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Office of Research and Sponsored Programs



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UNIVERSITY

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MISSION

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

CREDITS

The Office of Research and Sponsored Programs gratefully acknowledges Ken Bennett's photographs.

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# FROM THE DIRECTOR

Dear Faculty and Staff,

Congratulations! Once again your dedication to the pursuit of funding for research and creative work has confirmed Wake Forest University as a national resource. The total awarded for fiscal year FY12 in support of externally sponsored projects again exceeded \$9 million. The Department of Health and Exercise Science received the most sponsored research dollars, followed closely by the Department of Physics. However, the amounts awarded to just about every department increased over last year.

The Translational Science Center, Center for Nanotechnology and Molecular Materials, Magnolia Scholars Program, and Humanities Institute all received their first awards this year.

FY12 was a transition year for our office as well as the university. From July 2011 to June 2012, our chief research officer Mark Welker served as Interim Provost; in June 2012, he stepped down from these responsibilities to return to teaching and research as William L. Poteat Professor of Chemistry. We will miss his leadership but are very grateful for the support he provided over the years. More changes are in store for FY13, as we work to support the vision of our new Provost, Rogan Kersh, and new Associate Provost for Research, Chemistry Professor S. Bruce King.

In addition to other staffing changes, our office has relocated to a suite on the third floor of Reynolda Hall. Here, we join the Humanities Institute, Institute for Public Engagement, Teaching and Learning Center, Professional Development Center, and the Office of Diversity and Inclusion in the Faculty Center of Excellence.

Somewhat behind the scenes, there was a flurry of activity in our human subject protection program as Pam Moser, Associate Director for Faculty Research Compliance and Support, along with Institutional Review Board Chair Janine Jennings worked with staff at the medical school to create a separate Reynolda Campus application within the shared eIRB system. The new application went live in June 2012, and the process leading up to the go-live date was no small feat. I would like to personally acknowledge all of Pam and Janine's efforts as well as the support and cooperation they received from staff in Academic Computing and the IRB office at WFU Health Sciences. Additionally, I would like to thank the Reynolda campus faculty and staff who helped with testing.

Without a doubt, Office of Research and Sponsored Programs staff are key to the success of the campus research enterprise. Pam Moser, Amy Comer, Stephen Williams, Julie Edelson, and Susan Edwards are some of the most dedicated and capable staff on our campus. We've had a terrific year, and the report that follows highlights some of the many projects on which we had the pleasure of helping.

On a personal note, I just completed my tenth year at WFU and feel so grateful and proud to work with a faculty of such distinction. Thank you!

Sincerely,  
Lori Messer  
Director

# OUTSTANDING AWARDS



**T. Michael Anderson,** Assistant Professor of Biology, received funding for two projects. The first, *Collaborative Research: Mechanisms of Tree Recruitment Limitation across a Savanna Moisture Availability Gradient*, is supported by the National Science Foundation.

Savannas are ecosystems with a continuous herbaceous understory dominated by grasses and a discontinuous overstory dominated by trees and shrubs. They are widely distributed, accounting for more than 20 percent of the Earth's land surface and nearly half of Africa's. They are home to most of the world's livestock, wild herbivore populations, and a large fraction of the human population, yet ecologists know little about the natural conditions that create and maintain them. For example, savannas vary widely in terms of precipitation and temperature, and why some have only a few trees, and others are densely wooded is not known. This project studies the success of seeds and seedling trees transplanted under a variety of conditions across a rainfall gradient spanning 200 km of native savanna in the Serengeti ecosystem in Tanzania. The Serengeti is the ideal natural laboratory because it harbors all the factors potentially influencing seed germination and seedling growth—fire, large herbivores, competition with grasses, soil nutrients, and water. In a unique experiment, 40 separate plots across the rainfall gradient will be either burned or protected from fire to learn whether interactions between fire and other factors promote or depress tree growth.

