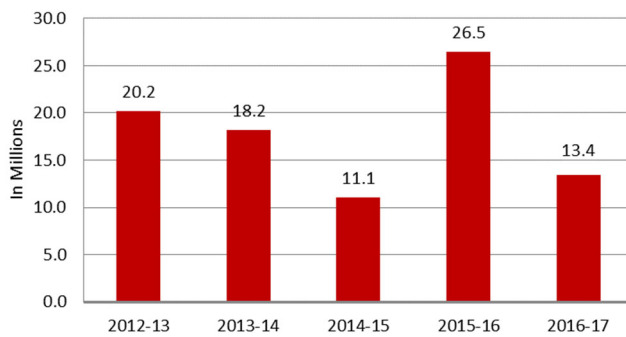


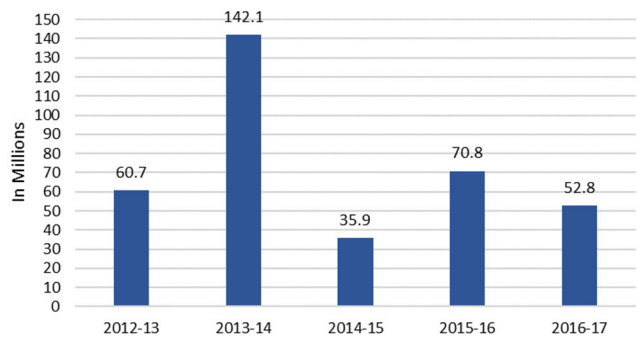
## External Funding Overview

Sponsored Projects Administration external funding totals include Ball State University Foundation funds that play out as externally sponsored projects, as well as funding self-administered by University Service Centers. The chart below, "External Dollars Received FY2013 - 2017," reflects totals for all sources of external funding for Ball State projects, including Foundation support and Centers.

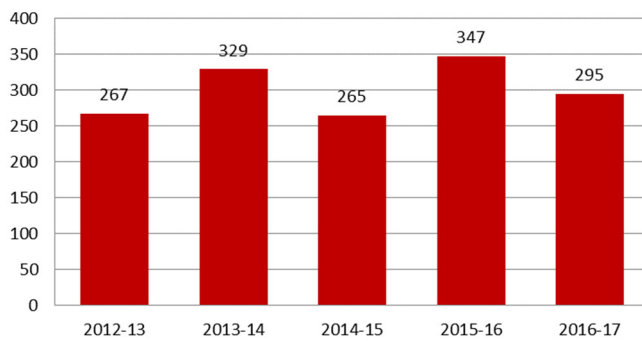
**External Dollars Awarded - FY13-17**



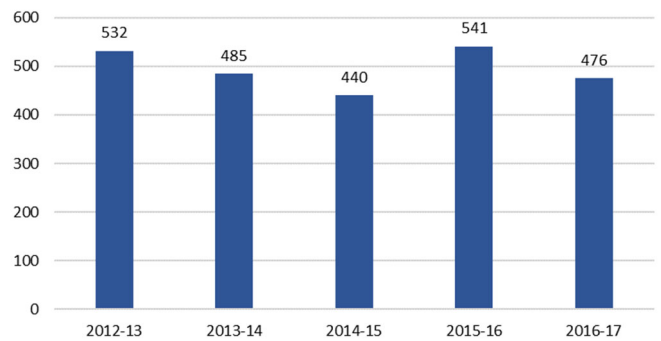
**External Dollars Proposed - FY13-17**



**Total Number of Awards Granted - FY13-17**



**Total Number of Proposals Submitted - FY13-17**



<b>External Dollars Received by Project Type</b>			
<b>Source</b>	<b>Number</b>	<b>Amount</b>	<b>Percentage</b>
Research	94	\$5,646,193	42.2%
Public Service	59	\$2,665,681	19.9%
Institutional Support	76	\$2,546,294	19.0%
Academic Support	47	\$1,526,847	11.4%
Instruction	19	\$981,584	7.3%
<b>Total</b>	<b>295</b>	<b>\$13,366,598</b>	<b>100%</b>

