MISSION
Wake Forest University’s Office of Research and Sponsored Programs supports the Associate Provost for Research in building faculty research programs of nationally recognized excellence. We assist faculty in their pursuit and management of sponsored activities; work to assure ethical research achievement, especially involving human subjects, in compliance with all relevant laws and regulations; protect the university’s interests; and acknowledge and publicize faculty distinction.

CREDITS
The Office of Research and Sponsored Programs gratefully acknowledges Ken Bennett’s and Stephen Williams’ photographs.
Dear Researchers,

There is just no way to spin it—total awards for FY15 dropped from the previous year. Although this news is disappointing, plenty of exciting accomplishments are not necessarily reflected in the numbers. Wake Forest scholars earned prestigious fellowships, and in a direct way, projects served the sick, the disabled, the poor, and the elderly and advanced our capacity to solve critical problems on scales from local to global.

Moreover, FY16 is already shaping up to be one of our best yet. We expect awards for some major projects, including our first-ever NIH U01 under the direction of Steve Messier in Health and Exercise Science and another large character-focused project, under the direction of Will Fleeson, Christian Miller and Mike Furr, that will be funded by the Templeton Religion Trust. Keep checking the WFU website for announcements related to these and other projects.

For the first time, a gift was designated for research. Using funds from the generous donation from Blue Cross Blue Shield of North Carolina (BCBSNC) Associate Provost, Bruce King created a new internal award program called the WFU/BCBSNC Pilot Grants. Four exciting projects were chosen in the fall 2014 competition; they are described in this report. Another call for applications will be announced soon.

During FY15 we made a decision that will have a huge impact on WFU research. We explored options that would enable us to become more efficient in the proposal submission and management process. A team that included staff from Financial Services and Information Systems helped us evaluate four systems that would allow us to prepare, route, and manage proposals electronically. We ultimately selected Cayuse 424 and SP, and went live in August. This new system and the adoption of the eCOI system, are helping our office to become paperless.

The ORSP team continues to represent WFU in the field of research administration. Amy Comer is serving on a committee to review the grant administrator training module in CITI. In addition, she facilitated a discussion group at the National Council of University Research Administrators (NCURA) regional meeting in May. Our newest staff member, Jeanie Baird, renewed her CIP certification, a credential she has held for more than six years. I co-presented a faculty development session and facilitated a discussion group, both focusing on CRADLE, at NCURA’s Pre-Award Administrators meeting. As a result of these sessions and presentations last year, we have heard from several institutions that have adopted programs similar to our CRADLE program. I was also re-elected Secretary for the Research Administrators Certification Council.

Sincerely,

Lori Messer, CRA
Director
**ANTHROPOLOGY**

**Eric Jones** received a 3-year award from the National Science Foundation (NSF) for A Settlement Ecology Analysis of the Ecological Factors Influencing the Spatial Distribution of Middle-Range Communities in the North Carolina Piedmont, AD 1000-1600. This multiscalar study focuses on both natural and cultural landscapes to determine why complex socio-political organizations arose and endured in some places and not others. It compares the settlement strategies of nonhierarchical Piedmont Village Tradition (PVT) communities and hierarchical Mississippian and PVT communities to see how they vary by location. Surveys will categorize all known PVT sites; discriminant function analysis will be used to determine the factors that most influenced settlement location; excavations will establish the variability in PVT settlement types; GIS analyses will be used to reconstruct the landscapes that existed around each site and to inform predictive modeling of the landscape characteristics common to sociopolitically complex communities. Each phase will be conducted with undergraduates, who will gain field and laboratory training and experience. Differential GPS equipment, computer and tablet hardware, GIS software, and archaeological field equipment will be added to the Anthropological Geographic Analysis (AGA) Laboratory. Digital spatial data will be compiled into a single database, permanently housed at WFU, and available to other researchers via tDAR. Results will be displayed at the Museum of Anthropology, and participating students will organize events that bring the university and local and Native American communities together to learn about cultural preservation and heritage.