The second project, *Foraging Ecology and Habitat Selection of Re-introduced Black Rhinoceros in*

*Serengeti National Park*, received funding from the National Geographic Society. Illegal poaching of black rhinos has caused catastrophic population declines, placing them on the International Union for Conservation of Nature's red list of critically endangered species. Serengeti National Park, a world heritage site and one of the most renowned conservation areas in Africa, is no exception: poaching in the late 1970s drove the black rhino population from over 400 to 10. In response, government and conservation organizations initiated the Serengeti Rhino Repatriation Project without knowing a great deal about habitat needs, forage availability, or the consequences of the park's frequent burning policy. This study is the first to use precision mapping and detailed nutrient analysis to reconstruct the forage selectivity of Serengeti rhinos. It will determine the influence of the frequency of recent and historic fires and generate specific fire-management recommendations.



**Keith Bonin,** Professor and Chair of Physics, along with Martin Guthold, Jed Macosko, Associate Professors in Physics, Anita McCauley, Senior Lecturer in Microscopy, and Karin Scarpinato, Associate Dean of Faculty and Research

Programs and Associate Professor of Biology at Georgia Southern University, won a National Science Foundation award for *Cell Mechanics and Protein Mobility during Neoplastic Transformation*. Recent reports indicate that the physical and mechanical properties of cancerous and normal cells differ. Some researchers report that cancer cells are softer than

normal cells, while others report they are stiffer. This project aims to solve the controversy by determining whether the cells in question were at different stages in their progression from normal to cancerous (neoplastic transformation) or different tumor and cell types. Specifically, it will quantify changes in the mechanical properties of human mammary endothelial (HME) cells during neoplastic transformation through particle tracking, cell squeezing, and fluorescence recovery after photobleaching (FRAP) of membrane proteins. FRAP will also be used to determine changes in cytoplasmic and nuclear protein mobility. Results will establish how and why the mechanical properties of HME cells change as they progress from normal to cancerous, which may improve cancer diagnosis, treatment, and prognosis.



**Jerid Francom**, Assistant Professor of Spanish and Linguistics in the Department of Romance Languages, received a Digital Humanities Start-Up Grant from the National Endowment for the Humanities to realize

*ACTIV-ES: A Novel Spanish-*

*language Corpus for Linguistic and Cultural Comparisons between Communities of the Hispanic World.* ACTIV-ES will be the first electronic resource to compile the language of everyday life in three linguistically, culturally, and geographically distinct communities—Spain, Mexico, and Argentina. It will provide the basis for a heretofore unimaginable cross-linguistic and cross-cultural analysis of current patterns and themes. Experts in linguistics, pedagogy, computer science, and psychology will guide the theoretical and technical steps to optimize ACTIV-ES for applications in second-language pedagogy and research. During the grant period and beyond, WFU IT personnel and services will optimize integration of

the resource on campus and ensure free access to all interested constituencies.



**Dr. T. Nathaniel "Nate" French**, Director of the Magnolia Scholars, secured support from North Carolina Independent Colleges and Universities, funded by the US Department of Education, for the *Wake Forest University Summer Bridge Program*. This

pilot program targets low-income, minority, and/or first-generation college students; athletes and nonathletes are equally represented. During the second summer session, 20 participants will take an English writing and a public speaking course that work together to increase critical thinking, argument, and presentation skills. Activities outside of the classroom are designed to build camaraderie and relationships with faculty, departments, and university decisionmakers.



**Eranda Jayawickreme**, Assistant Professor of Psychology, in collaboration with Professor William Fleeson and Dr. Laura Blackie of the Wake Forest University Psychology Department, and Marie Forgeard, Ann Marie Roepke, and Martin Seligman

of the University of Pennsylvania Psychology Department will examine the question, *What Are the Real Benefits of Hardship? Examining Possibilities for Behavior Growth following Adversity*, with funding from the John Templeton Foundation. Although the notion that strength rises from adversity is both attractive and central to many works of philosophy, theology, and literature, empirical evidence remains mixed. Verbal reports of growth may not be related to



meaningful behavior changes and even, in some situations, lead to negative outcomes. This interdisciplinary project examines whether and under what conditions adversity leads to psychological and behavioral growth. From conducting assessments with survivors of the civil war in Sri Lanka to tracking the behavioral trajectories of Americans who have experienced a highly stressful event, results will inform development of effective tools to enable people to gain from challenges.