<b>External Dollars Received by Funding Source</b>			
<b>Source</b>	<b>Number</b>	<b>Amount</b>	<b>Percentage</b>
Federal	53	\$4,428,575	33.1%
Foundation	61	\$3,055,141	22.8%
State (IN)	18	\$2,470,438	18.4%
Non-Profit	82	\$2,065,134	15.4%
College/University	19	\$567,768	4.2%
Industry	44	\$552,373	4.1%
Local Govt Agency	17	\$227,093	1.7%
Individual	1	\$75	>1%
<b>Total</b>	<b>295</b>	<b>\$13,366,598</b>	<b>100%</b>

<b>Awards by College / Unit</b>		
<b>College/Unit</b>	<b>Amount</b>	<b>Number</b>
Academic Affairs	\$932,362	8
Applied Sciences & Technology	\$359,267	18
Architecture and Planning	\$120,012	12
Business	\$580,554	3
Communication, Information, and Media	\$3,725	3
Community Engagement	\$612,929	16
Fine Arts	\$53,607	5
Health	\$1,025,027	40
Information Technology	\$1,179,757	28
Sciences and Humanities	\$5,188,200	89
Student Affairs	\$15,531	4
Teachers College	\$2,062,627	39
University Development	\$1,233,000	30
<b>Total</b>	<b>\$13,366,598</b>	<b>295</b>

<b>External Dollars Proposed by Project Type</b>			
<b>Source</b>	<b>Number</b>	<b>Amount</b>	<b>Percentage</b>
Research	205	\$24,018,793	45.4%
Institutional Support	84	\$10,058,779	19.0%
Public Service	89	\$9,730,995	18.4%
Instruction	30	\$5,529,939	10.4%
Academic Support	68	\$3,545,732	6.7%
<b>Total</b>	<b>476</b>	<b>\$52,884,238</b>	<b>100%</b>

<b>External Dollars Proposed by Funding Source</b>			
<b>Source</b>	<b>Number</b>	<b>Amount</b>	<b>Percentage</b>
Federal	102	\$24,002,447	45.3%
Industry	55	\$8,397,860	15.8%
State (IN)	25	\$7,535,970	14.2%
Foundation	103	\$6,223,507	11.7%
Non-Profit	131	\$3,740,084	7.0%
Foreign Source	9	\$2,100,694	3.9%
College/University	22	\$524,678	>1%
Local Govt Agency	28	\$358,922	>1%
Individual	1	\$75	>1%
<b>Total</b>	<b>476</b>	<b>\$52,884,238</b>	<b>100%</b>

<b>Proposals by College / Unit</b>		
<b>College/Unit</b>	<b>Amount</b>	<b>Number</b>
Academic Affairs	\$3,733,979	13
Applied Sciences and Technology	\$4,503,675	55
Architecture and Planning	\$213,810	14
Business	\$983,653	6
Business Affairs	\$16,849	2
Communication, Information, and Media	\$149,663	9
Community Engagement	\$1,327,006	19
Fine Arts	\$88,857	7
Governmental Relations	\$154,611	7
Health	\$3,771,322	37
Information Technology	\$1,248,667	29
Sciences and Humanities	\$16,769,077	156
Student Affairs	\$15,531	4
Teachers College	\$9,947,317	83
University College	\$2,006,081	7
University Development	\$1,101,250	27
Online and Strategic Learning	\$6,852,890	1
<b>Total</b>	<b>\$52,884,238</b>	<b>476</b>

# Initiatives & Accomplishments

Progress on the Ball State Strategic Plan (2012-17):

	Baseline FY12	FY13	FY14	FY15	FY16	FY17
Increase by 125% external funding for scholarly work	\$14M	\$20.2M	\$18.2M	\$11.1M	\$25.7M	\$11.7M
Increase by 40% the number of contract and grant proposal submissions.	505	532	485	440	679	479
Increase number of contract and grant proposal submissions totaling more than \$25,000 by 25%	183	205	210	180	301	202

## Research Recognition

*Student Symposium:* The 2017 Symposium continued to serve as an important public forum for undergraduate and graduate students to display and present their research and creative projects. This year continued a new feature with panel presentations scheduled in addition to posters. One-hundred-seventy-nine individual student participants presented 157 posters and 20 papers, which drew an over 328 total attendees.