**BIOLOGY**

**Erik Johnson** received a 3-year NSF award for Dissection of signaling networks maintaining metabolic homeostasis. The project integrates genetics, pharmacology, and physiology to investigate precisely how organisms maintain metabolic stability. Experiments take advantage of the tractability of the model organism Drosophila melanogaster, the fruit fly, and use powerful molecular and imaging tools to clarify metabolic pathways. Preliminary results indicate that these pathways are highly conserved in all animals, and information from this project has potential practical applications ranging from novel therapeutics to pest management strategies.
COUNSELING

Philip Clarke, who is also Director of the Memory Assessment Clinic Counseling Center at Wake Forest Baptist Health (WFBH), with Ed Shaw and other Department of Counseling faculty, including Assistant Professor of the Practice Brian Calhoun and Assistant Professor Nathaniel Ivers, launched the Care Train Project with funding from WFBH. Although Alzheimer’s disease and other dementias are more prevalent among African Americans than among Caucasians, African Americans are less connected with support services for persons with dementia and their family caregivers. One route to addressing this health disparity is developing sustainable, culturally sensitive support services, including partnering with the African American church community. In this project, counselors conducted a support group for family caregivers of individuals with dementia at a large African American church. The Care Train team then developed and implemented a program to train caregivers who had completed the pilot program to lead the subsequent caregiver support group. Counselors will observe several of the resulting group sessions to assess innovations, challenges, and participant outcomes. Preliminary data will inform a proposal to support a larger program engaging several local African American churches. If successful, this model could be exported to African American communities at large and be modified to assist other underserved groups.

José Villalba is working with Laura González (UNCG) on Latino Parents Learning About College (LaP-LAC) with support from the Kate B. Reynolds Charitable Trust. Presented in partnership with religious congregations and community centers, LaP-LAC is a college-planning curriculum in Spanish and English to inform parents about the US educational system and to support their roles as planners and providers for their families. The two co-investigators are measuring whether and how well the program enhances Latino parents’ ability to contribute to the success and college access of their high school-aged children and LaP-LAC’s impact on the postsecondary educational options that Forsyth County’s Latino high school students pursue.
HEALTH AND EXERCISE SCIENCE

Jeff Katula is principal investigator on several projects in addition to his Blue Cross/Blue Shield of North Carolina pilot research. They have one strong theme: finding effective, affordable ways to help all people improve their health. What we might call Pro Humanitate.

One line, supported by the National Institutes of Health and Wake Forest Baptist Health, tests the potential of translating the Diabetes Prevention Program (DPP) lifestyle intervention through community-based partnerships, Healthy Living Partnerships to Prevent Diabetes (HELP PD). The original trial randomized 301 overweight and obese people with prediabetes to either enhanced usual care or a group-based lifestyle intervention facilitated by community health workers and diabetes care-center staff. The trial demonstrated a weight loss effect of -4.19 kg (-5.35%) at 24 months. HELP PD is the largest and longest randomized controlled trial to date to translate the DPP. In HELP PD II, Dr. Katula tests the long-term efficacy and cost-effectiveness of a continued monthly group-based maintenance program led by community health workers as compared to enhanced usual care. Dr. Katula is currently working with the North Carolina Division of Public Health to implement diabetes prevention programs across the state through county health departments.

