubsea Corporate Technology, \$79,603, "Oil-water Separation Utilizing Surface Tension Effects in Horizontal Mini-channels."

**Dunn, William L.**, **McNeil, Walter J.**, and **Shultis, J. Kenneth**, US Department of Energy, \$150,000, "Proposal for a Consortium for Nonproliferation-Enabling Capabilities."

**Geuther, Jeffrey A.**, **McGregor, Douglas S.**, and **Roberts, Jeremy A.**, US Department of Energy, \$85,386, "Advanced Instrumentation for Transient Reactor Testing."

**Hosni, Mohammad H.**, **Amama, Placidus B.** (Chemical Engineering), **Chen, James M.**, **Day, Dwight D.** (Electrical and Computer Engineering), **Edgar, James H.** (Chemical Engineering), **Fateh, Fariba** (Electrical and Computer Engineering), and **Mirafzal, Behrooz** (Electrical and Computer Engineering), National Science Foundation, \$2,100, "Planning I/UCRC Kansas State University: Center for On-the-Move Energy Technologies (COMET)."

**Lease, Kevin B.**, National Aeronautics and Space Administration, \$42,841, "Kansas Space Grant Consortium."

**Leseman, Zayd C.**, and **Chen, James M.**, National Science Foundation, \$180,000, "A First-Principles Study of Electro-Mechanical Coupling in Triboelectric Nanogenerators."

**Leseman, Zayd C.**, National Science Foundation, \$1,788, "CAREER: Phononic Crystals: Theory and Practical Implementations."

**McGregor, Douglas S.**, and **Shultis, J. Kenneth**, US Department of Defense, \$209,439, "Wearable Detection Device (WDD) - Low Visibility Gamma Neutron Sensor."

**McGregor, Douglas S., Geuther, Jeffrey A., and Roberts, Jeremy A.**, US Department of Energy, \$85,386, "Advanced Instrumentation for Transient Reactor Testing."

**McGregor, Douglas S., and Roberts, Jeremy A.**, US Department of Energy, \$363,667, "Develop an Active Sensor Array Prototype for Knolls Atomic Power Laboratory."

**McGregor, Douglas S., Harrison, Mark, and Roberts, Jeremy A.**, US Department of Energy, \$100,000, "Micro-Pocket Fission Detector Development for TREAT Experiments."

**McGregor, Douglas S.**, US Department of Energy, \$130,520, "Technical Assistance on High Temperature MPFD Development."

**McGregor, Douglas S.**, US Department of Energy, \$38,626, "Wide-Bandgap Microstructured Semiconductor Neutron Detector."

**McNeil, Walter J., Bahadori, Amir, Gruenbacher, Don M.** (Electrical and Computer Engineering), and **Natarajan, Balasubramaniam** (Electrical and Computer Engineering), US Department of Defense, \$35,000, "Radiological Systems Research for Detection, Localization, and Isotope Identification."

**McNeil, Walter J., Dunn, William L., and Shultis, J. Kenneth**, US Department of Energy, \$90,000, "Proposal for a Consortium for Nonproliferation-Enabling Capabilities."

**McNeil, Walter J., Bahadori, Amir, Bindra, Hitesh, and Roberts, Jeremy A.**, US Nuclear Regulatory Commission, \$98,455, "Kansas State University Nuclear Research Fellowship Program."

**Roberts, Jeremy A., Geuther, Jeffrey A., and McGregor, Douglas S.**, US Department of Energy, \$87,973, "Advanced Instrumentation for Transient Reactor Testing."

**Roberts, Jeremy A., and McGregor, Douglas S.**, US Department of Energy, \$363,667, "Develop an Active Sensor Array Prototype for Knolls Atomic Power Laboratory."

**Roberts, Jeremy A., Harrison, Mark, and McGregor, Douglas S.**, US Department of Energy, \$100,000, "Micro-Pocket Fission Detector Development for TREAT Experiments."

**Roberts, Jeremy A., Bahadori, Amir, Bindra, Hitesh, and McNeil, Walter J.**, US Nuclear Regulatory Commission, \$98,455, "Kansas State University Nuclear Research Fellowship Program."

**Shultis, J. Kenneth, and McGregor, Douglas S.**, US Department of Defense, \$52,360, "Wearable Detection Device (WDD) - Low Visibility Gamma Neutron Sensor."

**Shultis, J. Kenneth, Dunn, William L., and McNeil, Walter J.**, US Department of Energy, \$60,000, "Proposal for a Consortium for Nonproliferation-Enabling Capabilities."

**Singh, Gurpreet**, OneSubsea Corporate Technology, \$85,000, "Investigation of Graphene Oxide Coating for Protection Against Seawater Corrosion."

**Spaulding, Gregory L.**, FCA US LLC, \$15,000, "SRT Compression Ratio Study - Senior Design I & II."

**Wei, Mingjun**, US Army, \$126,272, "Comprehensive Reduced Order Modeling and Validations for Loads and Flight Stability of a Flapping Wing."

**White, Warren J., and Miller, Ruth D.** (Electrical and Computer Engineering), National Renewable Energy Laboratory, \$2,500, "Kansas State University Wind Turbine Design Team 2016."

**White, Warren N., and Miller, Ruth D.** (Electrical and Computer Engineering), US Department of Energy, \$5,000, "Kansas State University Wind Turbine Design Team 2018."

## **COLLEGE OF HUMAN ECOLOGY**

### **APPAREL, TEXTILES, AND INTERIOR DESIGN**

**Day, Julia K.**, National Science Foundation, \$1,650, "Wireless Sensor Network Architecture for Monitoring and Control in Buildings."

**Kaup, Migette L., Cornelison, Laci J.** (Dean of Human Ecology), **Doll, Gayle** (Dean of Human Ecology), **Gfeller, Stephanie** (Dean of Human Ecology), and **Kulcsar, Laszlo** (Sociology, Anthropology, and Social Work), US Department of Health and Human Services, \$58,896, "Peak 2.0 Evaluation."

### **DEAN OF HUMAN ECOLOGY**

**Buckwalter, John,** and **Gould, Carol A.**, AG\*IDEA, \$58,963, "AG\*IDEA Lead Institute."

**Buckwalter, John,** and **Gould, Carol A.**, Great Plains IDEA Alliance, \$181,087, "Comprehensive Fiscal Sponsorship Agreement - Great Plains Interactive Distance Education Alliance."

**Buckwalter, John, Cortez, Anita R.** (Vice Provost for Undergraduate Studies), and **Olsen, Charlotte S.** (School of Family Studies and Human Services), US Department of Health and Human Services, \$51,270, "Kansas Bridges to the Future."

**Cornelison, Laci J., Doll, Gayle, Gfeller, Stephanie, Kaup, Migette L.** (Apparel, Textiles, and Interior Design), and **Kulcsar, Laszlo** (Sociology, Anthropology, and Social Work), US Department of Health and Human Services, \$147,240, "Peak 2.0 Evaluation."

**Doll, Gayle, Cornelison, Laci J., Gfeller, Stephanie, Kaup, Migette L.** (Apparel, Textiles, and Interior Design), and **Kulcsar, Laszlo** (Sociology, Anthropology, and Social Work), US Department of Health and Human Services, \$58,896, "Peak 2.0 Evaluation."

**Fees, Bronwyn S.**, Kansas Child Care Training Opportunities, Inc, \$430,717, "Early Childhood Workforce Development Grant."

**Fees, Bronwyn S.**, Kansas Child Care Training Opportunities, Inc, \$41,318, "Kansas Child Care Training Opportunities."

**Gfeller, Stephanie, Cornelison, Laci J., Doll, Gayle, Kaup, Migette L.** (Apparel, Textiles, and Interior Design), and **Kulcsar, Laszlo** (Sociology, Anthropology, and Social Work), US Department of Health and Human Services, \$14,724, "Peak 2.0 Evaluation."

**Gould, Carol A.,** and **Buckwalter, John,** AG\*IDEA, \$58,963, "AG\*IDEA Lead Institute."

**Gould, Carol A.,** and **Buckwalter, John,** Great Plains IDEA Alliance, \$181,087, "Comprehensive Fiscal Sponsorship Agreement - Great Plains Interactive Distance Education Alliance."

**Syme, Maggie L.**, The Borchard Foundation Center on Law & Aging, \$19,675, "Examining Jury Decision-Making in Sexual Consent and Dementia Cases: Implications for Law and Policy."

**Toews, Michelle L., Johannes, Elaine M.** (School of Family Studies and Human Services), and **Vennum, Amber V.** (School of Family Studies and Human Services), US Department of Health and Human Services, \$186,436, "Healthy REWARDS (Relationships, Expectations, Willpower, Aspirations, Reactions, Decisions, Self-esteem): An Evidence-Based Approach to Sexual Risk Avoidance."



**Toews, Michelle L.**, US Department of Health and Human Services, \$105,795, "Strengthening Relationships/Strengthening Families (SR/SF)."

#### **HOSPITALITY MANAGEMENT AND DIETETICS**

**Kwon, Junehee**, Foodservice Systems Management Education Council, \$2,000, "Restaurant Service Sabotage Scale Development Using Item Response Theory (Chen-Wei Tao)."

**Roberts, Kevin R., Sauer, Kevin L.** (Human Nutrition), and **Shanklin, Carol W.** (Dean of Graduate School), US Department of Agriculture, \$224,236, "Center of Excellence for Food Safety Research in Child Nutrition Programs."

#### **HUMAN NUTRITION**

**Chambers IV, Edgar**, and **Chambers, Delores H.**, Frito Lay, Inc., \$20,650, "Consumer Perception of Products Under Extended Use."

**Chambers IV, Edgar**, and **Garcia, Jane M.** (School of Family Studies and Human Services), Kansas State University Foundation, \$2,500, "Improving the Consistency of Beverage and Food Modifications for Older Adults (Abiline Katt and Krista Sudbeck)."

**Chambers IV, Edgar**, and **Koppel, Kadri**, Kemin Industries, \$6,950, "Sensory Analysis of Pet Products."

**Chambers IV, Edgar**, and **Alavi, Sajid** (Grain Science and Industry), PepsiCo, Inc., \$1,250,000, "Kansas State University Product Development Accelerator."

**Chambers, Delores H.**, and **Chambers IV, Edgar**, Frito Lay, Inc., "Consumer Perception of Products Under Extended Use."

**Hanson, Jennifer**, Kansas State University Foundation, \$4,326, "An Infographic Menu: Improving Decision Making in Dementia Residents (Priscilla Brenes)."

**Hanson, Jennifer**, and **VerBrugge (Glasscock), Marlene K.** (School of Family Studies and Human Services), US Department of Agriculture, \$296,468, "4-H Military Partnership and Outreach Support Program."

**Haub, Mark D.**, and **Rosenkranz, Sara**, Isagenix International, LLC, \$550, "Determining the Impact of Meal Replacement Products on Human Blood Glucose Levels."

**Haub, Mark D.**, and **Rosenkranz, Sara**, MGP Ingredients, Inc., \$5,895, "Metabolic Responses of Resistant Starch vs Native Wheat Starch."

**Kidd, Tandalayo**, US Department of Agriculture, \$120,719, "'Get Fruved:' A Peer-Led, Train-the-Trainer Social Marketing Intervention to Increase Fruit and Vegetable Intake and Prevent Childhood Obesity."

**Kidd, Tandalayo**, and **Muturi, Nancy W.** (School of Journalism and Mass Communications), US Department of Agriculture, \$400,000, "Community-Based Participatory Research (CBPR) Model in Preventing Overweight and Obesity Among 6th-8th Grade Youth in Low-Income Racial/Ethnic Communities."