*2017 Student Symposium Keys/Litten/Smith Award winners:*

### Daoda Socrates Carlon - Natural Resources and Environmental Management

*A Collaborative Approach to Forest Resources Management in Post-War Liberia*

Faculty Mentor: Joshua Gruver, Natural Resources and Environmental Management

### Stephen Davies - Biology

*Pharmaceutical and Personal Care Product Degradation in two Indiana Wetlands*

Faculty Mentor: Melody Bernot, Biology

### Ashley Emmons & Priscilla Grimm - Biology

*The effects of age on nuclear reduced glutathione (GSH) levels in rat kidney cortex and medulla*

Faculty Mentor: Marianna Zamlauski-Tucker, Biology

### Adam Null & Tanner Barton - Physiology and Health Science

*Depression and Diabetes in the United States: A National Assessment*

Faculty Mentor: Jagdish Khubchandani, Nutrition and Health Science

### Myah Reeve - Criminal Justice

*The Emotional Impact of Police Involved Shooting on Law Enforcement Officers*

Faculty Mentor: Bryan Byers, Criminal Justice

### Abigail Reiff - Psychological Science

*Attitudes and Knowledge of Future Teachers to Identify Struggling Readers*

Faculty Mentor: Janay Sander, Educational Psychology

### Caroline Tegeler, Amanda Shurzinske, Taylorann Smith & Jeremy Walls - Biology

*Interactions among Temperature, Cyanobacteria, and Heterotrophic Bacteria in a Eutrophic Lake*

Faculty Mentor: Allison Rober, Biology

### Meredith Wells, Kinesiology

*The Effect of Grade on the Biomechanics of Downhill Running in Female Distance Runners*

Faculty Mentor: Henry Wang, Kinesiology

### *BeneFacta Day*

The 26<sup>th</sup> annual BeneFacta Day was celebrated November 18, 2016 in the BSU Alumni Center. This annual event for recognizing faculty and professional personnel active in submitting proposals and carrying out sponsored projects brought together over 100 attendees who enjoyed wine, cheese, and hors d'oeuvres, as well as remarks from the Interim President, Acting Associate Vice-President for Research, and SPA Director.

### *Research & Outstanding Creative Endeavor of the Year*

The annual lecture and reception featuring the Outstanding Researcher of the Year and Outstanding Creative Endeavor Awardee took place on April 28, 2017 in the Student Center Forum Room. The 2016 Research recipient, as nominated by his peers and chosen by the University Research Committee, Rei Chen, associate professor of information systems and operations management, spoke on his research agenda and the impact data breaches on our actions (or inactions). The Outstanding Creative Endeavor award, also nominated by her peers and chosen by the Creative Arts Committee was Karen Kesler, professor of Theatre, who shared her creative process and passion for directing.

### **Staff Updates**

SPA is happy to welcome Dr. Sue McDowell as Interim Associate Vice-President of Research, effective July 1, 2017 and Kelly Peckham as a Budget Administrator. In addition, we've been very thankful to have Ann Sheller temporarily join the staff as Grant Specialist.

### **Program Offerings & Support Programs**

#### *Research Week, 2016*

This campus-wide initiative entered its third year in FY17, and continued to focus on providing high quality professional development opportunities for faculty and staff all concentrated over one week. An archive of presentation materials is available on the SPA website.

#### *SPA Fellows Program*

A keystone program for new faculty developed by Campus Liaison, Stan Geidel, continued during academic year 2016/17 with two cohorts of a hand-selected group of 15 faculty members chosen by the Provost, AVPR, Colleges, Deans, and SPA staff to participate in a year-long intensive educational program. Knowledge-base and grant-writing skills are developed in order to obtain external grants in support of fundable endeavors more successfully.

#### *Focus on the Search*

This 1-hour intensive session allows 6-8 participants to

get hands-on, one-on-one, time with the SPA Research Education and Outreach Coordinator to first sign up for COS Pivot and then how to utilize this power tool to develop a search – all with the help of a Pivot expert.

### *Indirect Cost Recovery Distribution*

Per University policy, of the \$1,183,610 in indirect costs recovered by the University, currently: 5% goes to Principal Investigator(s), 10% to Departments/Units, and 5% to the College. During the past year, the following amounts were transferred: \$54,337 to PIs, \$161,647 to departments/centers, and \$59,188 to colleges – which makes a total distribution of \$309,639.