Dr. Katula is also involved with the Maya Angelou Center for Health Equity (MACHE), which, through a Center of Excellence award (PI, Dr. Bell, Epidemiology & Prevention) from the National Institute on Minority Health and Health Disparities, is conducting two studies translating lifestyle interventions to community-based settings. Dr. Katula and Dr. Alain Bertoni (Epidemiology & Prevention) are co-PIs on Lifestyle Interventions for the Treatment of Diabetes (LIFT), which is testing a community-based translation of lifestyle weight-loss interventions targeting underserved patients with diagnosed diabetes to develop a model for remediating America’s health disparities. Specifically, the intervention is designed to help minority and lower income diabetes patients achieve 7 percent weight loss and increase their physical activity to about three hours a week, reducing cardiovascular disease risk 10 percent compared to enhanced usual care. Note that Dr. Katula is co-investigator on the other study included in this award, La Communidad, to determine whether combining the intervention with the accountability and structure of Latino church communities will enhance health-related behaviors and reduce type-2 diabetes incidence.
Another line of research, *Community-Based Therapy for Fibromyalgia*, is sponsored by the Northwest Community Care Network (NWCCN) and Wake Forest Baptist Health. Fibromyalgia is characterized by nervous system abnormalities that produce pain, cognitive impairment, and psychological problems. In this feasibility study, Dr. Katula will design, implement, and manage an intervention to reduce patients’ pain. Delivered through the YMCA, it combines structured exercise with group-mediated cognitive behavioral therapy.

**Pat Nixon**’s long-time project with Wake Forest Baptist Health, *Prenatal events, postnatal consequences II*, was renewed by the National Institutes of Health. Over the last twenty years, pregnant women at risk for premature delivery have been treated with synthetic corticosteroids to facilitate fetal lung maturation and improve survival in prematurely born infants. However, despite the early life benefits, data from experimental animal and epidemiological studies suggest increased risk for developing chronic diseases, such as high blood pressure and diabetes later in life. This collaborative group was previously funded to investigate the effects of antenatal steroid therapy on blood pressure and kidney function in a widely used sheep model and a cohort of adolescents. Their funding was extended for an additional five years to examine insulin resistance and type 2 diabetes risk in the same cohort who are now young adults. They will also explore the possibility that obesity exacerbates the steroid effects in both the animal model and young adults. The work may help to identify new directions for early intervention to reduce the risk of hypertension and renal and metabolic abnormalities in individuals exposed to antenatal steroids.

**HISTORY**

**Robert Hellyer** secured funding from the Japan Foundation to support a two-day conference at Wake Forest on *The Civil Wars of Japan’s Meiji Restoration and National Reconciliation: Global Historical Perspectives*. It explored the civil wars that surrounded the Meiji Restoration of 1868, the Boshin War and the Satsuma Rebellion. Specifically, participants will discuss how these conflicts shaped Japan’s interactions with the outside world and how reconciliation was achieved in their aftermath as compared to the attempts that followed the US Civil War, the Taiping Rebellion in China, and other internal conflicts in the same period. Finally, panelists and discussants will examine how the conflicts are understood by historical memories of the period, drawing comparisons with the United States, China, and Korea. The Wake Forest gathering will be the first of three international conferences on the Meiji Restoration in advance of the sesquicentennial in 2018, organized by Dr. Hellyer and colleagues at Yale and Heidelberg Universities.
HUMANITIES

David Phillips received Mellon Foundation funds through the Consortium of Humanities Centers and Institutes (CHCI), based at Duke University, as part of Integrating Humanities across National Boundaries: The Promise of CHCI. The CHCI launched two projects as part of this grant. One was Humanities for the Environment, with research centers, or observatories, in North America (http://hfe-observatories.org/observatories/north-american-observatory/), Australia, and Europe. The project asks how humanities discourse and tools can respond to a moment of planetary crisis, when human activity is eroding the future.

The WFU Humanities Institute leads the South Cluster of the North American Observatory, collaborating with the Humanities Institutes at Stony Brook University and the University of Minnesota. In the first two project periods, it convened research teams to survey and collect the history of environmental change in each partner’s region; conducted and recorded interviews with community leaders and regional activists; and joined representatives of the North and West Clusters and newly forming observatories in Africa and Asia at an international conference at the University of Wisconsin Madison, with a view toward continuing the project beyond the current grant period. In addition, with the help of web designers, Dr. Phillips developed and launched a website to document and disseminate results (http://hfe-observatories.org/).

