

**Vice President for Research  
Report to Board of Trustees  
September 2016**

**Office of the Vice President for Research**

**Recent activities:**

The Research Compliance office launched the iThenticate plagiarism detection software which is designed to be used by researchers, instructors, graduate students and undergraduates engaged in high-level research to screen written work for originality and copyright infringement. This software is also used by Federal government agencies such as the National Science Foundation (NSF) to check for instances of potential plagiarism in submitted proposals.

The Office of Technology Transfer (OTT) executed an exclusive option agreement with a venture capital firm based in Columbus, Ohio, to license Twitris, a social media technology developed by Dr. Amit Sheth's group. With assistance from OTT, a team led by Dr. Caroline Cao was selected to participate in the Ohio I-Corps Program – the first team chosen from Wright State University. The OTT continues to work extensively with faculty and staff through individual meetings and outreach, and is involved in reaching students through delivery of guest lectures in a capstone class and in a graduate engineering course.


OTT also participated in a range of commercialization events, including its own "Partnering Forum: Making Technology Transfer and Commercialization Work for You," Wright Ventures presented by the RSCOB, OEA commercialization initiative kick-off organized by Wright Brothers Institute, the Dayton Area Chamber of Commerce annual meeting, the faculty speaker series that is organized by WSRI, and the Business 4000 presentations that were organized by RSCOB which showcased the commercialization of AFRL technologies. The OTT has also been marketing technologies to several venture capital firms.

The Office for Research Development office has facilitated several multi-faculty proposals to various federal agencies. This new office has already won research awards including a three year \$1.75M award and a one year \$110K award; multiple proposals are currently submitted and under review.

The Wright State Applied Research Corporation (WSARC) is the State's fiscal agent to manage the Federal Research Network (FRN), which provides funding to designated centers of excellence. Twenty research projects were submitted for Round 2. Statewide training was conducted during Spring, which resulted in much better written proposals, and further training sessions are under development. The selection of projects for support was conducted by representatives of NASA, AFRL and NAMRU, and industry and university participants from across the State. Fourteen of the 20 projects were selected to move forward from white paper to full proposal. Seven projects were selected for funding: WSU faculty, as part of several centers of excellence, are involved in five of the seven winning proposals!

The Wright State Research Institute (WSRI) has approximately \$75M in proposals in source selection by the government and \$100M in the pipeline.


## Summary of Research and Sponsored Programs Awards:



### Awards by Type of Activity 6/30/16 vs. 6/30/15

Awards by Type of Activity 6/30/16 vs. 6/30/15  
(Includes Financial Aid)

Type of Activity	6/30/16	6/30/16	6/30/15	6/30/15
	# of Awards	Award \$	# of Awards	Award \$
Research	300	\$46,285,466	285	\$42,186,142
Student Aid/Services	44	\$24,262,288	30	\$23,585,519
Public Service	57	\$18,994,497	100	\$13,074,079
Instruction	27	\$4,165,334	25	\$2,739,070
Academic/Institutional Support	2	\$339,233	4	\$126,509
<b>Total</b>	<b>430</b>	<b>\$94,046,818</b>	<b>444</b>	<b>\$81,711,318</b>



### Awards by Type of Activity Four Year Comparison through June

Type of Activity	FY16	FY15	FY14	FY13
	6/30/16 Award \$	6/30/15 Award \$	6/30/14 Award \$	6/30/13 Award \$
Research	\$46,285,466	\$42,186,141	\$40,686,414	\$35,840,073
Student Aid/Services	\$24,262,288	\$23,585,519	\$26,706,973	\$30,541,327
Public Service	\$18,994,497	\$13,074,079	\$14,755,686	\$12,926,797
Instruction	\$4,165,334	\$2,739,070	\$2,586,367	\$3,714,437
Academic/Institutional Support	\$339,233	\$126,509	\$442,985	\$7,482,215
Employer Assistance/Development	\$0	\$0	\$7,403	\$279,587
<b>Total</b>	<b>\$94,046,818</b>	<b>\$81,711,318</b>	<b>\$85,185,828</b>	<b>\$90,784,436</b>
<b>No. of Awards:</b>	<b>430</b>	<b>444</b>	<b>481</b>	<b>539</b>
<b>No. of Proposals:</b>	<b>746</b>	<b>700</b>	<b>775</b>	<b>801</b>

## Recent Highlights:

Wright State University ended its fiscal year 2016 with a total of \$94,046,819 in external funding representing 430 awards.