**Lisa Kiang**, Associate Professor of Psychology, received funding from the American Psychological Foundation to determine *Physiological Reactivity to Discrimination among African, Asian, and Latin American Youth*. The psychological and

emotional consequences of racial discrimination are well understood, but less is known about how it affects physical responses. This study seeks to connect socio-emotional experiences of discrimination to physiological reactivity; to differentiate that reactivity by the type and severity of the transgression; to compare discrimination experiences among African, Asian, and Latin Americans; and to examine how reactivity may be moderated by resilience factors, such as ethnic identity.



**Sarah Kenyon Lischer**, Associate Professor of Political Science, has been awarded a grant from the Berghof Foundation to pursue her book project *Voices of the Living, Voices of the Dead: Atrocity Narratives and Reconciliation after Genocide*. The project

examines the role of public narratives, in the forms

of memoirs and memorials, in building peace after atrocity. It also focuses on how Western interpretation of those narratives affects the emergence of a dominant discourse in the post-genocide country. During the grant period, Lischer will conduct field research in Cambodia and Bosnia.

**Stephen Messier**, Professor of Health and Exercise Science and Director of the J.B. Snow Biomechanics Laboratory, has been at Wake Forest for 30 years and has 22 years' experience in clinical trials specifically related to knee osteoarthritis (OA). All of them are large team efforts supported by funding from the National Institutes of Health and other sources. This year, he was awarded two NIH grants.



The Intensive Diet and Exercise for Arthritis (IDEA) trial was designed to test whether intensive weight loss, either with or without exercise, would reduce pain and improve function compared to an exercise-only control group in older, overweight and obese

adults with symptomatic knee OA.

The 454 participants were randomized to one of three 18-month interventions: intensive dietary restriction-only (D); intensive dietary restriction-plus-exercise (D+E); or exercise-only control (E). The weight loss goal for the two diet groups was  $\geq 10\%$  of baseline body weight, and the exercise intervention consisted of low-to-moderate intensity walking and resistance training 3 days a week for 1 hour a day. The trial showed that intensive weight loss with excellent long-term retention is possible in this population and, when combined with low-to-moderate intensity exercise, results in an approximate 50% reduction in pain accompanied by significant improvements in function and mobility. These data provide evidence

that the best recommendation for long-term symptom reduction in overweight and obese persons with knee OA is intensive weight loss combined with low to moderate intensity exercise. The Wake Forest University Pepper Center, with a grant from NIH, is funding a follow-up study of the first 150 participants to see how they have done 2-3 years after completing IDEA.

Second, the *Strength Training And Arthritis Trial (START)*, with Shannon Mihalko, Associate Professor of Health and Exercise Science, and an international research team that includes a strong link to the Medical School, examines the efficacy of high-intensity strength training in improving symptoms, slowing progression, and affecting the underlying mechanisms of thigh muscle weakness in knee OA patients. This strategy has not been examined due to the unsubstantiated belief that it might exacerbate symptoms, but preliminary data showed excellent tolerance for the training as well as reduced pain and increased function. The study is innovative in three ways: it tests the efficacy of an 18-month, high-intensity strength training protocol suitable for an older population with knee OA; it measures both clinical (e.g., pain, function) and mechanistic (knee joint loads, inflammation) outcomes; and it aims to identify a nonpharmacologic therapy capable of improving clinical symptoms and slowing disease progression with minimal adverse effects. Given the prevalence and impact of OA and the widespread availability of the intervention, assessing its efficacy has immediate and vital clinical impact. Results will provide critically needed guidance for clinicians in a variety of health professions who prescribe and oversee treatment and prevention of OA-related complications.