### **Communication & Information**

SPA continues to share information through a number of social media outlets including the SPA Research Newsletter Blog, Facebook page, and Twitter account. In addition to funding opportunities, SPA events, and news related to external funding, these mechanisms have also allowed for the ability to share funding successes quickly with the campus community.

### **SPA Professional Development**

SPA Staff attended and/or presented at the following conferences and professional meetings:

- Indiana Forum for Research Administration (IFRA)
- Midwest Research and Graduate Administrators Forum (MRGAF)
- National Council of University Research Administrators (NCURA) Fundamentals Class
- Butler Undergraduate Research Conference
- Federal Demonstration Partnership
- National Council of University Research Administrators (NCURA) Annual Meeting
- Evisions Annual Conference
- National Institutes of Health Regional Seminar
- National Science Foundation Grants Conference
- Women Working in Technology
- 2017 BSU Copyright Conference

## ASPiRE Internal Grant Programs

Ball State University's Internal Grants Program was created in 1965 to provide funding to faculty and students and to support and develop projects in the areas of research and creative endeavors. ASPiRE Internal grants are intended to supplement and strengthen the support for research and creative endeavors that comes both from departmental and college resources along with other university programs.

Ball State Internal Grants program offerings consisted of the following competitions this fiscal year: Junior Faculty Research, Junior Faculty Creative Arts, ADVANCE, CREATE, New Faculty Start-Up, Reprint/Publication Support, Travel Support for External Funding for faculty, International Travel Support, Hollis, as well as Graduate Creative Arts, Graduate Research, Undergraduate Creative Arts, Undergraduate Research, and Travel Support to Professional Meetings for students.

### 2016-17 Program Participation

The ASPiRE Internal Grants program processed 189 student proposals and awarded \$27,215 to support 154 projects; 128 faculty proposals and awarded \$267,180 to support 102 projects. Details of the 2016-17 ASPiRE Internal Grants program are summarized in the table, "Internal Grants Program 2016-17." Two of the Junior Faculty awardees are featured in the 2017 issue of Ball State Research: Silas Hansen from English and Katie Lawson of Psychological Science.

Internal Grants Pgm 2016-17	Requests-Submitted	Proposals Awarded	Award Amount
<b>Faculty Programs - Research</b>			
ADVANCE	10	5	\$52,147
Junior Faculty Research	9	6	\$87,360
<b>Total Research</b>	<b>19</b>	<b>11</b>	<b>\$139,507</b>
<b>Faculty Programs - Creative Arts</b>			
CREATE	7	7	\$33,000
Junior Faculty Creative Arts	3	3	\$37,036
<b>Total Creative Arts</b>	<b>10</b>	<b>10</b>	<b>\$70,036</b>
Hollis	2	2	\$ 899
International Travel	32	30	\$11,337
New Faculty Start-Up	24	15	\$36,819
Reprint/Publication Support	31	27	\$ 6,122
Travel Support for External Funding	10	6	\$ 2,460
<b>Total Faculty Programs</b>	<b>128</b>	<b>102</b>	<b>\$267,180</b>
<b>Graduate Student Programs</b>			
Creative Arts	7	4	\$ 2,000
Research	41	20	\$ 9,036
Hollis	12	8	\$ 3,104
Travel Support for Prof. Meetings	93	92	\$ 7,500
<b>Total</b>	<b>153</b>	<b>124</b>	<b>\$21,640</b>
<b>Undergraduate Student Pgms</b>			
Creative Arts	3	3	\$ 900
Research	18	12	\$ 3,600
Travel Support for Prof. Meetings	15	15	\$ 1,075
<b>Total</b>	<b>36</b>	<b>30</b>	<b>\$ 5,575</b>
<b>Total Student Programs</b>	<b>189</b>	<b>154</b>	<b>\$27,215</b>
<b>Total Internal Grants</b>	<b>317</b>	<b>256</b>	<b>\$294,395</b>

## Intellectual property

Intellectual property (IP) development remains an integral component to the research enterprise at the University. SPA is responsible for both receiving initial disclosures of potential intellectual property and in serving as the University liaison with the Ball State Innovation Corporation (BSIC). The BSIC, under the continued leadership of President Wil Davis, directs commercialization and licensing activities related to BSU's works of intellectual property: everything from mobile apps to curriculum to scientific patents.