**Koppel, Kadri**, and **Chambers IV, Edgar**, Kemin Industries, \$6,950, "Sensory Analysis of Pet Products."

**Lindshield, Brian L., Bhadriraju, Subramanyam** (Grain Science and Industry), **Campabadal Teran, Carlos** (Grain Science and Industry), **Harvey, Jagger J.** (Dean of Agriculture and Director of AES), **Leslie, John F.** (Plant Pathology), **Lilja, Nina K.** (International Agricultural Programs), and **Ulmer, Jonathan** (Communications), US Agency for International Development, "Feed the Future Innovation Lab for the Reduction of Post-Harvest Loss."

**Melgarejo, L Tonatiuh, Douthit, Teresa L.** (Animal Sciences and Industry), **Drouillard, James S.** (Animal Sciences and Industry), and **Lattimer, James M.** (Animal Sciences and Industry), New Generation Supplements, \$14,436, "Immunomodulation of HorsLic Omega Elite® in Yearling Horses."

**Rosenkranz, Sara,** and **Haub, Mark D.,** Isagenix International, LLC, \$2,200, "Determining the Impact of Meal Replacement Products on Human Blood Glucose Levels."

**Rosenkranz, Sara,** and **Haub, Mark D.,** MGP Ingredients, Inc., \$13,755, "Metabolic Responses of Resistant Starch vs Native Wheat Starch."

**Sauer, Kevin L., Roberts, Kevin R.** (Hospitality Management and Dietetics), and **Shanklin, Carol W.** (Dean of Graduate School), US Department of Agriculture, \$224,236, "Center of Excellence for Food Safety Research in Child Nutrition Programs."

**Swaney-Stueve, Marianne, Gallo, Katherine E.** (K-State Olathe), and **Jepsen, Tegan M.** (K-State Olathe), Hill's Pet Nutrition, Inc., \$15,450, "Study Agreement 2."

**Swaney-Stueve, Marianne, Jepsen, Tegan M.** (K-State Olathe), and **Taylor, Terry L.,** Hill's Pet Nutrition, Inc., \$13,650, "Study Agreement 4."

**Taylor, Terry L., Jepsen, Tegan M.** (K-State Olathe), and **Swaney-Stueve, Marianne,** Hill's Pet Nutrition, Inc., \$2,100, "Study Agreement 4."

**Thiele, Ryan,** Mid-America Athletic Trainers' Association (MAATA), \$2,000, "Time Course Effects of Manually-Applied Passive Stretches of Hamstrings Musculotendinous Stiffness and Postural Stability."

**Vardiman, John P.,** US Department of Defense, \$30,000, "Establishing Optimal Training Intervals for the Marine Corps Martial Arts Program (MCMAP) for Improvement in Physical Performance and Warrior Mindset."

**Wang, Weiqun,** US Department of Agriculture, \$20,000, "Determining the Bioavailability of Sorghum Phenolic Compounds."

## **KINESIOLOGY**

**Ade, Carl,** and **Barstow, Thomas J.,** National Aeronautics and Space Administration, \$55,000, "Identification of Aerobic Fitness Standards for Exploration Mission Tasks."

**Ade, Carl,** National Aeronautics and Space Administration, \$16,565, "Omics and Biochemical Markers of Cardiovascular and Bone Health: Relationship with Bedrest and Standard Physiological Measures."

**Barstow, Thomas J.,** and **Ade, Carl,** National Aeronautics and Space Administration, \$55,000, "Identification of Aerobic Fitness Standards for Exploration Mission Tasks."

**Dzewaltowski, David A.,** Centers for Disease Control and Prevention, \$62,500, "Development and Evaluation of School Physical Activity (Chelsey Schlechter)."

**Harms, Craig A.,** and **Heinrich, Katie M.,** US Department of Health and Human Services, \$49,951, "HIFT for Obesity Prevention, Fitness and Health Promotion in Military Personnel."

**Heinrich, Katie M.,** and **Harms, Craig A.,** US Department of Health and Human Services, \$449,562, "HIFT for Obesity Prevention, Fitness and Health Promotion in Military Personnel."

## **SCHOOL OF FAMILY STUDIES AND HUMAN SERVICES**

**Durtschi, Jared A., and Stith, Sandra M.**, US Department of Agriculture, \$172,803, "KSU-USAF 2015 FAP Research Project."

**Garcia, Jane M., and Chambers IV, Edgar** (Human Nutrition), Kansas State University Foundation, \$2,500, "Improving the Consistency of Beverage and Food Modifications for Older Adults (Abiline Katt and Krista Sudbeck)."

**Griffin, Charles L., and Jager, Shanna K.**, US Department of Health and Human Services, \$59,781, "Technical Support for the Department for Children and Families Strategic Development, Faith-based and Community Initiatives."

**Jager, Shanna K., and Griffin, Charles L.**, US Department of Health and Human Services, \$538,027, "Technical Support for the Department for Children and Families Strategic Development, Faith-based and Community Initiatives."

**Johannes, Elaine M., and Yelland, Erin L.**, Centers for Disease Control and Prevention, \$18,630, "Kansas Health Extender Pilot Project."

**Johannes, Elaine M.**, Sunflower Foundation, \$13,805, "Building a Poverty Alleviation Network for Kansas."

**Johannes, Elaine M., Toews, Michelle L.** (Dean of Human Ecology), and **Vennum, Amber V.**, US Department of Health and Human Services, \$41,430, "Healthy REWARDS (Relationships, Expectations, Willpower, Aspirations, Reactions, Decisions, Self-esteem): An Evidence-Based Approach to Sexual Risk Avoidance."

**Lutter, Sonya L.**, Thrivent Financial for Lutherans (brightpeak), \$49,400, "Love and Money Curriculum."

**Olsen, Charlotte S., Buckwalter, John** (Dean of Human Ecology), and **Cortez, Anita R.** (Vice Provost for Undergraduate Studies), US Department of Health and Human Services, \$410,158, "Kansas Bridges to the Future."

**Schumm, Walter R.**, Austin Institute for the Study of Family & Culture, \$26,004, "Further Analyses of NFSS and Other Data."

**Stith, Sandra M., and Durtschi, Jared A.**, US Department of Agriculture, \$1,555,226, "KSU-USAF 2015 FAP Research Project."

**Vennum, Amber V., Johannes, Elaine M., and Toews, Michelle L.** (Dean of Human Ecology), US Department of Health and Human Services, \$186,436, "Healthy REWARDS (Relationships, Expectations, Willpower, Aspirations, Reactions, Decisions, Self-esteem): An Evidence-Based Approach to Sexual Risk Avoidance."

**VerBrugge (Glasscock), Marlene K., and Hanson, Jennifer** (Human Nutrition), US Department of Agriculture, \$1,679,986, "4-H Military Partnership and Outreach Support Program."

**VerBrugge (Glasscock), Marlene K.**, US Department of Agriculture, \$417,053, "CYFAR 4-H Military Partnership Professional Development and Technical Assistance Program."

**Yelland, Erin L., and Johannes, Elaine M.**, Centers for Disease Control and Prevention, \$18,630, "Kansas Health Extender Pilot Project."

**Yelland, Erin L.**, US Department of Agriculture, \$356,257, "Keys to Embracing Aging Program Expansion."

**Yelland, Erin L.**, US Department of Health and Human Services, \$10,000, "K-State Research and Extension MIPPA Outreach for Region 9."

## **K-STATE OLATHE**

### **INNOVATION CAMPUS**

**Gallo, Katherine E., Jepsen, Tegan M., and Swaney-Stueve, Marianne** (Human Nutrition), Hill's Pet Nutrition, Inc., \$15,450, "Study Agreement 2."

**Jepsen, Tegan M., Gallo, Katherine E., and Swaney-Stueve, Marianne** (Human Nutrition), Hill's Pet Nutrition, Inc., \$20,600, "Study Agreement 2."

**Jepsen, Tegan M., Swaney-Stueve, Marianne** (Human Nutrition), and **Taylor, Terry L.** (Human Nutrition), Hill's Pet Nutrition, Inc., \$5,250, "Study Agreement 4."

**Richardson, Ralph C.**, Heartland Food Products, LLC, \$2,400, "Heartland Food Products Memorandum of Agreement."

## **K-STATE POLYTECHNIC CAMPUS**

### **APPLIED AVIATION RESEARCH CENTER**

**Carraway, Kurt J.**, PrecisionHawk USA, Inc., \$31,367, "Task Order 2: PrecisionHawk Pathfinder."

**Carraway, Kurt J.**, US Department of Transportation, \$129,464, "A10: Human Factors Considerations of UAS Procedures, and Control Stations."

**Carraway, Kurt J., and Hsu, William H.** (Computer Science), Westar Energy, \$13,990, "Westar Task Order #5."

## **COLLEGE OF VETERINARY MEDICINE**

### **ANATOMY AND PHYSIOLOGY**

**Alves, Fernando P., and Schultz, Bruce D.**, US Department of Health and Human Services, \$213,750, "Mechanisms of Sperm Immunotolerance in the Male Reproductive Tract."

**Coetzee, Johann F.**, US Department of Agriculture, \$99,071, "Enhancing Animal Care Strategies on Organic Dairy Farms."

**DeLong, Robert K.**, US Department of Health and Human Services, \$5,712, "Anti-Cancer RNA Nanoconjugates."

**Gehring, Ronette, Jaber-Douraki, Majid** (Mathematics), **Lin, Zhoumeng**, and **Riviere, Jim**, US Department of Agriculture, \$180,000, "Food Animal Residue Avoidance Databank (FARAD)."

**Lin, Zhoumeng, Gehring, Ronette, Jaber-Douraki, Majid** (Mathematics), and **Riviere, Jim**, US Department of Agriculture, \$57,600, "Food Animal Residue Avoidance Databank (FARAD)."

**Marcus, Daniel C., and Wangemann, A. Philine**, US Department of Health and Human Services, \$75,480, "Fluid Transport in Inner Ear Development."

**Riviere, Jim, Gehring, Ronette, Jaber-Douraki, Majid** (Mathematics), and **Lin, Zhoumeng**, US Department of Agriculture, \$61,200, "Food Animal Residue Avoidance Databank (FARAD)."

**Schultz, Bruce D., and Wangemann, A. Philine**, US Department of Health and Human Services, \$20,124, "BRITE Veterinary Student Program."

**Schultz, Bruce D.**, US Department of Health and Human Services, \$3,750, "K-INBRE DRPP Mentor."

**Schultz, Bruce D., and Alves, Fernando P.**, US Department of Health and Human Services, \$11,250, "Mechanisms of Sperm Immunotolerance in the Male Reproductive Tract."

**Schultz, Bruce D., Davis, Elizabeth G.** (Clinical Sciences), and **Nguyen, Thu A.** (Diagnostic Medicine/Pathobiology), US Department of Health and Human Services, \$17,720, "Short Term Training in Health Professional Schools."

**Shi, Jishu N.**, US Department of Homeland Security, \$91,916, "Evaluation of a Plant-made CSFV Vaccine During a Challenge Study in Swine."

**Tamura, Masaaki**, Euglena Co., Ltd, \$18,968, "The Study of the Therapeutic Potentials of Chlorella Vulgaris and Euglena Gracilis Water Extract in Colon Cancer Treatment."

**Tamura, Masaaki**, and **Wouda, Raelene** (Clinical Sciences), US Department of Health and Human Services, \$44,993, "Preclinical Evaluations of a Hyaluronan-cisplatin Conjugate for the Treatment of Lung Cancer."

