Office of the Vice Provost for Research
YEAR-END REPORT
IU Bloomington 2014–15

creating opportunities

investing resources

enhancing research
The mission of the Office of the Vice Provost for Research is to work with individuals, teams, centers, institutes, and schools to foster excellence in research and creative activities and to offer support to faculty to successfully compete for external funding. OVPR provides consultation, proposal development services, competitive internal funding programs, and research infrastructure for a wide range of research, scholarly, and creative activities.

ovpr.indiana.edu

PRIORITIES for FY 2015–16

IU Bloomington Grand Challenges Implementation

OVPR will work closely with the vice president for research, IU Bloomington provost, deans, and faculty to identify and fund Grand Challenges. This program will include:

• Commitment of significant funding and additional resources

• Working with the Office of the Vice President for Diversity, Equity, and Multicultural Affairs to develop deep and sustained collaborative relationships with minority-serving institutions

• Engaging the IU Foundation, Office of the Vice President for Engagement, and the Office of the Vice President for Public Affairs and Government Relations to pursue funding opportunities from corporate and private entities

• Committing to start-up packages for Grand Challenges cluster hires and to possible hires through OVPR centers and institutes (e.g., Ostrom Workshop and Kinsey Institute) and other schools

Emerging Areas of Research

Working with the vice president for research, IU Bloomington provost, deans, and faculty, we will identify and fund emerging areas of research on the IU Bloomington campus. These areas may be defined as less multi- or interdisciplinary and smaller in scope than those involved in the Grand Challenges, but still areas in which IU Bloomington can become a national and international leader. OVPR will:

• Commit significant funding and additional resources, including a limited number of faculty hires

• Examine current internal funding programs to maintain a proper balance of funding for single and multi-investigator projects

• Allocate seed funds for research personnel and for the development of large proposals for external funding, seminar series, major conferences, or other research outcomes such as collaborative endeavors, initiatives, publications, exhibits, and performances

Research and Proposal Development Services

OVPR will optimize the contributions of its Proposal Development Services group to the development of Grand Challenges initiatives and emerging areas of research. Over the next year, in collaboration with the vice president for research, the Office of Research Administration, and IU Bloomington deans and departments, OVPR will evaluate the effectiveness of our current system, examine alternate models, and pursue an organization of consistent campuswide research and proposal development resources to maximize coordination and effectiveness.

Research Infrastructure

OVPR will continue to invest in the physical and IT infrastructure necessary for 21st-century research and beyond, through new and renovated lab space, digitization of collections, and continuing investments in cyberinfrastructure, with priorities based upon prospects for research and creative activity productivity.
As IU Bloomington’s recently appointed vice provost for research, I’m very pleased to share this FY 2014–15 year-end report. The past year has included significant accomplishments for the Office of the Vice Provost for Research (OVPR) at IU Bloomington, for which credit is due to my immediate predecessor, Interim Vice Provost for Research Michael Wade, and to Sarita Soni, who retired in 2014 after nine years as vice provost for research.

OVPR’s accomplishments over the last year include:

• **Partnering** with IU Bloomington’s new Johnson Center for Entrepreneurship in Biotechnology to promote greater opportunities for translational research as part of a Lilly Endowment-funded Initiative to Promote Opportunities through Education Collaborations.

• **Awarding** the inaugural $15,000 Outstanding Faculty Collaborative Research Award to two teams of IU Bloomington faculty, who co-presented a well-received lecture in December 2014.

• **Initiating** the Grant Linking Universitywide Expertise (GLUE) Awards with the Indiana Clinical and Translational Sciences Institute to support IU Bloomington-led translational research teams. In 2015, three research teams received $200,000 in awards for projects studying addiction, antiviral vaccines, and the network structure of the Alzheimer’s brain.

• **Supporting** continued development of important campus research centers, including the appointment of a new director, Sue Carter, for the Kinsey Institute for Research on Sex, Gender, and Reproduction and new strategic planning for the Ostrom Workshop on Political Theory and Policy Analysis, led by director Lee Alston.

• **Working** with UITS to integrate core facility management through iLab Solutions, which offers a suite of web-based tools for academic research management including inventory, usage tracking, invoicing, reporting, and requisitioning.