MATHEMATICS

Jeremy Rouse and Katherine Thompson received NSF funding to run a 9-week summer research program for undergraduate students at Wake Forest in 2015, 2016, and 2017, Wake/Davidson Experience in Number Theory Research. Each summer, eight students, chosen by nationwide search, experience the joys and challenges of conducting original research in number theory and writing an original, publishable research paper. They explore various topics in elementary number theory, quadratic forms, elliptic curves, and modular forms. A rich professional development program prepares them to present their research at the University of Georgia’s Mock American Mathematical Society (AMS) conference and the AMS/MAA (Mathematical Association of America) Joint Math Meetings.

In 2015, eight students from Wake Forest, University of Georgia, Princeton, Emory, Wellesley, Saint Louis University, and Florida Atlantic University have already completed publishable work in arithmetic dynamics under the direction of Dr. Rouse and ternary quadratic forms under the direction of Dr. Thompson.
INTERNAL AWARDS

The Office of Research and Sponsored Programs assists the Associate Provost for Research in coordinating and administering internal award programs. In the last fiscal year, the Associate Provost used gift funds to create internal grants. The first competition for the Blue Cross Blue Shield of North Carolina (BCBSNC) pilot grant program was held in the fall of 2014, and a second is planned for fall 2015.

FY15 awards by program are as follows:

<table>
<thead>
<tr>
<th>Program</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCBSNC Pilot Grants</td>
<td>$197,550</td>
</tr>
<tr>
<td>Pilot Research Grants (PRG)</td>
<td>$57,107*</td>
</tr>
<tr>
<td>Bridge Funds</td>
<td>$4,443</td>
</tr>
</tbody>
</table>

*The ZSR Foundation provided $50,000.

The office also manages matching/cost share funds. In FY15, over $62K was provided for sponsored project cost share, high-speed computing, open-access publishing, faculty workshops and conferences, and other internal grants.

FACULTY DEVELOPMENT

In FY15, the office spent nearly $100K hosting and coordinating workshops and events, supporting research-related committees, and paying for faculty travel to professional development seminars. Supported programs and events include:

- Reception to Honor Authors, Editors, and Fine & Performing Artists
- Creative Research Activities Development & Enrichment Program (CRADLE)
- Creative Research Activities Development & Enrichment Initiative for the Schools of Business (B-CRADLE)
- Responsible Conduct of Research Training for Graduate and Undergraduate Students
- Building Research Success at Wake Forest University
- Recognition of Research Excellence
- Export Controls Training
- Quality Circles
- Team Building
- Centers and Institutes Retreat

The office edited 44 proposals and other documents and performed over 28 searches for funding opportunities.
Michelle Voss Roberts, Associate Dean for Academic Affairs and Associate Professor of Theology, received an NEH Summer Stipend, to work on *Body Parts: Re-visioning Theological Conceptions of the Human*. The book addresses an enduring and searing question: What is a human being? Dualistic body/soul anthropologies have reigned since Plato and Aristotle, and while humanities scholars have attempted to repair these schemes and to appreciate embodied differences, they seldom look to alternative conceptions of the human.

This exercise in intercultural theory considers the Indian philosopher Abhinavagupta, who imagined thirty-six “body parts”, ranging from physical elements to the highest unity of consciousness. It addresses the shortcomings and exclusions of the body/soul paradigm by naming denigrated parts, including the elements, organs of sense and action, and even limitations, as integral to a contemporary view of humanity.

The funding ratio for fellowships is 7 percent; for summer stipends, 9 percent. In absolute terms, some 80 are awarded in each competition each year. Wake Forest is immensely proud of faculty who can compete in the ether.
Blue Cross Blue Shield of North Carolina provided funds to enable faculty to develop creative, impactful approaches to solve the state’s healthcare problems.

**IMPROVment™: Bringing Improvisational Movement to Parkinson’s Communities in North Carolina.** Christina Tsoules Soriano, Associate Professor of Dance, has been working with Dr. Christina Hugenschmidt, Assistant Professor of Gerontology and Geriatric Medicine, to determine whether and how improvisational movement benefits people with Parkinson’s disease. Falling is one of the most common reasons for their hospitalization, and movement-based interventions that include improvisation may particularly help by improving both physical function and spontaneous mental response to the environment. In addition, group interventions can create a meaningful community experience, combating isolation and building confidence. Participants in previous programs were strongly engaged and eager to continue.