**Tamura, Masaaki**, US Department of Health and Human Services, \$84,111, "Pulmonary Delivery of an Aerosolized and Targeted Platinum Nanoparticle for Treatment of Lung Cancer."

**Wangemann, A. Philine**, and **Schultz, Bruce D.**, US Department of Health and Human Services, \$20,124, "BRITE Veterinary Student Program."

**Wangemann, A. Philine**, and **Marcus, Daniel C.**, US Department of Health and Human Services, \$301,920, "Fluid Transport in Inner Ear Development."

**Weiss, Mark L.**, Kansas State University Foundation, \$25,831, "2017 Johnson Basic Research Funding."

**Weiss, Mark L.**, MediVet America, \$7,020, "Long Term Follow Up of OA Patients."

**Xiong, Yulan**, Kansas State University Foundation, \$18,000, "Identification of Characterization of the Modifiers of LRRK2 Function."

**Xiong, Yulan**, US Department of Health and Human Services, \$30,000, "Molecular Regulation of LRRK2 in Neurodegeneration."

**Xiong, Yulan**, US Department of Health and Human Services, \$220,659, "The Role of Aging in LRRK2-Associated Parkinsons Disease."

**Xiong, Yulan**, William N. and Bernice E. Bumpus Foundation, \$100,000, "Identification and Characterization of the LRRK2 Guanine Nucleotide-Exchange Factor (GEF)."

**Yu, Jianzhong**, Kansas State University Foundation, \$20,000, "Basic Cancer Research Funding."

## **CLINICAL SCIENCES**

**Amachawadi, Raghavendra G.**, and **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), Alltech, Inc., \$8,000, "Technical Testing Service Agreement."

**Amachawadi, Raghavendra G., DeRouchey, Joel M.** (International Agricultural Programs), **Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Goodband, Robert D.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Micronutrients, \$40,398, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."

**Apley, Michael D., and Lubbers, Brian** (Veterinary Diagnostic Laboratory), US Department of Health and Human Services, \$201,000, "Characterization of Antimicrobial Use in Beef Feedlots and Dairies."

**Biller, David S., Harkin, Kenneth R., Roush, James K., and White, Dana A.** (Veterinary Medical Teaching Hospital), MYOS RENS Technology Inc, \$6,414, "EvaLuation of Fortetropin to Reverse Disuse Muscle Atrophy in Dogs after Tibial Plateau Leveling Osteotomy for Cranial Cruciate Ligament Rupture."

**Davis, Elizabeth G., Nguyen, Thu A.** (Diagnostic Medicine/Pathobiology), and **Schultz, Bruce D.** (Anatomy and Physiology), US Department of Health and Human Services, \$17,199, "Short Term Training in Health Professional Schools."

**Harkin, Kenneth R., Biller, David S., Roush, James K., and White, Dana A.** (Veterinary Medical Teaching Hospital), MYOS RENS Technology Inc, \$3,207, "EvaLuation of Fortetropin to Reverse Disuse Muscle Atrophy in Dogs after Tibial Plateau Leveling Osteotomy for Cranial Cruciate Ligament Rupture."

**Higginbotham, Mary Lynn, Hocker, Samuel E., McMurphy, Rose M., and Wouda, Raelene,** ELIAS Animal Health, LLC, \$82,430, "Clinical Trial to Evaluate the Safety and Efficacy of the Combination of Chemotherapy and ECI-LYM-11 to Treat Newly Diagnosed B-cell Lymphoma."

**Larson, Robert L., Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Miesner, Matt D., Mosier, Derek A.** (Diagnostic Medicine/Pathobiology), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Richt, Juergen** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), and **White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$4,793, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**McMurphy, Rose M., Higginbotham, Mary Lynn, Hocker, Samuel E., and Wouda, Raelene,** ELIAS Animal Health, LLC, \$16,486, "Clinical Trial to Evaluate the Safety and Efficacy of the Combination of Chemotherapy and ECI-LYM-11 to Treat Newly Diagnosed B-cell Lymphoma."

**Miesner, Matt D., Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Larson, Robert L., Mosier, Derek A.** (Diagnostic Medicine/Pathobiology), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Richt, Juergen** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), and **White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$4,793, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**Roush, James K., Biller, David S., Harkin, Kenneth R., and White, Dana A.** (Veterinary Medical Teaching Hospital), MYOS RENS Technology Inc, \$9,622, "EvaLuation of Fortetropin to Reverse Disuse Muscle Atrophy in Dogs after Tibial Plateau Leveling Osteotomy for Cranial Cruciate Ligament Rupture."

**White, Bradley J., Nagaraja, Tiruvoor G.** (Diagnostic Medicine/Pathobiology), **Renter, David G.** (Diagnostic Medicine/Pathobiology), and **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), US Department of Health and Human Services, \$103,778, "Exposure Heterogeneity and Environmental Transmission Dynamics of Escherichia coli: Linking Mechanisms and Patterns."

**Wouda, Raelene, Higginbotham, Mary Lynn, Hocker, Samuel E., and McMurphy, Rose M.,** ELIAS Animal Health, LLC, \$65,944, "Clinical Trial to Evaluate the Safety and Efficacy of the Combination of Chemotherapy and ECI-LYM-11 to Treat Newly Diagnosed B-cell Lymphoma."

**Wouda, Raelene,** Kansas State University Foundation, \$25,000, "Innovative Research."

**Wouda, Raelene,** and **Tamura, Masaaki** (Anatomy and Physiology), US Department of Health and Human Services, \$14,998, "Preclinical Evaluations of a Hyaluronan-cisplatin Conjugate for the Treatment of Lung Cancer."

## **DEAN OF VETERINARY MEDICAL CENTER**

**Mulcahy, Ellyn R.**, Kansas Health Foundation, \$25,000, "Promoting a Healthy Community in Saline County."

**White, Bradley J.**, American Association of Bovine Practitioners, \$45,000, "BCI Providing Online CE Platform for AABP."

**White, Bradley J., Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Larson, Robert L.** (Clinical Sciences), **Miesner, Matt D.** (Clinical Sciences), **Mosier, Derek A.** (Diagnostic Medicine/Pathobiology), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Richt, Juergen** (Diagnostic Medicine/Pathobiology), and **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), US Department of Agriculture, \$119,828, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

## **DIAGNOSTIC MEDICINE/PATHOBIOLOGY**

**Amachawadi, Raghavendra G., Dritz, Steven S., Jones, Cassandra K.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G., Niederwerder, Megan, Stark, Charles** (Grain Science and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$8,958 (includes \$1,598 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Bai, Jianfa, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Fang, Ying, Li, Yanhua, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$5,650, "Development of a TaqMan Quantitative RT-PCR Test for Porcine Parainfluenza Virus 1 (Mentor: Dr. Ying Fang)."

**Bai, Jianfa, Cernicchiaro, Natalia, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J., Nagaraja, Tiruvoor G., Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G., Sanderson, Michael W., Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U., Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Beckham, Tammy R.**, US Department of Health and Human Services, \$80,729, "Preventing Zoonotic Diseases in Kenya."

**Cernicchiaro, Natalia, and Renter, David G.**, Chr. Hansen A/S, \$91,800, "Observational Study to Evaluate the Association between Administration of Bovamine Defend, a Direct-fed Microbial, with Fecal Shedding of Escherichia Coli O157:H7 in Commercial Feedlot Cattle."

**Cernicchiaro, Natalia, Dritz, Steven S., Houser, Terry A.** (Animal Sciences and Industry), **Jones, Cassandra K.** (Animal Sciences and Industry), **Trinetta, Valentina** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$5,989, "From Feed to Meat: Investigation of the Prevalence and Distribution of Salmonella Enterica Serotype I 4, [5], 12:i: - A Pathogen of Interest in Pork."

**Cernicchiaro, Natalia, and Zhang, Weiping**, US Department of Agriculture, \$92,000, "A Broadly Protective Vaccine Against Porcine Post-Weaning Diarrhea (PWD)."

**Cernicchiaro, Natalia, Bai, Jianfa, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J., Nagaraja, Tiruvoor G., Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G., Sanderson, Michael W., Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U., Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Chang, Kyeong-Ok**, US Department of Health and Human Services, \$8,406, "Mentor for Dr. Sally Davis - KU COBRE CMADP Award."

**Chang, Kyeong-Ok**, US Department of Health and Human Services, \$734,295, "Norovirus 3CL Protease-Based Anti-Norovirus Therapeutics."

**Cino Ozuna, Ada G.**, US Department of Health and Human Services, \$57,132, "Expanding the Utility of Severe Combined Immuno-deficient (SCID) Pig Models."

**Clavijo, Alfonso, Mur, Lina, Richt, Juergen, and Rowland, Raymond R. R.**, National Pork Board, \$68,469 (includes \$31,250 from Third Party Match), "NPB Joint Projects MOU."

**Davis, A. Sally**, US Department of Agriculture, \$50,000, "Development of Tools for the Pathological Characterization of Rift Valley Fever Virus Infection."

**Davis, A. Sally**, US Department of Health and Human Services, \$39,000, "Characterization of Protease Tmprss2 and its Interaction with Influenza A."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Ajinomoto Co., Inc, \$6,000, "Evaluation of High SID Tryptophan: Lysine Ratios with Ractopamine HCl on Growth Performance and Carcass Characteristics."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Ajinomoto Heartland LLC, \$8,000, "Histidine: Lysine Ratios in Diets for 15 to 25 lb Pigs."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Archer Daniels Midland Company, \$2,000, "Effects of Increasing Standardized Ileal Digestible Lysine during Gestation on Sow Reproductive Performance of Gilts and Sows under Commercial Conditions."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), CTO BiOWiSH Technologies, "Effects of BiOWiSH MultiBio 3P in Diets for Finishing Pigs."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Distributors Processing Inc, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), DSM Nutritional Products AG, "Evaluation of Different Probiotic Products for the Nursery Pig."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Feed One Co., Ltd., "Feed One Co., LTD. Fellowship."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Genus PLC, \$4,000, "Determining the Effects of Increasing the Cup Waterer: Pig Ratio on Growth Performance of Growing/finishing Pigs."



**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Gonzalez, John M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **O'Quinn, Travis G.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Heliae Development, LLC, "Effects of Increasing Astaxanthin on Finishing Pig Growth Performance, Carcass Characteristics and Pork Quality."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), International Ingredient Corporation, "Evaluation of Solu-E Inclusion Level on Nursery Pig Performance Protocol #5506."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Iowa Select Farms, "Iowa Select Farm Fellowship."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Kemin Industries, "Determining the Influence of KemTRACE CR and/or Micro-Aid on Growth Performance and Carcass Composition of Finishing Pigs Housed in a Commercial Environment #4378."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Micronutrients, "Effect of Increasing Levels of Zn from Intellibond Z on Growth Performance, Carcass Composition, and Economic Return of Pigs Housed in a Commercial Environment."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Micronutrients, "Effects of Feeding Increasing Levels of Cu from Either Intellibond-C or Mintrex-Cu on Growth Performance of Nursery Pigs."

**Dritz, Steven S., Amachawadi, Raghavendra G.** (Clinical Sciences), **DeRouchey, Joel M.** (International Agricultural Programs), **Goodband, Robert D.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G., Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Micronutrients, \$5,050, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."