But by far, OVPR’s most important focus in the last year, and for years to come, remains the Grand Challenges research program, as outlined in the university’s Bicentennial Strategic Plan. The goal of this program is to engage IU faculty in major multidisciplinary research endeavors, the outcomes of which will transform the lives of people in Indiana and the world. In collaboration with IU’s vice president for research and other university partners, OVPR is devoting considerable time and effort into developing a Grand Challenges plan, which also will include funding for emerging areas of research. Following a well-attended Town Hall meeting in May 2015, IU Bloomington faculty teams have identified more than a dozen exciting ideas that are currently under discussion as we move forward in the Grand Challenges process. As FY 2015–16 progresses, we will be working with faculty and units across the campus to advance IU’s Grand Challenges program.

Sincerely,

Rick Van Kooten
Vice Provost for Research
Indiana University Bloomington
OVPR’s “Brilliant Minds” research video series, established in 2012, features short 2-3 minute films produced in collaboration with IU Communications. These research videos showcase a few of the close to 2,000 full-time faculty at work on the IU Bloomington campus. New videos in the series focus on innovative research taking place at the IU School of Public Health-Bloomington; the work of Kylie Peppler, associate professor of learning sciences in the School of Education, on how “making”—building, tinkering, and creating—can promote a scientific mindset inside and outside the classroom; and the critically acclaimed, other-worldly high-definition video installations created by Professor of Digital Art Jawshing Arthur Liou. The series may be viewed through the IU Bloomington research site at research.indiana.edu or on IU’s YouTube channel.

Kylie Peppler, associate professor of learning sciences and director of The Creativity Labs in the School of Education at IU Bloomington, works with students.

Proposal Development Services enhances the competitiveness of proposals

Now in its fourth year, OVPR’s Proposal Development Services team offers personalized services designed to enhance the competitiveness of IU Bloomington grant proposals. In addition to offering comprehensive project management services for complex proposals, PDS offers one-on-one consultations, proposal preparation assistance, and grant-writing events and resources to all IU Bloomington faculty.

In FY 2014–15, PDS consulted on 43 projects and worked with faculty on full-scale proposal development for an additional 17 proposals, including two center applications, three training grants, and four equipment grants.

Over the year, PDS also offered 11 grant-writing events serving more than 100 faculty members across all disciplines, including two grant-writing workshops; three funding presentations; four writing, editing and peer review sessions; and a research networking event that brought together 40 faculty members to develop interdisciplinary collaborations around research ideas focused on network science.

IU Bloomington faculty publications

New strategic directions for OVPR centers, institutes, museums

Following the Board of Trustees’ approval of IU’s Bicentennial Strategic Plan in December 2014, schools and units across the campus, including OVPR centers, institutes, and museums, are renewing their own strategic plans to align with the university’s key strategic priorities.

Among the OVPR centers, institutes, and museums re-envisioning their mission and goals are two long-established and highly regarded units, the Kinsey Institute for Research in Sex, Gender, and Reproduction and The Vincent and Elinor Ostrom Workshop on Political Theory and Policy Analysis.

Under the leadership of Sue Carter, a leading expert in neurobiology of sexual responses and behaviors, the Kinsey Institute has refined the mission originally established by its founder Alfred Kinsey to focus on advancing knowledge and understanding of love, sexuality, and well-being throughout the lifespan. The institute’s strategic goals over the next five years include expanding scientific research programs pertaining to love, sexuality, and well-being, and identifying new ways to sustain, grow, preserve, and improve access to the Kinsey Institute’s renowned library, archives, and art collections.

The Ostrom Workshop, likewise building on the intellectual legacy of distinguished researchers Vincent and Elinor Ostrom, has reframed its mission to build upon the theme of governance as a way of understanding and addressing major societal problems. Led by Lee Alston, known for his research in economics and on the governance and use of natural resources, the Ostrom Workshop has identified new strategic priorities that include enhancing scholarly collaborations; expanding research programs under the theme of governance, defined as “the formal and informal rules that shape behavior”; developing educational opportunities for on- and off-campus audiences; and renovating and upgrading the Workshop’s facilities to accommodate future growth.
Research activities around the world

With a grant from the Andrew W. Mellon Foundation, OVPR, and the IU Bloomington Office of the Provost manage the Mellon Innovating International Research, Teaching, and Collaboration program, designed to spur innovative and transformative research and scholarly activities in international, area, and global studies. In 2014–15, 21 faculty and advanced graduate students received awards. Here’s a small sampling of where in the world their research is taking them.