Funding from the Translational Science Center has enabled Soriano to codify, disseminate, and record exercises, naming and trademarking her curriculum IMPROVment™. The present project will collect pilot data assessing its effects on cognition. In two hour-long classes per week for ten weeks, instructors will provide movement-motivating prompts, and the group will be asked to react on-the-spot. Exercises often begin with simple one-step instructions and progress to more complex and/or interactive movements, challenging memory and rhythm.

The pilot data will be used to apply to NIH, perhaps for a Phased-Innovation Grant to Develop Interventions for Health-Enhancing Physical Activity or as a Patient-Centered Outcomes Research Initiative.

**Mapping and Aligning Food Assets, Food Pathways, and Religious Health Assets.** Mark E. Jensen, Teaching Professor of Pastoral Care and Pastoral Theology at the School of Divinity, working with Teresa Cutts, Assistant Research Professor in Public Health Science at the School of Medicine, are developing methods to improve local food security, healthcare use, and the overall health of the underserved. The team will first compile, synthesize, and update data at the intersection of food, faith, and health from Forsyth county reports, focusing on Winston-Salem’s most vulnerable populations and neighborhoods. Second, it will conduct workshops to map both food-provider and food-seeker perspectives, using frameworks developed by the International/African Religious Health Assets Mapping Programme (IRHAP/ARHAP). Third, after obtaining informed consent, it will gather de-identified, aggregate data on healthcare use among food seekers. Finally, the data on food security and healthcare use will be integrated with qualitative findings from the mapping workshops to reflect the overall community health and to define the barriers faced by our most socially complex citizens.

The project will reveal faith-based and other food/health assets of which government and other community partners (pantries, soup kitchens, backpack and church feeding programs, community gardens) may not be aware as well as gaps in the local infrastructure for strategic investment. The data will support applications to such state and national sponsors as the Kate B. Reynolds Foundation, the Duke Endowment, the Kresge Foundation, and RWJF to implement some of the recommended steps. Partnering with a local CDC to apply to the HHS Office of Community Services under the Healthy Food Financing Initiative will also be explored.
North Carolina Healthy Living Partnerships to Prevent Diabetes (NCHELP PD): Pilot Phase 2. Jeffrey A. Katula, Associate Professor of Health and Exercise Science, will test the feasibility of establishing a diabetes prevention program administered by North Carolina county health departments and led by community health workers (CHW). North Carolina has the ninth highest diabetes rate in the country, and this population seems disproportionately affected by related complications. Since the landmark Diabetes Prevention Program (DPP) and Finnish Diabetes Prevention Study (FDPS) demonstrated that incidence of type-2 diabetes could be reduced almost 60 percent in prediabetic patients through weight loss resulting from diet and physical activity, diverse translations have had encouraging effects. One review noted that programs led by CHW seem to be more effective than those led by professional medical staff.

Dr. Katula’s study Healthy Living Partnerships to Prevent Diabetes (HELP PD) successfully translated the DPP to Winston-Salem in partnership with a local diabetes education program using lay CHWs. After one year, it documented greater weight loss (7 as opposed to 4 percent), significant decrease in fasting blood glucose, at significantly lower cost than the DPP.

The current study will pilot test the feasibility of housing these program in NC county health departments. Community Transformation Grants to the State of North Carolina and counties will cover the costs of implementation and training, while BCBS funding will support outcome assessment and participant and data management. Results will inform an application to the National Institute of Diabetes and Digestive and Kidney Disorders to conduct a pragmatic trial of this diabetes prevention and management intervention. At the same time, partners in the NC Department in Health and Human Services will use the data to promote policy changes (e.g., CHW reimbursement). The goal is to create a sustainable, accessible DPP that reduces health disparities and inequities and the burden of diabetes in North Carolina.