Dr. Messier is also principal investigator of *The Runners And Injury Longitudinal Study (TRAILS)*, first funded by the United States Army Research

Office (ARO) in 2010. This prospective observational study aims to determine the biomechanical, behavioral, and physiologic risk factors for runners who sustain the most common knee overuse injury. It monitors the training and injury status of 200 noninjured runners over 12 months. All were free of discomfort from a previous injury for at least 6 months. The goal is to design interventions to reduce these injuries and to rehabilitate injured runners.



**Luis Roniger**, Reynolds Professor of Political Science, received support from the United States-Israel Bi-National Science Foundation to study *Exile, Transnational Migration, and the Transformation of Public Culture: Argentina, Chile, Uruguay, and Paraguay*. This project analyzes the roles, literary and scientific works, public standing, and institutional insertion of intellectuals and academics who returned after their home countries democratized in the 1980s. It addresses an important and poorly researched area: the sociology of culture in postauthoritarian periods.

# FELLOWSHIP AWARDS

## ART

Morna O'Neill, *Decoration and Display: British Art at International Exhibitions*, National Humanities Center



When did decorative art become decorative? In mid-nineteenth century Britain, what is now called decorative art was more commonly referred to as *applied, industrial, or useful*.

Not until the first decade of the twentieth century did it begin to denote a commodity whose

design and fabrication reflected both aesthetic and functional considerations. This project examines how the display of decorated model rooms at international exhibitions from 1889 in Paris to 1911 in Turin mediated the meaning of British fine and decorative art. Traditional concepts of process and product gave way to commercialism and domesticity. Dr. O'Neill's book will explore how the shift in terminology reveals changing attitudes about industrialization and the status of the work of art in a commodity culture to prompt a re-orientation of the history of modern art.

## HISTORY

Robert Hellyer, *An Everyday Cup of Green Tea: Japanese Producers and American Consumers in a Trans-Pacific Trade, 1850-1950*, National Endowment for the Humanities (NEH) Fellowship, Newberry Library

This project tells a surprising transnational story: Japan's development of overseas trade to meet an often capricious American taste for green tea. While foreign trade is often explored in the distanced terms



of politics and economics, this history explores how it colors the daily lives of the "everymen and women" connected to it: Japanese farmers, many of them ex-samurai, growing tea for Americans; Japanese workers, predominantly women, processing and packing it in

port factories; and Japanese merchants, working with their government and Western firms to market tea in the United States. It considers the women in US coastal cities as well as Midwest farmers and California lumberjacks who consumed Japanese tea. The beverage becomes a lens on US rural and urban daily life from 1850 to 1950 and offers insights on how a cross-section of Americans viewed an Asian product and, by implication, Japan and other Asian countries. Related narratives explore the emerging Japanese empire's place in the world tea market and how intercourse with foreign countries shaped US advertising and regulatory legislation. The project illuminates basic aspects of the human experience from a variety of disciplinary perspectives, including history, art, and graphic design. It examines the broad forces shaping daily practices, whether in employment, marketing, or goods consumed. It illuminates the ways that people interact and influence one another through trade, even across vast geographic expanses.



## POLITICAL SCIENCE

C. William Walldorf, Jr., *The Rise and Fall of the Democracy Consensus in United States Foreign Policy*, Earhart Foundation



The recent political uprisings in the Middle East renew the longstanding debate about the role of human rights and democracy promotion, especially through forceful regime change, in US foreign policy. If history serves as a guide, public ideas about the efficacy

and desirability of advancing liberal political order abroad—the democracy consensus—will determine the course of these debates. Nearly all of the work on liberal collective beliefs in US foreign policy emphasizes their consistency, at times fanaticism, but, according to leading indicators since at least the middle of the last decade, the US public mood about pressing states to liberalize politically has significantly declined. What drives the rise and fall of the democracy consensus?