**Dritz, Steven S., Amachawadi, Raghavendra G., Jones, Cassandra K.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G., Niederwerder, Megan, Stark, Charles** (Grain Science and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$2,687 (includes \$479 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Dritz, Steven S., Cernicchiaro, Natalia, Houser, Terry A.** (Animal Sciences and Industry), **Jones, Cassandra K.** (Animal Sciences and Industry), **Trinetta, Valentina** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$2,995, "From Feed to Meat: Investigation of the Prevalence and Distribution of Salmonella Enterica Serotype I 4, [5], 12:i: - A Pathogen of Interest in Pork."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), PIC North America (PIC USA, Inc.), "Determining the Dietary Phosphorus Requirement of Growing-Finishing Pigs."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Quality Technology International, Inc., "Effect of Calsporin on Nursing Piglet Intestinal Microflora and Growth Experiment #693."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), SVC Research, LLC, "KSU Applied Swine Nutrition Fellowship."

**Dritz, Steven S., Jones, Cassandra K.** (Animal Sciences and Industry), **Niederwerder, Megan** (Veterinary Diagnostic Laboratory), **Rowland, Raymond R. R., Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Swine Health Information Center, \$3,498, "Evaluation of the Risk of Transboundary Movement of ASFV via Contaminated Feed Ingredients."

**Dritz, Steven S., DeRouchey, Joel M.** (Animal Sciences and Industry), **Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Trouw Nutrition USA, "Evaluation of Elarom-F Plus in Nursery Diets with the Inclusions of Varying Levels of Intellibond C."

**Dryden, Michael W.**, Merck Animal Health, \$112,875, "Evaluation of Fluralaner to Control Flea Populations on Naturally Infested Cats in Private Residences in Tampa FL 2017."

**Fang, Ying, Bai, Jianfa** (Veterinary Diagnostic Laboratory), and **Liu, Xuming** (Veterinary Diagnostic Laboratory), National Pork Board, \$19,770, "Detection and Differentiation of Field Strains and Commonly Used Vaccine Strains of Type 2 PRRS Virus in the US."

**Fang, Ying, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Li, Yanhua, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$6,570, "Detection and Differentiation of Seneca Valley Virus (SVV) from Foot and Mouth Disease Virus (FMDV)."

**Fang, Ying, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa, Li, Yanhua, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$5,650, "Development of a TaqMan Quantitative RT-PCR Test for Porcine Parainfluenza Virus 1 (Mentor: Dr. Ying Fang)."

**Fang, Ying, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Hesse, Richard, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$2,763, "Development of Sensitive and Reliable Diagnostic Assay to Detect Atypical Porcine Pestivirus (APPV) in Swine."

**Fang, Ying, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Li, Yanhua, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$5,850, "Multiplex Real-time RT-PCR Assay for Simultaneous Detection and Differentiation of Swine Influenza C, D, and B Viruses."

**Fang, Ying,** and **Rowland, Raymond R. R.**, US Department of Agriculture, \$16,573, "Preventing Porcine Reproductive and Respiratory Syndrome (PRRS) through Modifications in the Virus Receptor, CD163."

**Fang, Ying**, US Department of Agriculture, \$15,000, "The XIVth International Nidovirus Symposium."

**Ganta, Roman Reddy R.**, Saint George's University, \$60,000, "Postdoctoral Scholars Program (PSP) Training Grant."

**Ganta, Roman Reddy R.**, US Department of Health and Human Services, \$18,047, "Mentor for Dr. Jodi McGill - KU COBRE CMADP Award."

**Ganta, Roman Reddy R.**, US Department of Health and Human Services, \$441,044, "Vector and Host Contributions to the Regulation of *E. chaffeensis* Gene Expression."

**Green, Jessica L., Ma, Wenjun, Morozov, Igor, and Richt, Juergen**, Kansas Department of Commerce / Kansas Bioscience Authority, \$11,007 (includes \$11,007 from Matching from PIADC), "Kansas Bioscience Matching Fund Program."

**Hardwidge, Philip R.**, US Department of Health and Human Services, \$377,500, "Bacterial Effectors Targeting the IKK/NF-kB Pathway."

**Hardwidge, Philip R.**, US Department of Health and Human Services, \$187,500, "Functions of Translocated Bacterial Glycosyltransferases."

**Hesse, Richard, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Fang, Ying, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$2,763, "Development of Sensitive and Reliable Diagnostic Assay to Detect Atypical Procine Pestivirus (APPV) in Swine."

**Huang, Yan-Jang S., and Vanlandingham, Dana L.**, Cerus Corporation, \$92,063, "Evaluation of West Nile Virus Inactivation in Blood Products."

**Huang, Yan-Jang S., Higgs, Stephen** (Biosecurity Research Institute), and **Vanlandingham, Dana L.**, Swine Health Information Center, \$32,000, "Development of PCR-based Diagnostic Assays for Japanese Encephalitis Virus Infection in Pigs."

**Kastner, Justin J., and Gragg, Sara E.** (Animal Sciences and Industry), US Department of Agriculture, \$65,820, "Multidisciplinary, Experiential SFS, TBT, FSMA, and Trade Facilitation Training for Cochran Fellows from El Salvador, Guatemala, and Honduras."

**Kastner, Justin J.**, US Department of Agriculture, \$39,096, "Multidisciplinary, Experiential SPS Training and Mentoring for Cochran Fellows from East Africa."

**Kastner, Justin J., Bai, Jianfa, Cernicchiaro, Natalia, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Nagaraja, Tiruvoor G., Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G., Sanderson, Michael W., Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U., Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic *Escherichia coli* (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Li, Yanhua, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$2,835, "Detection and Differentiation of PCV3 from PCC2a, PCV2b and the High Prevalent PCV2d Mutant Strains."

**Li, Yanhua, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Fang, Ying, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$6,570, "Detection and Differentiation of Seneca Valley Virus (SVV) from Foot and Mouth Disease Virus (FMDV)."

**Li, Yanhua, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa, Fang, Ying, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health

Information Center, \$33,900, "Development of a TaqMan Quantitative RT-PCR Test for Porcine Parainfluenza Virus 1 (Mentor: Dr. Ying Fang)."

**Li, Yanhua, Anderson, Gary A.** (Veterinary Diagnostic Laboratory), **Bai, Jianfa** (Veterinary Diagnostic Laboratory), **Fang, Ying, Liu, Xuming** (Veterinary Diagnostic Laboratory), and **Peddireddi, Lalitha** (Veterinary Diagnostic Laboratory), Swine Health Information Center, \$2,925, "Multiplex Real-time RT-PCR Assay for Simultaneous Detection and Differentiation of Swine Influenza C, D, and B Viruses."

**Lockhart, Caryl Y.**, Food and Agriculture Organization of United Nations, \$31,801, "International Consulting - Indonesia."

**Ma, Wenjun, Green, Jessica L., Morozov, Igor, and Richt, Juergen**, Kansas Department of Commerce / Kansas Bioscience Authority, \$9,906 (includes \$9,906 from Matching from PIADC), "Kansas Bioscience Matching Fund Program."

**Ma, Wenjun**, Kansas State University Research Foundation, \$30,000, "Pathogenesis of Porcine Circovirus 3."

**Ma, Wenjun**, Merck Animal Health, \$303,865, "Molecular Epidemiology and Pathogenicity of Procine Circovirus 3 in Pigs."

**Ma, Wenjun**, US Department of Health and Human Services, \$230,905, "Evolution and Biology of Influenza B Viruses in Pigs."

**Ma, Wenjun, and Richt, Juergen**, US Department of Health and Human Services, \$43,041, "Host Dependence of Influenza A Virus Reassortment."

**McGill, Jodi L., and He, Mei** (Biological and Agricultural Engineering), US Department of Agriculture, \$153,068, "Reprogramming Extracellular Nanovesicles as Highly Potent Vaccines aganst Bovine Respiratory Disease."

**McGill, Jodi L.**, US Department of Health and Human Services, \$135,671, "Alternative Functions for yo T Cells in the Immune Response to Mycobacterium."

**McGill, Jodi L.**, US Department of Health and Human Services, \$190,000, "Determining the Role of Interleukin-17 in the Immune Response to Respiratory Syncytial Virus Infection."

**McGill, Jodi L.**, US Department of Health and Human Services, \$225,000, "Efficacy of a Novel Nanoparticle Vaccine and Nutrition during RSV Infection."

**Morozov, Igor, Green, Jessica L., Ma, Wenjun, and Richt, Juergen**, Kansas Department of Commerce / Kansas Bioscience Authority, \$9,906 (includes \$9,906 from Matching from PIADC), "Kansas Bioscience Matching Fund Program."

**Mosier, Derek A., Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Larson, Robert L.** (Clinical Sciences), **Miesner, Matt D.** (Clinical Sciences), **Renter, David G., Richt, Juergen, Sanderson, Michael W., and White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$47,931, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**Mur, Lina, Clavijo, Alfonso, Richt, Juergen, and Rowland, Raymond R. R.**, National Pork Board, \$43,820 (includes \$20,000 from Third Party Match), "NPB Joint Projects MOU."

**Nagaraja, Tiruvoor G., and Amachawadi, Raghavendra G.** (Clinical Sciences), Alltech, Inc., \$8,000, "Technical Testing Service Agreement."

**Nagaraja, Tiruvoor G., Amachawadi, Raghavendra G.** (Clinical Sciences), **DeRouchey, Joel M.** (International Agricultural Programs), **Dritz, Steven S., Goodband, Robert D.** (Animal Sciences and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Micronutrients, \$10,100, "Impact of Copper Supplementation, Alone or in Combination with Chlortetracycline, on Antimicrobial Resistance of Fecal Enterococci of Weaned Piglets."

**Nagaraja, Tiruvoor G., Amachawadi, Raghavendra G., Dritz, Steven S., Jones, Cassandra K.** (Animal Sciences and Industry), **Niederwerder, Megan, Stark, Charles** (Grain Science and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$8,958 (includes \$1,598 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Nagaraja, Tiruvoor G., Bai, Jianfa, Cernicchiaro, Natalia, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J., Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G., Sanderson, Michael W., Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U., Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Nagaraja, Tiruvoor G., Renter, David G., Sanderson, Michael W., and White, Bradley J.** (Clinical Sciences), US Department of Health and Human Services, \$25,945, "Exposure Heterogeneity and Environmental Transmission Dynamics of Escherichia coli: Linking Mechanisms and Patterns."

**Nguyen, Thu A.,** Kansas State University Foundation, \$118,000, "Johnson Center for Basic Cancer Research Funding - 3D Tissue/Tumor Model."

**Nguyen, Thu A.,** Merial Limited, \$15,000, "2017 Merial Veterinary Scholars Program."

**Nguyen, Thu A., Davis, Elizabeth G.** (Clinical Sciences), and **Schultz, Bruce D.** (Anatomy and Physiology), US Department of Health and Human Services, \$17,199, "Short Term Training in Health Professional Schools."

**Niederwerder, Megan, Amachawadi, Raghavendra G., Dritz, Steven S., Jones, Cassandra K.** (Animal Sciences and Industry), **Nagaraja, Tiruvoor G., Stark, Charles** (Grain Science and Industry), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), National Pork Board, \$4,479 (includes \$799 from Third Party Contribution), "Assessing the Role of Medium Chain Fatty Acids as an Alternative to Medically Important Antibiotics."

**Renter, David G., and Cernicchiaro, Natalia,** Chr. Hansen A/S, \$10,200, "Observational Study to Evaluate the Association between Administration of Bovamine Defend, a Direct-fed Microbial, with Fecal Shedding of Escherichia Coli O157:H7 in Commercial Feedlot Cattle."