Reforming and Expanding North Carolina Medicaid: Empirical Evidence to Inform Public Policy. Fred and Elizabeth Turnage Professor of Law Mark Hall is collaborating with Michael Lawlor, Economics emeritus and founding director of the health policy and administration minor, to recruit student research assistants and a research fellow to amass, analyze, and disseminate balanced, reliable information to guide public deliberations on how to reform North Carolina Medicaid and whether to expand it under the Affordable Care Act. Other sources informing these hotly debated questions tend to be biased or insufficiently specific to North Carolina.

The team will conduct a literature review; observe legislative hearings; and interview diverse policy advocates, Medicaid officials, representatives of trade associations and professional groups involved with Medicaid, and other observers and experts. Results will be presented in issue briefs targeting the most current and contentious topics and disseminated widely through press releases, op-ed columns, websites, and social media. One or more articles will be written for publication in peer-reviewed journals.

The project will also take the first step in developing a campus-wide program in health law and public policy based at the Law School. It will demonstrate how scholars with expertise in both areas can promote the public health.
HUMAN RESEARCH PROTECTION

ORSP provides administrative support to the Institutional Review Board (IRB) under 45CFR §46. Pam Moser, Associate Director for Human Research Protection, maintains IRB records; facilitates communication between the IRB and researchers; coordinates meetings; updates and maintains the university’s IRB policies and website; monitors training for researchers and other key personnel; provides continuing education for IRB members; and keeps the university’s Federalwide Assurance and IRB Registration current.

In 2014-2015, the IRB reviewed 131 new applications. Three studies were reviewed by the full board; 116 qualified for expedited review; and twelve as exempt research. In addition, 163 amendments, 131 continuing reviews, and five safety events (protocol deviations) were processed. All category totals are remarkably consistent compared to last year with the exceptions of amendments (24% increase) and continuing reviews (20% increase).

Group outreach efforts targeted graduate programs in Communication, Education, and Religion as well as undergraduate URECA Scholars/Fellows, Honors students in Health and Exercise Science, and Counseling students. Training and support for eIRB, the electronic submission and review system, continued for individual users across campus.

In the spring 2014, the HRP Consulting Group, Inc., was engaged to evaluate the IRB and provide guidance on the efficiency and effectiveness of its functions. Many of HRP’s recommendations, aimed at transforming our “functional IRB” into a “robust Human Research Protection Program”, have been implemented in FY2015. The lynchpin of the transformation was the creation of a new staff position.

Jeanie Baird, Human Research Protection Specialist, conducts the day-to-day administrative work involved in the processing of research protocols and creation of new user accounts which allows the Associate Director to pursue the development of a Quality Assurance/Quality Improvement Program, improvements to the eIRB application and account creation/authentication process, and revision of the Policies and Procedures. Cross-coverage during absences and flexible staffing during periods of peak application volume have allowed us to maintain a consistently high level of customer service throughout the academic year.

CONFLICTS OF INTEREST

In, January, the eCOI system was launched to collect annual conflict of interest (COI) disclosures. The system can upload a management plan document before the disclosure is routed to reviewers, and reviewers can process the disclosures, cite their COI determination, and make additional notes. End users were very pleased with the electronic solution. Administratively, the new process saves time and provides secure, searchable data. By the end of April, the COI Office had achieved 100 percent compliance.
Wake Forest University researchers brought in over $8.9 million from external sponsors, not including fellowship support for scholarship in the social sciences and humanities—approximately $2 million less than in FY14. Researchers submitted 131 proposals, requesting just over $70 million, which was the highest amount requested in a non-ARRA year.

Once again, faculty in Health and Exercise Science submitted the most proposals and requested and received the most funding. The Physics Department was next in terms of total amount received and number of proposals submitted, but the Psychology Department requested the second highest amount: over $6 million more in FY15 than FY14.