Dr. Walldorf will write a book, *The Rise and Fall of the Democracy Consensus in United States Foreign Policy*, to explore changes in the democracy consensus from 1900-2011. It draws attention to two factors closely tied to US liberal identity—threat and disillusionment—that predictably explain them. Scholars have discussed liberal elite ideologies and public ideas like internationalism, but none has offered a systematic study of changes in broad-based ideas about the efficacy and desirability of promoting liberal political ends abroad.

The democracy consensus matters. When high, it generally enables policymakers to use a wide array of methods, including full-scale military operations, to protect and advance democracy and human rights.

When low, it often restricts them to low-cost military strikes. The book surveys cases from the 1920s-1930s, 1960s-1970s, 1990s, and 2000s, when changes in the consensus restrained or facilitated policy. Its theoretical and empirical foundation will elucidate the potential direction of US policies toward current developments in the Middle East and beyond.

## ROMANCE LANGUAGES

Roberta Morosini, *Networks and Knowledge: Synthesis and Innovation in the Muslim-Christian-Jewish Medieval Mediterranean*, National Endowment for the Humanities (NEH) Summer Institute, Barcelona, 2012



Dr. Morosini will attend the month-long institute with leading scholars in the field of Medieval Mediterranean Studies. She aims to complete a book, *Whispers of the Dove and Echoes of Byzantium: The Bull and the Holy Book*, which focuses on modes

of representation—or misrepresentation—of the prophet Muhammad in 14th- and 15th-century Italy. Specifically, she will study visual representations of an anti-Islamic legend about a bull carrying a holy book in its horns that appears in Dante, Filippino Lippi's *Adorazione del vitello d'oro*, and illuminations in the commentary to the *Dittamondo* by Guglielmo Capello and points to a very concrete fear of the Turks. Considering new theories and methods in Mediterranean Studies will help her to relocate the legend in the broader context of regional knowledge transmission. Her discussions, classes, and interactions with fellows in other fields of Mediterranean Studies will also inform her future contribution to Wake Forest's new program in Mediterranean Studies.

# MEETING AWARDS

Meeting awards affect a wide range of investigators and projects, sparking new insights, building collaborations, and creating the community vital to young scientists' development of scientific identity.

**Natalie Holzwarth**, Professor in Physics, **Akbar Salam**, Associate Professor in Chemistry, and **Timo Thonhauser**, Assistant Professor in Physics, secured funds from the Army Research Office and the Department of Energy to support ES12, the 24th Annual Workshop on Recent Developments in Electronic Structure Theory. This meeting, hosted by WFU in June, convened electronic structure theorists from universities, colleges, institutes, and laboratories around the world. Invited presentations and contributed posters described new methods for computing previously inaccessible properties of materials; breakthroughs in computational efficiency and accuracy; and novel applications to study molecules, liquids, and solids. Funding from ARO and DOE along with contributions from WFU and private sources kept participant costs low and made attendance more accessible.

**Frank Moore**, Assistant Professor of Mathematics, organized an *Intensive Workshop in 2012 for Macaulay2 Package Development* with funds from the National Security Agency. Participants implemented algorithms in numerical algebraic geometry, algebraic statistics, enumerative algebraic geometry, and differential graded algebras with applications in fields as diverse as computational biology, robotics, coding theory, and string theory. Special attention will be paid to parallelization of new and existing algorithms in Macaulay2, a new parallel computing engine.



# CENTERS & INSTITUTES

At the annual retreat in June, the directors of Wake Forest centers and institutes reported on their remarkable progress.

**Humanities Institute** Core programming includes interdisciplinary faculty seminars; Ventures in Humanities Research, which supports long-term collaborative projects with strong potential for external funding; Faculty-Student Collaborations in the Humanities; guest lectures; and a symposium. During FY12, the institute received WFU's first National Endowment for the Humanities Challenge Grant.

**Translational Science Center** With a focus on aging, the faculty has grown from 16 to 44 from the Reynolda campus, Medical School, Duke, Winston-Salem State University, and Johns Hopkins. Researchers are investigating the physical and cognitive benefits of orally administered nitrates (beet juice); "brain boot camp", electronic games that challenge physical and cognitive function; and the benefits of improvisational dance training on Parkinson disease. These projects are generating external grant proposals, publications, and patents.