**Renter, David G.,** Intervet, Inc., \$12,800, "Evaluation of Implanted Hutch Raised Calves."

**Renter, David G., Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Larson, Robert L.** (Clinical Sciences), **Miesner, Matt D.** (Clinical Sciences), **Mosier, Derek A., Richt, Juergen, Sanderson, Michael W., and White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$4,793, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**Renter, David G., Bai, Jianfa, Cernicchiaro, Natalia, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J., Nagaraja, Tiruvoor G., Phebus, Randall K.** (Animal Sciences and Industry), **Sanderson, Michael W., Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U., Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Renter, David G., Nagaraja, Tiruvoor G., Sanderson, Michael W., and White, Bradley J.** (Clinical Sciences), US Department of Health and Human Services, \$12,972, "Exposure Heterogeneity and Environmental Transmission Dynamics of Escherichia coli: Linking Mechanisms and Patterns."

**Richt, Juergen, Green, Jessica L., Ma, Wenjun, and Morozov, Igor,** Kansas Department of Commerce / Kansas Bioscience Authority, \$79,248 (includes \$79,248 from Matching from PIADC), "Kansas Bioscience Matching Fund Program."

**Richt, Juergen, Clavijo, Alfonso, Mur, Lina, and Rowland, Raymond R. R.,** National Pork Board, \$82,163 (includes \$37,500 from Third Party Match), "NPB Joint Projects MOU."

**Richt, Juergen,** National Pork Board, \$115,000, "NPB Joint Projects MOU - Call #3."

**Richt, Juergen, Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Larson, Robert L.** (Clinical Sciences), **Miesner, Matt D.** (Clinical Sciences), **Mosier, Derek A., Renter, David G., Sanderson, Michael W., and White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$47,931, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**Richt, Juergen,** US Department of Agriculture, \$125,000, "Molecular Analytical Methods Development to Support Arbovirus Research."

**Richt, Juergen,** US Department of Defense, \$321,958, "Determining the Ability of rVSV-ZEBOV to Infect Domestic Livestock."

**Richt, Juergen, and Ma, Wenjun,** US Department of Health and Human Services, \$64,562, "Host Dependence of Influenza A Virus Reassortment."

**Richt, Juergen, Bai, Jianfa** (Veterinary Diagnostic Laboratory), and **Hesse, Richard** (Veterinary Diagnostic Laboratory), US Department of Homeland Security, \$672,000, "Center of Excellence for Emerging & Zoonotic Animal Disease (CEEZAD)."

**Richt, Juergen,** US Department of Homeland Security, \$103,695, "Develop and Verify Performance of Novel Screening, Surveillance and Diagnostic Tools."

**Rowland, Raymond R. R.,** National Pork Board, \$128,480, "Genetic Modifications in CD163 that Confer Complete Resistance of Pigs to Infection with PRRSV."

**Rowland, Raymond R. R., Clavijo, Alfonso, Mur, Lina, and Richt, Juergen,** National Pork Board, \$79,424 (includes \$36,250 from Third Party Match), "NPB Joint Projects MOU."

**Rowland, Raymond R. R.,** National Pork Producers Council, \$49,850, "Consulting Agreement."

**Rowland, Raymond R. R.,** PIC North America (PIC USA, Inc.), \$58,454, "Use of Genetically Modified Pigs to Evaluate PRRS Virus Susceptibility."

**Rowland, Raymond R. R., Dritz, Steven S., Jones, Cassandra K.** (Animal Sciences and Industry), **Niederwerder, Megan** (Veterinary Diagnostic Laboratory), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Swine Health Information Center, \$27,980, "Evaluation of the Risk of Transboundary Movement of ASFV via Contaminated Feed Ingredients."

**Rowland, Raymond R. R.,** US Department of Agriculture, \$20,001, "Genetically Improving Resistance of Pigs to PRRS Virus Infection."

**Rowland, Raymond R. R., and Fang, Ying**, US Department of Agriculture, \$314,878, "Preventing Porcine Reproductive and Respiratory Syndrome (PRRS) through Modifications in the Vitus Receptor, CD163."

**Sanderson, Michael W.**, US Department of Agriculture, \$47,900, "A Secure Beef Supply (SBS) Plan for Business Continuity in a Foot and Mouth Disease Outbreak."

**Sanderson, Michael W., Burton, Kenneth R.** (National Agricultural Biosecurity Center), **Larson, Robert L.** (Clinical Sciences), **Miesner, Matt D.** (Clinical Sciences), **Mosier, Derek A., Renter, David G., Richt, Juergen,** and **White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$4,793, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**Sanderson, Michael W., Bai, Jianfa, Cernicchiaro, Natalia, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J., Nagaraja, Tiruvoor G., Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G., Schroeder, Ted C.** (Agricultural Economics), **Thomson, Daniel U., Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Sanderson, Michael W., Nagaraja, Tiruvoor G., Renter, David G., and White, Bradley J.** (Clinical Sciences), US Department of Health and Human Services, \$116,750, "Exposure Heterogeneity and Environmental Transmission Dynamics of Escherichia coli: Linking Mechanisms and Patterns."

**Thomson, Daniel U., Bai, Jianfa, Cernicchiaro, Natalia, Ellis, Jason D.** (Communications), **Fox, John "Sean" A.** (Agricultural Economics), **Kastner, Curtis L.** (Food Science Institute), **Kastner, Justin J., Nagaraja, Tiruvoor G., Phebus, Randall K.** (Animal Sciences and Industry), **Renter, David G., Sanderson, Michael W., Schroeder, Ted C.** (Agricultural Economics), **Tonsor, Glynn T.** (Agricultural Economics), and **Zurek, Ludek** (Entomology), US Department of Agriculture, \$1,381, "Shiga-toxigenic Escherichia coli (STEC) in the Beef Chain: Assessing and Mitigating the Risk by Translational Science, Education and Outreach."

**Van Der Merwe, Deon, Flippo, Daniel** (Biological and Agricultural Engineering), **Sharda, Ajay** (Biological and Agricultural Engineering), and **SV, Krishna J.** (Agronomy), CNH Industrial America LLC, \$4,865, "Testing and Evaluation Services Agreement."

**Van Der Merwe, Deon, Flippo, Daniel** (Biological and Agricultural Engineering), **Schapaugh Jr, William T.** (Agronomy), and **Sharda, Ajay** (Biological and Agricultural Engineering), Kansas Soybean Commission, \$2,378, "Small Unmanned Aircraft Thermal Infrared Imaging System to Identify Soybean Drought Tolerant Varieties."

**Van Der Merwe, Deon**, US Agency for International Development, \$89,558, "Mycotoxin Prevalence and Mitigation Measures in Ethiopia."

**Van Der Merwe, Deon, and Lubbers, Brian** (Veterinary Diagnostic Laboratory), US Department of Health and Human Services, \$13,250, "KSVDL Vet-LRN Veterinary Diagnostic Laboratory Program."

**Vanlandingham, Dana L., and Huang, Yan-Jang S.**, Cerus Corporation, \$92,063, "Evaluation of West Nile Virus Inactivation in Blood Products."

**Vanlandingham, Dana L., Higgs, Stephen** (Biosecurity Research Institute), and **Huang, Yan-Jang S.**, Swine Health Information Center, \$32,000, "Development of PCR-based Diagnostic Assays for Japanese Encephalitis Virus Infection in Pigs."

**Vanlandingham, Dana L.**, US Department of Health and Human Services, \$15,000, "The Role of African Green Monkeys in the Epidemiology of Dengue and Chikungunya on St. Kitts, West Indies."

**Volkova, Victoriya, and Lubbers, Brian** (Veterinary Diagnostic Laboratory), US Department of Health and Human Services, \$125,000, "Retail Meat Surveillance in the State of Kansas as a Part of the National Antimicrobial Resistance Monitoring System."

**Zhang, Weiping**, Bill and Melinda Gates Foundation, \$131,625, "Sta Toxoid Vaccines Development (Phase III)."

**Zhang, Weiping**, PATH Vaccine Solutions, \$145, "A Broadly Protective Subunit Vaccine Against Enterotoxigenic Escherichia Coli Diarrhea."

**Zhang, Weiping, and Cernicchiaro, Natalia**, US Department of Agriculture, \$368,000, "A Broadly Protective Vaccine Against Porcine Post-Weaning Diarrhea (PWD)."

**Zhang, Weiping**, US Department of Health and Human Services, \$377,020, "A Broadly Protective Subunit Vaccine against Enterotoxigenic Escherichia coli (ETEC) Associated Diarrhea."

**Zurek, Ludek**, US Department of Agriculture, \$13,671, "Genomics and Metagenomics of Antimicrobial-resistance in the Poultry Production Ecosystem."

#### **VETERINARY DIAGNOSTIC LABORATORY**

**Anderson, Gary A., Bai, Jianfa, Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming, and Peddireddi, Lalitha**, Swine Health Information Center, \$2,835, "Detection and Differentiation of PCV3 from PCC2a, PCV2b and the High Prevalent PCV2d Mutant Strains."

**Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming, and Peddireddi, Lalitha**, Swine Health Information Center, \$6,570, "Detection and Differentiation of Seneca Valley Virus (SVV) from Foot and Mouth Disease Virus (FMDV)."

**Anderson, Gary A., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming, and Peddireddi, Lalitha**, Swine Health Information Center, \$5,650, "Development of a TaqMan Quantitative RT-PCR Test for Porcine Parainfluenza Virus 1 (Mentor: Dr. Ying Fang)."

**Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Hesse, Richard** (Diagnostic Medicine/Pathobiology), **Liu, Xuming, and Peddireddi, Lalitha**, Swine Health Information Center, \$2,763, "Development of Sensitive and Reliable Diagnostic Assay to Detect Atypical Procine Pestivirus (APPV) in Swine."

**Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming, and Peddireddi, Lalitha**, Swine Health Information Center, \$2,925, "Multiplex Real-time RT-PCR Assay for Simultaneous Detection and Differentiation of Swine Influenza C, D, and B Viruses."

**Anderson, Gary A., and Raghavan, Ram K.**, Swine Health Information Center, \$2,500, "Veterinary Diagnostic Portal and Data Warehouse for Data Mining Applications."

**Anderson, Gary A.**, US Department of Agriculture, \$52,184, "NAHLN Support."

**Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), and **Liu, Xuming**, National Pork Board, \$39,540, "Detection and Differentiation of Field Strains and Commonly Used Vaccine Strains of Type 2 PRRS Virus in the US."

**Bai, Jianfa, Anderson, Gary A., Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming, and Peddireddi, Lalitha**, Swine Health Information Center, \$28,350, "Detection and Differentiation of PCV3 from PCC2a, PCV2b and the High Prevalent PCV2d Mutant Strains."



**Bai, Jianfa, Anderson, Gary A., Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming**, and **Peddireddi, Lalitha**, Swine Health Information Center, \$32,850, "Detection and Differentiation of Seneca Valley Virus (SVV) from Foot and Mouth Disease Virus (FMDV)."

**Bai, Jianfa, Anderson, Gary A., Fang, Ying** (Diagnostic Medicine/Pathobiology), **Hesse, Richard** (Diagnostic Medicine/Pathobiology), **Liu, Xuming**, and **Peddireddi, Lalitha**, Swine Health Information Center, \$11,053, "Development of Sensitive and Reliable Diagnostic Assay to Detect Atypical Procine Pestivirus (APPV) in Swine."

**Bai, Jianfa, Anderson, Gary A., Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), **Liu, Xuming**, and **Peddireddi, Lalitha**, Swine Health Information Center, \$11,700, "Multiplex Real-time RT-PCR Assay for Simultaneous Detection and Differentiation of Swine Influenza C, D, and B Viruses."