Three of the performance indicators of the BSU Strategic Plan directly relate to SPA and BSIC's

IP efforts fall under Goal 4, Objective 5: "Enhance commercialization with new opportunities and strategies." Those indicators are to increase royalty by 50% (to \$405,606), create a total of five start-up companies that generate significant net revenue, and increase the annual number of IP disclosures to 20.

During Fiscal Year 2017, 15 disclosures of intellectual property were made, while FY17 royalties totaled \$46,245.24. Itemized listing of those IP products are below. For additional questions on the IP process at Ball State, contact Stephanie Roof; for questions on the specific products available, contact Linda Swartz.

Author(s)	Project Title	Income
Michael O'Hara, Judith Sebesta	Explore Theatre: A Backstage Pass - DVD	\$16,222.01
Hans Sturm	The Art of the Left Hand	\$ 1,600.00
Hans Sturm	The Art of the Bow	\$ 1,100.00
Teresa Matlock	Child Care Collection, LLC	\$ 780.00
Hans P. Kellogg	Legacies of Perfection Auburn Cord Duesenberg	\$ 390.42
Linda Siktberg, Ann (Burford) Bilodeau	Safe Swallowing	\$ 359.55
Nancy Carlson, Ann Eldridge, Mark Warshaw	Gene Stratton Porter	\$ 110.00
Michael Gerhard, Wes Gehring	The Many Faces of Movie Comedy	\$ 48.90
<b>CD</b>		
Eric Lassister	Kiowa Hymns	\$ 100.63
<b>Software</b>		
Frog Baby Apps, LLC	Campus Hub	\$ 4,275.00
Matthew Stuve, Mark Lora	rGrade	\$ 3,505.65
Jason Doll, Thomas Lauer	Back-Calc (FishBC)	\$ 160.68
<b>Books</b>		
Ronald Morris	Crossroad Connect - Indiana 4th Grad Textbook	\$15,942.35
Janet Ross	Understanding English	\$ 230.80
<b>Miscellaneous</b>		
Dayna Thompson, Monique Gabb, Ron Kaitchuck	Saturn & Beyond	\$ 2,275.75
Rodger Smith	My Name is Jerry	\$ 143.50

# A Spectacular Sight - Muncie's Eclipse



Above:  
These eclipse photos and our  
front cover are courtesy of  
Chris Flook.  
Below:  
Crescent photos courtesy of  
Dr. Guillermo Gonzalez. Also  
pictured - his six-year-old  
daughter Jannai.

For the first time in nearly 40 years, the United States experienced a total solar eclipse. It happened to occur on the first day of Ball State's fall session. The majority of undergraduates weren't even alive for the eclipse of 1979 in the U.S. Even though it was a total eclipse in some areas, it was only a partial eclipse in Indiana. "It was a pretty large fraction of the sun blocked because we were not that far from the path of totality. Indiana just barely missed

being part of the path of totality," said Ball State astronomy professor Dr. Guillermo Gonzalez. In order to see totality – the full eclipse of the sun by the moon – you had to be in the direct path in certain cities to see the full effect. Still Muncie was fortunate to view this rare event.

Gonzalez said seeing the solar eclipse can be awe-inspiring, beautiful, and scientifically useful. "We can use observations near the limits of the path of totality, northern and southern limits, to estimate the size of the sun very accurately. It still remains one of the precise ways to

measure the sun." Gonzalez' first eclipse was as a teenager in 1979 in Miami. This time he watched the total eclipse with friends in St. Louis, Missouri at Meramec State Park. While he took a few photos, he chose to take video this year. The photos he did take were of crescents. "If you were standing in the trees you would have seen little crescents on the ground, because the little holes in the leaves act as pinhole cameras. During the eclipse, one of the fun things to do during partial phase is to look under trees." Just like many other astronomers, Gonzalez took measurements - sound level, light level, magnetic field, time, and air pressure. He presented his data at a Colloquium in October. If you just happened to miss the August eclipse, you'll get a chance to see totality right here in Muncie in just seven years – April 8, 2024. §







**SPONSORED  
PROJECTS  
ADMINISTRATION**  
BALL STATE UNIVERSITY

Above photo:  
John Otis Adams, (American,  
1851-1927), *In Poppyland*,  
1901, oil on canvas, David  
Owsley Museum of Art, Frank  
C. Ball Collection, Gift of the  
Ball Brothers Foundation,  
1995.035.040