- **Virginia Whealton, Ph.D. candidate, Department of Musicology, IU Jacobs School of Music**
  - **France**

- **Katie Stewart, Ph.D. candidate, Department of Political Science, College of Arts and Sciences**
  - **Russia**

- **Manling Luo, assistant professor, Department of East Asian Languages and Cultures, College of Arts and Sciences**
  - **China**

- **Shaowen Bardzell, associate professor of informatics, School of Informatics and Computing**
  - **Taiwan**

- **Kathryn Lehman, Ph.D. candidate, Department of History, College of Arts and Sciences**
  - **Bolivia and Brazil**

- **Marvin Sterling, associate professor, Department of Anthropology, College of Arts and Sciences**
  - **Jamaica**

- **Khalid Khan, assistant professor, Department of Environmental Health, School of Public Health-Bloomington**
  - **Bangladesh**

- **Madeline Chera, Ph.D. candidate, Department of Anthropology, College of Arts and Sciences**
  - **Madurai, Tamil Nadu, South India**
External proposals, awards, and expenditures by unit, IU Bloomington, 2014–15

Research expenditures refers to total spending on projects funded by external grants and contracts during the fiscal year.

<table>
<thead>
<tr>
<th>Unit</th>
<th>Number of Proposals</th>
<th>Number of Awards</th>
<th>Awards Dollars</th>
<th>Expenditures</th>
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<tr>
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<td><strong>TOTAL</strong></td>
<td><strong>1,186</strong></td>
<td><strong>770</strong></td>
<td><strong>$129,715,544</strong></td>
<td><strong>$116,208,400</strong></td>
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Research Centers and Institutes: $5,696,533 (49%)  
Faculty Research Support—OVPR Major Research Support Programs (1): $3,270,137 (28%)  
Research Development and Administration (3): $2,226,123 (19%)  
Faculty Research Support—Other Research Support Programs (2): $402,500 (3%)  
Research Compliance/Lab Animal Resources: $157,065 (1%)  

(1) Major Programs include Faculty Startup, Faculty Research Support Program (FRSP), Grant Match, Bridge Funding, BL Research Support, Proposal Development Services, and other research initiatives.  
(2) Other Research Support Programs include Research Leave Supplements, Summer Stipends for Collaborative Research & Creative Activity, Faculty Grant-in-Aid for Research, and Intercampus Research Fund.  
(3) Research Development and Administration include Proposal Development Services, Communications, and OVPR Administrative Support.
Traditions of Excellence at IU Bloomington, 2014–15

American Association for the Advancement of Science Fellows

• Sarita Soni, professor emerita of optometry and vision science, School of Optometry, and former associate vice president and vice provost for research

• Thomas Sterling, professor of informatics and computing, School of Informatics and Computing, and executive associate director and chief scientist of the Center for Research in Extreme Scale Technologies (CREST)

American Academy of Arts and Sciences

• Feisal A. Istrabadi, founding director of the Center for the Study of the Middle East; associate director of the Center for Constitutional Democracy; and Professor of Practice in the School of Global and International Studies and the IU Maurer School of Law

• Robert Nosofsky, Distinguished Professor and Chancellor’s Professor of Psychological and Brain Sciences, College of Arts and Sciences

• Roger Meyer Temam, Distinguished Professor and College Professor of Mathematics, College of Arts and Sciences

• Center for Exploration of Energy and Matter

• Center for Genomics and Bioinformatics

• Center for Research into the Anthropological Foundations of Technology

• Center for Survey Research

• Glenn A. Black Laboratory of Archaeology

• Indiana Geological Survey
  ° Center for Geospatial Data Analysis

• Indiana Institute on Disability and Community

• Institute for Advanced Study

• Institute for Digital Arts and Humanities

• Kinsey Institute for Research in Sex, Gender, and Reproduction

• Laboratory Animal Resources

• Light Microscopy Imaging Center

• Mathers Museum of World Cultures

• Ostrom Workshop in Political Theory and Policy Analysis
  ° Center for the Study of Institutions, Population, and Environmental Change

On the Cover

Top: Engraved yellow jasper gemstone with scorpion, first–fourth centuries CE, from Colors of Classical Art at the IU Art Museum (Burton Y. Berry Collection, 76.93.4). Support for the exhibition provided in part by OVPR Collaborative Research and Creative Activity Funding Award.

Bottom left: Cyanostar molecules, from research collaboration of Amar Flood (James F. Jackson Professor of Chemistry and Luther Dana Waterman Professor) and Steve L. Tait (associate professor of chemistry), both of IU Bloomington. Artwork created by Albert William of the Media Arts and Sciences program at IUPUI. Bottom right: Gus Schaefer, graduate student in the Department of Geological Sciences, calibrates water quality instruments for an Indiana Geological Survey project (photo by John Day).