**Bai, Jianfa, Hesse, Richard**, and **Richt, Juergen** (Diagnostic Medicine/Pathobiology), US Department of Homeland Security, \$14,000, "Center of Excellence for Emerging & Zoonotic Animal Disease (CEEZAD)."

**Hesse, Richard**, and **Niederwerder, Megan**, National Pork Board, "PEDV and PDCoV Literature Review."

**Hesse, Richard, Bai, Jianfa**, and **Richt, Juergen** (Diagnostic Medicine/Pathobiology), US Department of Homeland Security, \$14,000, "Center of Excellence for Emerging & Zoonotic Animal Disease (CEEZAD)."

**Liu, Xuming, Bai, Jianfa**, and **Fang, Ying** (Diagnostic Medicine/Pathobiology), National Pork Board, \$19,770, "Detection and Differentiation of Field Strains and Commonly Used Vaccine Strains of Type 2 PRRS Virus in the US."

**Liu, Xuming, Anderson, Gary A., Bai, Jianfa, Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Peddireddi, Lalitha**, Swine Health Information Center, \$17,010, "Detection and Differentiation of PCV3 from PCC2a, PCV2b and the High Prevalent PCV2d Mutant Strains."

**Liu, Xuming, Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Peddireddi, Lalitha**, Swine Health Information Center, \$6,570, "Detection and Differentiation of Seneca Valley Virus (SVV) from Foot and Mouth Disease Virus (FMDV)."

**Liu, Xuming, Anderson, Gary A., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Peddireddi, Lalitha**, Swine Health Information Center, \$2,825, "Development of a TaqMan Quantitative RT-PCR Test for Porcine Parainfluenza Virus 1 (Mentor: Dr. Ying Fang)."

**Liu, Xuming, Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Hesse, Richard** (Diagnostic Medicine/Pathobiology), and **Peddireddi, Lalitha**, Swine Health Information Center, \$5,527, "Development of Sensitive and Reliable Diagnostic Assay to Detect Atypical Procine Pestivirus (APPV) in Swine."

**Liu, Xuming, Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Peddireddi, Lalitha**, Swine Health Information Center, \$29,250, "Multiplex Real-time RT-PCR Assay for Simultaneous Detection and Differentiation of Swine Influenza C, D, and B Viruses."

**Lubbers, Brian**, and **Apley, Michael D.** (Clinical Sciences), US Department of Health and Human Services, \$99,000, "Characterization of Antimicrobial Use in Beef Feedlots and Dairies."

**Lubbers, Brian**, and **Van Der Merwe, Deon** (Diagnostic Medicine/Pathobiology), US Department of Health and Human Services, \$13,250, "KSVDL Vet-LRN Veterinary Diagnostic Laboratory Program."

**Lubbers, Brian, and Volkova, Victoriya** (Diagnostic Medicine/Pathobiology), US Department of Health and Human Services, "Retail Meat Surveillance in the State of Kansas as a Part of the National Antimicrobial Resistance Monitoring System."

**Marthaler, Douglas**, National Pork Board, \$44,368, "Comparing the Whole Genome Sequences of Historical and Recent Streptococcus suis Strains to Identify Virulence Factors, Genes or Markers Responsible for Pathogenesis."

**Marthaler, Douglas**, Swine Health Information Center, \$91,507, "Development and Validation of a Multiplex Real Time RT-PCR to Detect Porcine Rotavirus A, B, and C and a Real Time RT-PCR to detect Rotavirus H."

**Marthaler, Douglas**, Swine Health Information Center, \$47,282, "Development and Validation of a Real Time RT-PCR to Detect Porcine Torovirus (PToV)."

**Marthaler, Douglas**, Swine Health Information Center, \$35,872, "Implementation of Real Time RT-PCR to Detect Porcine Hepatitis E Virus (HEV)."

**Niederwerder, Megan, and Hesse, Richard**, National Pork Board, \$10,000, "PEDV and PDCoV Literature Review."

**Niederwerder, Megan, Dritz, Steven S.** (Diagnostic Medicine/Pathobiology), **Jones, Cassandra K.** (Animal Sciences and Industry), **Rowland, Raymond R. R.** (Diagnostic Medicine/Pathobiology), **Tokach, Michael D.** (Animal Sciences and Industry), and **Woodworth, Jason C.** (Animal Sciences and Industry), Swine Health Information Center, \$27,980, "Evaluation of the Risk of Transboundary Movement of ASFV via Contaminated Feed Ingredients."

**Peddireddi, Lalitha, Anderson, Gary A., Bai, Jianfa, Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Liu, Xuming**, Swine Health Information Center, \$5,670, "Detection and Differentiation of PCV3 from PCC2a, PCV2b and the High Prevalent PCV2d Mutant Strains."

**Peddireddi, Lalitha, Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Liu, Xuming**, Swine Health Information Center, \$6,570, "Detection and Differentiation of Seneca Valley Virus (SVV) from Foot and Mouth Disease Virus (FMDV)."

**Peddireddi, Lalitha, Anderson, Gary A., Bai, Jianfa** (Diagnostic Medicine/Pathobiology), **Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Liu, Xuming**, Swine Health Information Center, \$2,825, "Development of a TaqMan Quantitative RT-PCR Test for Porcine Parainfluenza Virus 1 (Mentor: Dr. Ying Fang)."

**Peddireddi, Lalitha, Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Hesse, Richard** (Diagnostic Medicine/Pathobiology), and **Liu, Xuming**, Swine Health Information Center, \$30,397, "Development of Sensitive and Reliable Diagnostic Assay to Detect Atypical Procine Pestivirus (APPV) in Swine."

**Peddireddi, Lalitha, Anderson, Gary A., Bai, Jianfa, Fang, Ying** (Diagnostic Medicine/Pathobiology), **Li, Yanhua** (Diagnostic Medicine/Pathobiology), and **Liu, Xuming**, Swine Health Information Center, \$5,850, "Multiplex Real-time RT-PCR Assay for Simultaneous Detection and Differentiation of Swine Influenza C, D, and B Viruses."

**Raghavan, Ram K., and Anderson, Gary A.**, Swine Health Information Center, \$22,500, "Veterinary Diagnostic Portal and Data Warehouse for Data Mining Applications."

#### **VETERINARY MEDICAL TEACHING HOSPITAL**

**Arck, Shirley T., and Colvin-Marion, Landa J.**, University of Kansas, \$3,600, "Training of Pharmacy D. Students."

**Colvin-Marion, Landa J., and Arck, Shirley T.**, University of Kansas, \$3,600, "Training of Pharmacy D. Students."

**White, Dana A., Biller, David S.** (Clinical Sciences), **Harkin, Kenneth R.** (Clinical Sciences), and **Roush, James K.** (Clinical Sciences), MYOS RENS Technology Inc, \$12,829, "EvaLuation of Fortetropin to Reverse Disuse Muscle Atrophy in Dogs after Tibial Plateau Leveling Osteotomy for Cranial Cruciate Ligament Rupture."

## **KANSAS COOPERATIVE EXTENSION SERVICE**

### **AGRICULTURE AND NATURAL RESOURCES**

**Hadley, Gregg L., and Sigle, Nadine J.**, Hansen Foundation, Dane G, \$15,350, "Community Intern Initiative."

**Hadley, Gregg L., and Rice, Trudy M.**, Hansen Foundation, Dane G, \$356,300, "Leading Locally - Working Together for Lasting Solutions."

**Hadley, Gregg L.**, US Department of Agriculture, \$193,050, "Kansas Agricultural Mediation Service."

**Hadley, Gregg L., and Ebert, Kerri L.** (Biological and Agricultural Engineering), US Department of Agriculture, \$500, "Kansas SARE - Kansas 2015 PDP."

**Hadley, Gregg L., and Ebert, Kerri L.** (Biological and Agricultural Engineering), US Department of Agriculture, \$55,000, "Kansas SARE - Kansas 2017 PDP."

**Rice, Trudy M., and Hadley, Gregg L.**, Hansen Foundation, Dane G, "Leading Locally - Working Together for Lasting Solutions."

**Sigle, Nadine J., and Hadley, Gregg L.**, Hansen Foundation, Dane G, \$15,350, "Community Intern Initiative."

### **COUNTY AGENTS - METROPOLITAN SECTOR**

**Bates, Marlin A., Aramouni, Fadi M.** (Animal Sciences and Industry), **Gragg, Sara E.** (Animal Sciences and Industry), **Nwadike, Londa S.** (Director of Cooperative Extension), **Phebus, Randall K.** (Animal Sciences and Industry), **Pliakoni, Eleni** (Horticulture, Forestry and Recreation Resources), and **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Food and Drug Administration, \$1,600, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

### **DIRECTOR OF COOPERATIVE EXTENSION**

**Buchholz, Daryl D., and Mestrovich Seay, Aliah K.** (Four-H Youth Development), National 4-H Council, "4-H National Mentoring Program (4-H NMP7) Youth Futures Pilot."

**Davis, Alvin N.**, Kansas Agriculture and Rural Leadership, Inc., \$122,070, "Kansas Agriculture and Rural Leadership, Inc.."

**Nwadike, Londa S., Ellis, Jason D.** (Communications), **Gragg, Sara E.** (Animal Sciences and Industry), **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), and **Trinetta, Valentina** (Animal Sciences and Industry), US Department of Agriculture, \$60,309, "Strengthening Food Safety Education and Outreach for Kansas and Missouri Fruit and Vegetable Producers."

**Nwadike, Londa S., and Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Department of Agriculture, \$20,011, "Strengthening Food Safety Education for Kansas Fruit and Vegetable Producers."

**Nwadike, Londa S.**, US Food and Drug Administration, \$817,610, "Produce Safety Cooperative Agreement with Kansas State Research and Extension."

**Nwadike, Londa S., Aramouni, Fadi M.** (Animal Sciences and Industry), **Bates, Marlin A.** (County Agents - Metropolitan Sector), **Gragg, Sara E.** (Animal Sciences and Industry), **Phebus, Randall K.** (Animal Sciences and Industry), **Pliakoni, Eleni** (Horticulture, Forestry and Recreation Resources), and **Rivard, Cary L.** (Horticulture, Forestry and Recreation Resources), US Food and Drug Administration, \$2,400, "Strategy for Successful Implementation of FSMA in the North Central Region through Adoption of a Systems Approach and Stakeholder Engagement Framework."

**Peters, Paula, and Floros, John D.** (Dean of Agriculture and Director of AES), University of Missouri, \$64,990, "Memorandum of Agreement."

**Peters, Paula, and Procter, Sandra B.** (Extension Family and Consumer Sciences), US Department of Agriculture, \$501,688, "Kansas Food Assistance Nutrition Education Plan."

#### **EXTENSION FAMILY AND CONSUMER SCIENCES**

**Procter, Sandra B., and Peters, Paula** (Director of Cooperative Extension), US Department of Agriculture, \$2,006,754, "Kansas Food Assistance Nutrition Education Plan."

#### **FOUR-H YOUTH DEVELOPMENT**

**Mestrovich Seay, Aliah K., and Buchholz, Daryl D.** (Director of Cooperative Extension), National 4-H Council, \$57,570, "4-H National Mentoring Program (4-H NMP7) Youth Futures Pilot."

#### **KANSAS FOREST SERVICE**

**Atchison, Robert L.,** US Department of Agriculture, \$35,288, "High Resolution Land Cover and Wind Break Assessment Products of Kansas."