The following faculty and staff received their first externally-sponsored grant at WFU in FY15:

- Kristen Beavers, Health & Exercise Science
- Phillip Clarke, Counseling
- Dan Fogel, Center for Energy, Environment, & Sustainability
- Amanda Jones, Chemistry
- Eric Jones, Anthropology
- Kevin Jung, Divinity
- Marianne Magjuka, Student Development
- José Villalba, Counseling
- Will Walldorf, Politics & International Affairs
- Christian Waugh, Psychology
- Tanya Zanish-Belcher, ZSR Library
- Ke Zhang, Biology

The statistics that follow summarize Reynolda campus sponsored research activity for FY15. These graphs include funding processed through the Office of Research and Sponsored Programs and not gifts or the many fellowship awards made to individual faculty. Awards represent authorization to spend as opposed to research expenditures.
## PROPOSALS BY DEPARTMENT

### Most Dollars Requested (millions)

<table>
<thead>
<tr>
<th>Department/Center</th>
<th>Awards</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Exercise Science</td>
<td>24.0</td>
<td>$2,323,471.02</td>
</tr>
<tr>
<td>Physics</td>
<td>17.5</td>
<td>$1,809,622.00</td>
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<tr>
<td>Philosophy</td>
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<td>$968,036.00</td>
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<tr>
<td>Chemistry</td>
<td>7.0</td>
<td>$874,766.64</td>
</tr>
<tr>
<td>Biology</td>
<td>9.0</td>
<td>$736,840.50</td>
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<tr>
<td>Center for Nanotechnology &amp; Molecular Materials</td>
<td>3.5</td>
<td>$680,594.50</td>
</tr>
<tr>
<td>Graduate School</td>
<td>4.0</td>
<td>$539,551.00</td>
</tr>
<tr>
<td>Psychology</td>
<td>2.0</td>
<td>$467,605.00</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2.0</td>
<td>$265,354.00</td>
</tr>
<tr>
<td>Communication</td>
<td>2.0</td>
<td>$231,909.00</td>
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<tr>
<td>Center for Energy, Environment &amp; Sustainability</td>
<td>3.5</td>
<td>$200,810.50</td>
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<tr>
<td>Center for Molecular Communications &amp; Signaling</td>
<td>2.0</td>
<td>$200,270.00</td>
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<tr>
<td>Translational Science Center</td>
<td>1.0</td>
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<tr>
<td>Divinity School</td>
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<td>$147,173.19</td>
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<tr>
<td>Anthropology</td>
<td>1.0</td>
<td>$125,236.00</td>
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<tr>
<td>Computer Science</td>
<td>2.0</td>
<td>$52,145.00</td>
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<td>Counseling</td>
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<td>Politics</td>
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<tr>
<td>ZSR Library</td>
<td>2.0</td>
<td>$6,900.00</td>
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<tr>
<td>Schools of Business</td>
<td>1.0</td>
<td>$6,000.00</td>
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<tr>
<td>History</td>
<td>1.0</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Theatre &amp; Dance</td>
<td>0.5</td>
<td>$1,250.00</td>
</tr>
<tr>
<td>Student Development</td>
<td>1.0</td>
<td>$750.00</td>
</tr>
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</table>

### Most Proposals Submitted

<table>
<thead>
<tr>
<th>Department/Center</th>
<th>Proposals Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health &amp; Exercise Science</td>
<td>23.0</td>
</tr>
<tr>
<td>Physics</td>
<td>21.5</td>
</tr>
<tr>
<td>Biology</td>
<td>18.0</td>
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<tr>
<td>Chemistry</td>
<td>14.0</td>
</tr>
<tr>
<td>Computer Science</td>
<td>8</td>
</tr>
</tbody>
</table>

## FUNDING SOURCES

### Federal

- National Institutes of Health: 41%
- National Science Foundation: 33%
- Other: 26%

### Non-Federal

- Private: 12%
- Other: 4%

### Other Funding Sources

- Schools of Business: 1.0
- History: 1.0
- Theatre & Dance: 0.5
- Student Development: 1.0
- ZSR Library: 2.0

### Total

- Federal: 84%
- Non-Federal: 12%
- Other: 4%