**Center for Energy, Environment, and Sustainability** Sixty faculty and staff work to bring interdisciplinary knowledge on ecology to the largest possible audience. Researchers focus on 3 areas of urgent concern: renewable energy research; biodiversity and ecosystem services; and policy, enterprise, and ecosystem markets. All areas aim to bring effective innovations from lab to market; outreach to students; and create active partnerships.

**Center for Molecular Communication and Signaling** Multidisciplinary teams across the Reynolda and Medical School campuses catalyze new research, develop instrumentation, and educate and mentor future

researchers. It has held seminars and symposia and funded 10 pilot grants, all of which include support for undergraduate and graduate student research.

**Center for Bioethics, Health, and Society** The WFU community joins with regional, national, and international stakeholders to advance research, education, and communication about the ethical, social, and policy ramifications of biotechnology, healthcare, biomedical research, and public health. Grants are awarded for pilot research and course development. The center hosts monthly work-in-progress talks, community events, and provides support for assistantships, fellowships and travel.

**Center for Enterprise Research and Education** Building on WFU projects in developing countries. Investigators are devising a comprehensive methodology to assess the needs of small business owners seeking to grow their companies and the effects of gender, culture, political systems, religion, environmental conditions, and personal personality. In Nicaragua, they worked with business and government organizations to contact entrepreneurs who will be surveyed every 6 months for 5 years. These studies will be extended to Kenya and Rwanda.

**Center for Nanotechnology and Molecular Materials** WFU's top innovator as measured by patents, the center's PowerFelt, a type of cloth that can run electronics, was Number 1 in a New York Times Magazine article, "Innovations that will change your life." Other innovations include FIPEL, the first new light bulb in 20 years, made of foldable plastic; and ORTHOCORRECT, which will enable a phone or tablet to measure strain across skin, shear, temperature, salinity, blood oxygen, even posture. Projects in the works include the first outdoor testing of solar cells in the southeast.

# COMPLIANCE

ORSP provides administrative support to the Institutional Review Board (IRB) under 45CFR §46. Pam Moser, Associate Director for Faculty Research Compliance and Support, 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 (FWA) and IRB Registration current.

In 2011-2012, the IRB reviewed 156 new applications, a 12 percent increase over 2010-2011. More expedited and exempt level reviews accounted for the increase. Two studies were reviewed by the full board; 125 qualified as expedited review and 29 as exempt research. In addition, 107 amendments (up 49 percent), 63 continuing reviews, and 3 safety events (minor protocol deviations) were processed. The increase in amendment and safety event submissions indicates improved compliance with human subjects regulations and IRB policy. All "paper" protocols, submitted before electronic submissions became mandatory, were closed by year's end.

Group outreach efforts targeted graduate programs in Psychology and Education. In February, the Institute for Public Engagement hosted a workshop, "Navigating the IRB Process". It provided a great opportunity to educate faculty members, staff, and graduate students in many disciplines about the IRB process.

Training and support for eIRB, the electronic submission and review system, continued for individual users across campus. It was launched in September 2007, and much of this year was spent revising the



application to make the process more user-friendly for social-behavioral researchers and IRB reviewers while maintaining excellent regulatory compliance. Our office worked closely with the IRB chair and programmers from the Medical School's Academic Computing Department to systematically revise, update, test, and implement the Reynolda eIRB application. Faculty and staff from the Reynolda human subjects research community (principal investigators, study coordinators, IRB members, and student researchers representing different disciplines and departments) participated in testing and provided valuable feedback that improved the final version. The new Reynolda eIRB site was activated on June 4, 2012.