**Atchison, Robert L.,** US Department of Agriculture, \$28,800, "NRCS Technical Service Provider."

**Biles, Larry E.,** Kansas Department of Agriculture, \$26,593, "Riparian Forest Buffer Installation, Restoration and Maintenance X."

**Biles, Larry E.,** Kansas Department of Agriculture, \$41,398, "Riparian Forest Buffer Installation, Restoration and Maintenance XI."

**Biles, Larry E.,** Kansas Department of Agriculture, \$50,991, "Riparian Forest Buffer Installation, Restoration and Maintenance XII."

**Biles, Larry E.,** Kansas Department of Agriculture, \$46,381, "Riparian Forest Buffer Restoration XIII."

**Biles, Larry E.,** Kansas Department of Agriculture, \$68,075, "Riparian Forest Buffer Restoration XIV."

**Biles, Larry E.,** US Department of Agriculture, \$50,000, "2014 Consolidated Payment Grant."

**Biles, Larry E.,** US Department of Agriculture, \$36,993 (includes \$6,993 from University of Kansas Center for Research), "2016 Forest Legacy Administration Program."

**Biles, Larry E.,** US Department of Agriculture, \$3,753,025 (includes \$1,362,399 from Third Party Match), "Consolidated Payment Grant 2016."

**Biles, Larry E.,** US Department of Agriculture, \$2,570,083 (includes \$1,053,900 from Third Party Match), "Consolidated Payment Grant 2017."

**Biles, Larry E.,** US Department of Agriculture, \$11,156, "Great Plains Windbreak Initiative Workshop."

**Biles, Larry E.**, US Department of Agriculture, \$138,000 (includes \$18,000 from In-Kind Match), "NRCS Technical Service Provider."

#### **NORTHEAST AREA OFFICE**

**Duncan, Stewart R., Ciampitti, Ignacio** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$453, "2017 K-State Soybean Production Schools for Kansas."

**Duncan, Stewart R., Ciampitti, Ignacio** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$495, "2018 K-State Soybean Production Schools for Kansas."

**Duncan, Stewart R., Adee, Eric A.** (Agronomy), **Ciampitti, Ignacio** (Agronomy), **Griffin, Terry W.** (Agricultural Economics), **Lin, Xiaomao** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Soybean Commission, \$1,499, "The Quest of 100-Bushel Soybean: On-Farm Approach."

**Duncan, Stewart R., Lollato, Romulo P.** (Agronomy), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Wheat Alliance, Inc., "K-State Wheat Demonstration Plots: Enhanced Uniformity for Improved Outreach."

**Duncan, Stewart R., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), **Whitworth, Robert "Jeff" J.** (Entomology), and **Zukoff, Sarah N.** (Southwest Area Office), US Department of Agriculture, \$13,900, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

#### **NORTHWEST AREA OFFICE**

**Haag, Lucas A.**, and **Schlegel, Alan J.** (Southwest Research Extension Center), Deere & Company, \$14,720, "No-till Opener Benchmarking Study."

**Haag, Lucas A., Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), and **Shoup, Douglas E.** (Southeast Area Office), Kansas Corn Commission, \$2,250, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Corn in Kansas."

**Haag, Lucas A.**, Support Funds, \$12,000, "XNW Support Funds Public Service 35."

**Haag, Lucas A.**, Support Funds, \$17,590, "XNW Support Funds Public Service Off Campus 26."

**Haag, Lucas A.**, Valent BioSciences, Corporation, \$24,000, "NTR1 2017 Field-Winter Wheat and Ntr Corn 2017 Field."

**Johnson, Sandra K., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M., Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$9,574, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**O'Brien, Daniel M.**, and **Lamm, Freddie R.** (Northwest Research Extension Center), Kansas Corn Commission, \$750, "Efficient Irrigation Technologies for Corn - A Comparison."

**O'Brien, Daniel M., Golden, Bill B.** (Agricultural Economics), **Kisekka, Isaya** (Southwest Research Extension Center), **Lamm, Freddie R.** (Northwest Research Extension Center), and **Schlegel, Alan J.** (Southwest Research Extension Center), Kansas Grain Sorghum Commission, \$10,200, "Sorghum Yield and Profitability Relative to Water Supply and Irrigation Management."

**O'Brien, Daniel M., Aguilar, Jonathan P.** (Southwest Area Office), **Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K., Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.** (Southwest Area Office), US Department of Agriculture, \$4,787, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

### **SOUTHEAST AREA OFFICE**

**Shoup, Douglas E., Haag, Lucas A.** (Northwest Area Office), **Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), and **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), Kansas Corn Commission, \$2,250, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Corn in Kansas."

**Shoup, Douglas E., Ciampitti, Ignacio** (Agronomy), and **Duncan, Stewart R.** (Northeast Area Office), Kansas Soybean Commission, \$4,348, "2017 K-State Soybean Production Schools for Kansas."

**Shoup, Douglas E., Ciampitti, Ignacio** (Agronomy), and **Duncan, Stewart R.** (Northeast Area Office), Kansas Soybean Commission, \$495, "2018 K-State Soybean Production Schools for Kansas."

**Shoup, Douglas E., Dille, Johanna A.** (Agronomy), **Hay, Marshall M.** (Agronomy), **Peterson, Dallas E.** (Agronomy), and **Roozeboom, Kraig L.** (Agronomy), Kansas Soybean Commission, \$1,543, "Control of Pigweed with an Integrated Systems Approach in Soybean."

**Shoup, Douglas E., Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), and **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), Kansas Soybean Commission, \$7,386, "Evaluation of Soil Health Test to Determine Fertilizer Needs for Soybean in Kansas."

**Shoup, Douglas E., Ciampitti, Ignacio** (Agronomy), and **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), Kansas Soybean Commission, \$13,200, "Improving Soybean Yield in the Double Crop Soybean System."

**Shoup, Douglas E., Little, Christopher R.** (Plant Pathology), **Roozeboom, Kraig L.** (Agronomy), and **Sassenrath, Gretchen F.** (Southeast Agricultural Research Center), Kansas Soybean Commission, \$466, "Soybean Production Systems to Control Charcoal Rot and Other Soil-borne Diseases."

**Shoup, Douglas E., Ade, Eric A.** (Agronomy), **Ciampitti, Ignacio** (Agronomy), **Duncan, Stewart R.** (Northeast Area Office), **Griffin, Terry W.** (Agricultural Economics), and **Lin, Xiaomao** (Agronomy), Kansas Soybean Commission, \$1,499, "The Quest of 100-Bushel Soybean: On-Farm Approach."

**Shoup, Douglas E., Duncan, Stewart R.** (Northeast Area Office), and **Lollato, Romulo P.** (Agronomy), Kansas Wheat Alliance, Inc., "K-State Wheat Demonstration Plots: Enhanced Uniformity for Improved Outreach."

**Shoup, Douglas E., Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R.** (Agronomy), **Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), **Swamy, Aavudai Anandhi** (Agronomy), **Tomlinson, Peter J.** (Agronomy), and **Waggoner, Justin** (Southwest Area Office), US Department of Agriculture, \$19,370, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

#### **SOUTHWEST AREA OFFICE**

**Aguilar, Jonathan P., Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), **Steward, David R.** (Civil Engineering), and **Vandever, Monte L.**, US Department of Agriculture, \$9,574, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Foster, Anserd J., Golden, Bill B.** (Agricultural Economics), and **Kisekka, Isaya** (Southwest Research Extension Center), Kansas Corn Commission, \$11,081, "Exploring the Value of Plant Analysis to Enhance Water Use Efficiency in Southwest Kansas."

**Foster, Anserd J.**, Minerals Technologies, \$5,000, "Effect of Boron on Alfalfa Yield and Quality in SW Kansas."

**Foster, Anserd J.**, National Crop Insurance Services, \$5,000, "NCIS Gift."

**Foster, Anserd J.**, and **Ciampitti, Ignacio** (Agronomy), Tessengerlo Kerley, \$6,804, "Effect of Sulfur Fertilization on Corn and Canola Production in Southwest Kansas."

**Onstad, Christen P.**, Support Funds, \$15,500, "XSW Support Funds Public Service 35."

**Vandever, Monte L., Fick, Walter H.** (Agronomy), and **Harmony, Keith R.** (Agricultural Research Center-Hays), US Department of Agriculture, \$13,152, "Educating Kansas Livestock Producers about Drought Risk Management Strategies and Tools."

**Vandever, Monte L., Aguilar, Jonathan P., Aiken, Robert M.** (Northwest Research Extension Center), **Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Golden, Bill B.** (Agricultural Economics), **Holman, Johnathon D.** (Southwest Research Extension Center), **Jaeger, John R.** (Agricultural Research Center-Hays), **Johnson, Sandra K.** (Northwest Area Office), **Kisekka, Isaya** (Southwest Research Extension Center), **Kulesza, Stacey E.** (Civil Engineering), **Lamm, Freddie R.** (Northwest Research Extension Center), **Lin, Xiaomao** (Agronomy), **Obour, Augustine K.** (Agricultural Research Center-Hays), **O'Brien, Daniel M.** (Northwest Area Office), **Rogers, Danny H.** (Biological and Agricultural Engineering), **Schlegel, Alan J.** (Southwest Research Extension Center), and **Steward, David R.** (Civil Engineering), US Department of Agriculture, \$4,787, "Water Management to Sustain the Economic Activity from the Ogallala Aquifer on the Southern High Plains - KSU."

**Waggoner, Justin, Devlin, Daniel L.** (Ks Ctr for Ag Rsrces & the Env / Ks Water Rsrce Rsrch Inst), **Middendorf, Gerad D.** (Sociology, Anthropology, and Social Work), **Presley, DeAnn R.** (Agronomy), **Rice, Charles W.** (Agronomy), **Ruiz Diaz Suarez, Dorivar A.** (Agronomy), **Shoup, Douglas E.** (Southeast Area Office), **Swamy, Aavudai Anandhi** (Agronomy), and **Tomlinson, Peter J.** (Agronomy), US Department of Agriculture, \$19,370, "Resilience and Vulnerability of Beef Cattle Production in the Southern Great Plains under Changing Climate, Land Use, and Markets."

**Zukoff, Sarah N., Brokesh, Edwin L.** (Biological and Agricultural Engineering), **Flippo, Daniel** (Biological and Agricultural Engineering), **McCornack, Brian P.** (Entomology), and **Sharda, Ajay** (Biological and Agricultural Engineering), Kansas Corn Commission, \$3,799, "Comprehensive Study of Light Wavelength and Image Processing to Automatically Identify Corn Pests."

**Zukoff, Sarah N.**, Monsanto Company, \$882, "Service Order #44."

**Zukoff, Sarah N.**, United Sorghum Checkoff Program, \$7,500, "2016 Sugarcane Aphid (SCA) Research-Best Management Practices."

**Zukoff, Sarah N.**, US Department of Agriculture, \$83,674, "Evaluating the Efficacy of Insect Resistance Management Plans for Delaying the Onset of *Bacillus Thuringiensis* Toxin Resistance in Western Bean Cutworm Populations."

**Zukoff, Sarah N., Boyer, Cheryl R.** (Horticulture, Forestry and Recreation Resources), **Cloyd, Raymond A.** (Entomology), **DeWolf, Erick D.** (Plant Pathology), **Duncan, Stewart R.** (Northeast Area Office), **Hoyle, Jared** (Horticulture, Forestry and Recreation Resources), **Johnson, Wendy** (Entomology), **Kennelly, Megan** (Plant Pathology), **McCornack, Brian P.** (Entomology), **Miller, Frannie L.** (Entomology), **Peterson, Dallas E.** (Agronomy), **Thompson, Curtis R.** (Agronomy), **Upham, Ward S.** (Horticulture, Forestry and Recreation Resources), and **Whitworth, Robert "Jeff" J.** (Entomology), US Department of Agriculture, \$13,900, "Promoting IPM and Enhancing Decision Making among Kansas Stakeholders through Innovative Programming."