Recent funding received by the University includes \$1,508,485 (representing the first of three years of funding) from the U.S. Department of Defense, Office of Naval Research's Multidisciplinary University Research Initiative (MURI) program to Dr. Timothy Broderick (Research Affairs, Boonshoft School of Medicine) and Co-Principal Investigators, Dr. Madhavi Kadakia (Biochemistry and Molecular Biology) and Dr. Michael Raymer (Computer Science and Engineering). These researchers, and other collaborators from the Wright State Research Institute, will study precision, high-intensity physical training through epigenetics. Additionally, the University's Ohio Human Performance and Health Sciences Center of Excellence, led by Dr. Timothy Broderick (Wright State Research Institute) received initial, incremental funding in the amount of \$783,109 from the Ohio Federal Research Network's first cycle competition in support of two two-year awarded projects: 1) Sliding-Scale Autonomy Through Physiological Rhythm Evaluations (PI: Dr. Ali Reiter, Wright State Research Institute), and 2) Improving Healthcare Training and Decision Making Through the Live, Virtual, and Constructive Enterprise (PI: Douglas Hodge, Wright State Research Institute). Both of these projects will support AFRL in the areas of airman performance, human machine teaming, autonomy, and education and training.

## Internal Funding Competition:

Following review by Research Council, funding was distributed for the internal Research Initiation and Professional Development Grant awards.

The 2016 official award recipients are as follows:

### Professional Development Grants:

PI Last Name	PI First Name	College	Title	Award
Battles	Kelly	LAKE	<i>Mary Shelley's Novel: The Fortunes of Perkin Warbeck (1830): A Critical Inquiry</i> <b>Note: Dr. Battles unable to accept award due to scheduling conflict.</b>	<b>\$1,365</b>
Bhanderi	Shreya	COLA	<i>Coping Strategies of Indian Women Facing Domestic Violence</i>	<b>\$900</b>
Burns	Gary	COSM	<i>International Collaboration to Develop A Non-Evaluative, Public Access Version of the AB5C Personality Inventory</i>	<b>\$3,000</b>
Oswald	Gina	CEHS	<i>Development of International Research and Educational Opportunities for Students with Disabilities with the United Kingdom</i>	<b>\$3,000</b>
Wendt	Heidi	COLA	<i>Braiding Ropes of Sand: Gospel Literature and the Making of Early Christian Diversity</i>	<b>\$1,925</b>
<b>Total:</b>				<b>\$8,825</b>

**Research Initiation Grants:**

<b>PI Last Name</b>	<b>PI First Name</b>	<b>College</b>	<b>Title</b>	<b>Award</b>
Amer	Maher	CECS	<i>Enabling Near Infrared Raman Spectroscopy Facility for Biological Samples Investigation</i>	<b>\$16,000</b>
Hassan Zadeh	Amir	RSCOB	<i>Wearable Technology and Data Science for Injury Prevention in Sports</i>	<b>\$14,000</b>
Ladle	David	BSOM	<i>Characterization of Gene Expression in Muscle Proprioceptive Afferent</i>	<b>\$15,400</b>
Mayes	Debra	BSOM	<i>The Role of N-Acetyl Cysteine in Blood Brain Barrier Modulation</i>	<b>\$15,500</b>
Medvedev	Ivan	COSM	<i>Detection of Respiratory Pathogens Based on THz Chemical Sensing</i>	<b>\$14,000</b>
Newell	Silvia	COSM	<i>Nutrient Removal and Greenhouse Gas Production Trade-Offs in Constructed and Natural Wetlands</i>	<b>\$15,000</b>
<b>Total:</b>				<b>\$89,900</b>

**Workshop:**

The Office of the Vice President for Research and the Division of Environmental Health and Safety sponsored a FBI Biosecurity Workshop at WSU on Wednesday, July 6. The workshop was attended by many faculty and staff.