ORSP continued its oversight of potential financial conflicts of interest involving WFU research faculty. The announcement of the Final Rule for Financial Conflict of Interest in Public Health Services-funded research (42CFR§50 and 45CFR§94) necessitated revision of the Wake Forest University Reynolda Policy on Conflicts of Interest to ensure university compliance before August 24, 2012. The ORSP Director spearheaded the effort involving University Compliance, the Legal Department, and the Reynolda Conflicts of Interest Committee.

# PROFESSIONAL DEVELOPMENT INITIATIVES

## FACULTY DEVELOPMENT

In FY12, the office spent over \$60K hosting and coordinating workshops and events, supporting research-related committees, and paying for faculty travel to professional development seminars. Some of the supported programs and events were:

- Reception and Dinner to Honor Authors, Editors, and Fine & Performing Artists
- Creative Research Activities Development & Enrichment Program (CRADLE)
- Extended Professional Enhancement & Research Training (ExPERT)
- Keys to Increasing Collaboration & Effective Team Building
- It's not all about the money: Applying for Grants and Fellowships in the Humanities
- Building Research Success at Wake Forest University
- Recognition of Research Excellence
- The Winning Grants Seminar
- Center and Institute Retreat
- Quality Circle Training

## INTERNAL AWARDS

The Office of Research and Sponsored Programs assists the Provost's Office in administering and coordinating several internal award programs. FY12 awards are as follows:

TRIAD Interuniversity Project Planning Grants (TIPP)	\$31,500
Social, Behavioral, & Economic Sciences Research Fund	\$60,139
Science Research Fund	\$49,452
Center support and Planning Grants	\$87,463

The office also manages matching/cost share funds. In FY12 more than \$188K was provided as match/cost share for faculty research projects and other support.



The office edited over 70 proposals and other documents and performed over 55 searches for funding opportunities.



# FUNDING HIGHLIGHTS

Wake Forest University investigators earned over \$9.1 million from external sponsors as well as fellowship support for scholarship in the social sciences and humanities. Overall, we submitted 154 proposals, requesting over \$46 million.

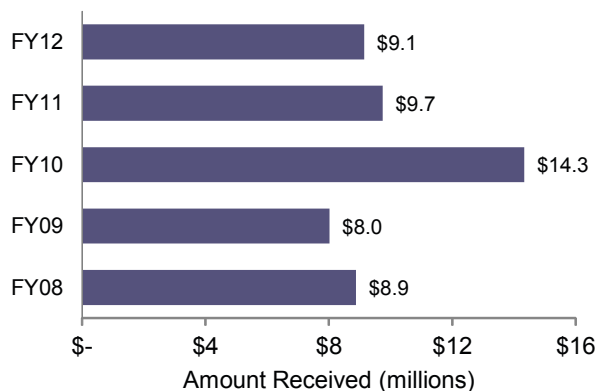
Faculty in the Physics Department once again submitted the most proposals, but the Health and Exercise Science Department received and requested the most funding. Nearly all departments increased their awards over last year.

The following faculty received their first individual awards at WFU in FY12:

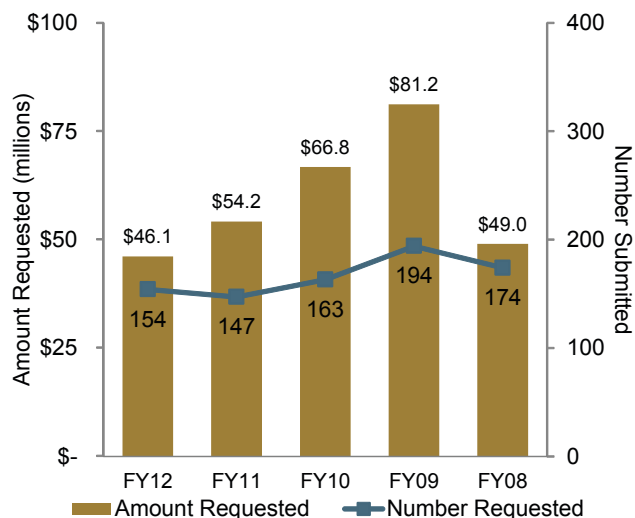
- T. Michael Anderson, Biology, National Geographic Society and National Science Foundation
- Jerid Francom, Romance Languages, National Endowment for the Humanities
- Eranda Jayawickreme, Psychology, John Templeton Foundation
- Lisa Kiang, Psychology, American Psychological Foundation
- Claudia Kairoff, English, National Endowment for the Humanities
- Frank Moore, Mathematics, National Security Agency
- Timo Thonhauser, Physics, Department of Energy

ORSP acknowledges the tremendous effort and imagination of all faculty who submitted proposals and congratulates those who received awards.