## **OFFICE OF THE PRESIDENT**

### **INTERCOLLEGIATE ATHLETICS - STATE**

**Connole, Ian J., Pinkett, Cori L., and Rubin, Lisa** (Special Education, Counseling, and Student Affairs), Association for Applied Sport Psychology, \$216, "Developing Student Athletes into Leaders: Analyzing the Impact of a Leadership Academy."

**Pinkett, Cori L., Connole, Ian J., and Rubin, Lisa** (Special Education, Counseling, and Student Affairs), Association for Applied Sport Psychology, \$216, "Developing Student Athletes into Leaders: Analyzing the Impact of a Leadership Academy."

### **VICE PRESIDENT FOR COMMUNICATIONS AND MARKETING**

**Nelson, Robert F.**, Country Stampede LLC, \$22,500, "Video Production Services."

### **OFFICE OF THE PRESIDENT**

**Myers, Richard B.**, State of Kansas, \$5,000,000, "National Bio and Agro-Defense Facility."

## **OFFICE OF THE PROVOST**

### **CENTER FOR ENGAGEMENT AND COMMUNITY DEVELOPMENT**

**Procter, David E., and Shaffer, Timothy J.** (Communication Studies), Kettering Foundation, \$15,000, "Design and Implement the First Stage of an Experiment on the Use of Deliberation as a Central Form of Community Engagement."

**Procter, David E.**, Sunflower Foundation, \$81,708, "Rural Food Access Grant."

**Procter, David E.**, The Food Trust, \$50,000, "Expanding Healthy Food Access by Strengthening Social Capital."

**Procter, David E.**, US Department of Health and Human Services, \$36,363, "CDC IPA for David Procter."

**Schenck-Hamlin, Donna C.**, Kettering Foundation, \$750, "Testing Water and Energy NIF Frameworks."



## **DEAN OF GLOBAL CAMPUS**

**Maes, Sue C.**, Brigham Young University, \$55,200, "BYU Course Delivery: EDCEP 835 and EDCEP 838."

## **DEAN OF GRADUATE SCHOOL**

**Herman, Michael A.**, National Science Foundation, \$347,805, "National Science Foundation Graduate Research Fellowship Award."

**Polson, Cheryl J.**, US Department of Defense, \$226,466, "Brigade Spouse Courses at Fort Leavenworth 2015-2020."

**Polson, Cheryl J.**, US Department of Defense, \$62,625, "Continuing Education for Senior Leaders (CESL) Seminar - Ft. Leavenworth."

**Shanklin, Carol W., Roberts, Kevin R.** (Hospitality Management and Dietetics), and **Sauer, Kevin L.** (Human Nutrition), US Department of Agriculture, \$49,830, "Center of Excellence for Food Safety Research in Child Nutrition Programs."

## **LIBRARY**

**Bengtson, Jason A.**, US Department of Health and Human Services, \$13,279, "Curation and Management of Electrophysiological Data Obtained from Outer Hair Cells Isolated from *Cavia Porcellus*."

## **OFFICE OF DIVERSITY AND DUAL CAREER DEVELOPMENT**

**Chavez, Mirta**, and **Wiley, Zelia Z.**, US Department of Health and Human Services, "Project IMPACT Leadership Program - 2017 - 2020."

**Chavez, Mirta**, and **Wiley, Zelia Z.**, US Department of Health and Human Services, "Project IMPACT Leadership Programs."

**Wiley, Zelia Z.**, and **Chavez, Mirta**, US Department of Health and Human Services, \$255,162, "Project IMPACT Leadership Program - 2017 - 2020."

**Wiley, Zelia Z.**, and **Chavez, Mirta**, US Department of Health and Human Services, \$169,743, "Project IMPACT Leadership Programs."

## **OFFICE OF THE PROVOST**

**King, Brenee**, National Science Foundation, \$87,202, "Preliminary Proposal: GEO Opportunities for Leadership in Diversity (GOLD)."

**Mason, April, Grauer, Bette** (Dean of Engineering), **Montelone, Beth A.** (Dean of Arts and Sciences), **Morales, Amanda I.** (Curriculum and Instruction), **Thurston, Linda P.** (Dean of Education), and **Wiley, Zelia Z.** (Dean of Agriculture and Director of AES), National Science Foundation, \$125,000, "Pathways to STEM: Kansas Louis Stokes Alliance for Minority Participation."

**Niehoff, Ruth A.**, Kansas State University Foundation, \$9,812, "Spainhour Faculty Chair for KAWSE."

## **SCHOOL OF LEADERSHIP STUDIES**

**Gott, Trisha C.**, US Department of State, \$150,000, "Mandela Washington Fellowship for Young African Leaders - 2017."

**Priest, Kerry**, The C. Charles Jackson Foundation, \$8,000, "2017 Graduate Student Leadership Development Program."

## **VICE PROVOST FOR UNDERGRADUATE STUDIES**

**Cortez, Anita R., Buckwalter, John** (Dean of Human Ecology), and **Olsen, Charlotte S.** (School of Family Studies and Human Services), US Department of Health and Human Services, \$51,270, "Kansas Bridges to the Future."

**Dandaneau, Steven P.**, Kansas State University Foundation, \$36,350, "Suder Foundation First Scholars Administration."

## **VICE PRESIDENT FOR ADMINISTRATION AND FINANCE**

### **KSU POLICE DEPARTMENT**

**Millington, Bradli E.**, Kansas Department of Transportation, \$3,000, "Special Traffic Enforcement Program (STEP)."

**Millington, Bradli E.**, US Department of Justice, \$6,878, "Kansas State University Police Body Camera Project."

## **VICE PRESIDENT FOR RESEARCH**

### **BIOSECURITY RESEARCH INSTITUTE**

**Higgs, Stephen, Huang, Yan-Jang S.** (Diagnostic Medicine/Pathobiology), and **Vanlandingham, Dana L.** (Diagnostic Medicine/Pathobiology), Swine Health Information Center, \$16,000, "Development of PCR-based Diagnostic Assays for Japanese Encephalitis Virus Infection in Pigs."

**Webster, John E.**, US Department of Agriculture, \$97,182, "2017 High Containment Laboratory Practices and Techniques Course."

### **NATIONAL AGRICULTURAL BIOSECURITY CENTER**

**Burton, Kenneth R.**, Nebraska Department of Agriculture, \$36,248, "Animal Disease Response Training - Nebraska."

**Burton, Kenneth R.**, US Department of Agriculture, \$99,535, "Decontamination of Port Equipment and Cargo Containers using Portable Pressure Washers and Oxidant Disinfectants."

**Burton, Kenneth R., Larson, Robert L.** (Clinical Sciences), **Miesner, Matt D.** (Clinical Sciences), **Mosier, Derek A.** (Diagnostic Medicine/Pathobiology), **Renter, David G.** (Diagnostic Medicine/Pathobiology), **Richt, Juergen** (Diagnostic Medicine/Pathobiology), **Sanderson, Michael W.** (Diagnostic Medicine/Pathobiology), and **White, Bradley J.** (Dean of Veterinary Medical Center), US Department of Agriculture, \$4,793, "Enhancing Rural Practitioner Aptitude for Endemic, Transboundary, and Emerging Diseases of Production Animals."

**Burton, Kenneth R.**, US Department of Homeland Security, \$333,118, "Development of a National Livestock Readiness Program (NLRP) for Local, State, and Regional Agriculture Response."

### **RESEARCH VICE PRESIDENT**

**Dorhout, Peter K.**, State of Kansas, \$1,000,000, "Global Foods System."

### **UNIVERSITY RESEARCH COMPLIANCE OFFICE**

**Marlow, Denver D.**, US Department of Agriculture, \$16,500, "Acquisition of Goods and Services."

## **VICE PRESIDENT FOR STUDENT LIFE AND DEAN OF STUDENTS**

### **EDUCATIONAL AND PERSONAL DEVELOPMENT**

**Booker, Monshonda**, US Department of Agriculture, \$2,228, "Summer Food Service ProgramUB-Salina 2016."

**Booker, Monshonda**, US Department of Education, \$257,500, "Kansas State University - Salina Upward Bound."

**Booker, Monshonda**, US Department of Education, \$257,500, "Kansas State University - Salina Upward Bound Program-Central Kansas."

**Bosco, Pat J.**, Kauffman Scholars, Inc., \$9,890, "IEP Kauffman Scholars Program - ISP."

**Greene, Kathleen V.**, US Department of Education, \$253,792, "Ronald E. McNair PostBaccalaureate Achievement Program."

**Greene, Kathleen V.**, US Department of Education, \$228,816, "Student Support Services K-State-Salina."

**Greene, Kathleen V.**, US Department of Education, \$297,233, "Student Support Services KSU-Manhattan."

#### **KSU CHILD DEVELOPMENT CENTER, INC.**

**Mitchell, Rose M.**, City of Manhattan, KS, \$40,800, "Social Services Advisory Board - 2017."

**Mitchell, Rose M.**, US Department of Education, \$104,539, "Child Care Access Means Parents at K-State."

#### **NEW STUDENT SERVICES**

**Lehning, Emily M.**, Kansas State University Foundation, \$22,476, "Blue Key Strengths Quest Initiative."

**Lehning, Emily M.**, Kansas State University Foundation, \$20,000, "Phillips 66 Shield Scholars Fund."

**Lehning, Emily M.**, Kansas State University Foundation, \$5,174, "Suder Foundation FIRST SCHOLARS FUND."

#### **OFFICE OF STUDENT LIFE**

**Kientz, Clara H.**, US Department of Health and Human Services, \$7,000, "Heartland Sexual Assault Policies & Prevention on Campuses Project."

**Kientz, Clara H.**, US Department of Justice, \$261,438, "FY17 VOCA Application for Kansas State University."

#### **UNIVERSITY COUNSELING SERVICES**

**Lambert, Dorinda J.**, City of Manhattan, KS, \$32,826, "Youth Oriented Alcohol Abuse Prevention Program."

#### **VICE PRESIDENT FOR STUDENT LIFE AND DEAN OF STUDENTS**

**Bosco, Pat J.**, and **Cortez, Anita R.**, Kansas State University Foundation, \$55,000, "Edgerley-Franklin Urban Leadership Scholars Program."

**Bosco, Pat J.**, and **Franklin, E. Bernard**, Kauffman Foundation, \$15,000, "KSU College Advising Corps in Kansas City."

**Bosco, Pat J.**, Kauffman Scholars, Inc., "IEP Kauffman Scholars Program - ISP."

**Bosco, Pat J.**, and **Franklin, E. Bernard**, National College Advising Corps, \$4,306, "KSU College Advising Corps in Kansas City - 2016 - 2017."

**DeGroat, Arthur S.**, Kansas State University Foundation, \$25,935, "David Woods Kemper Veterans Foundation."

**DeGroat, Arthur S.**, Kansas State University Foundation, \$28,600, "Kansas Masons Partnership in Military and Veterans Affairs."

**Franklin, E. Bernard**, and **Bosco, Pat J.**, Kauffman Foundation, \$135,000, "KSU College Advising Corps in Kansas City."

**Franklin, E. Bernard, and Bosco, Pat J.**, National College Advising Corps, \$38,750, "KSU College Advising Corps in Kansas City - 2016 - 2017."