## AWARDS BY YEAR: 2008-2012

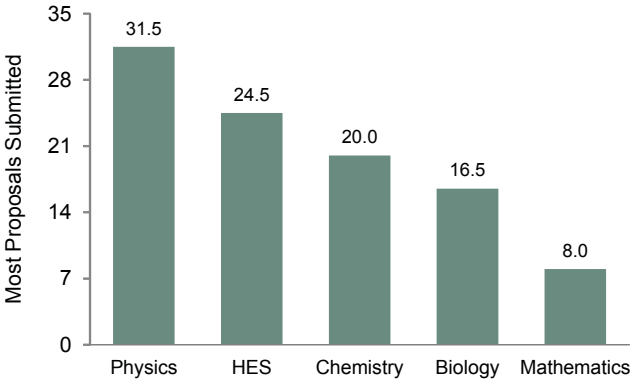
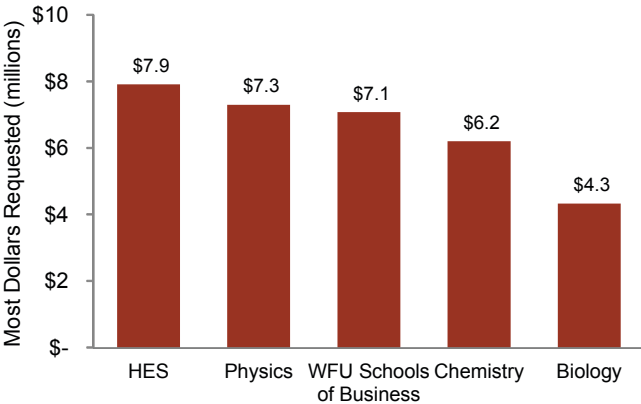


## PROPOSALS BY YEAR: 2008-2012

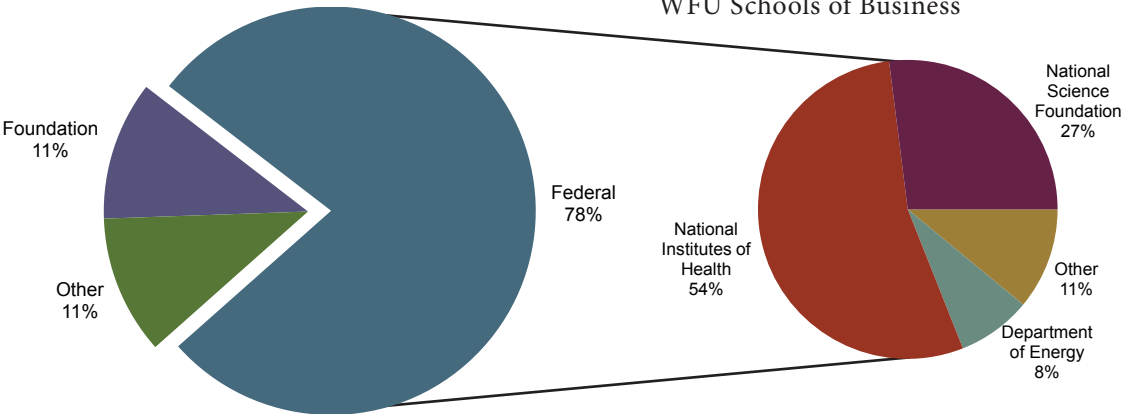


*These statistics summarize Reynolda campus sponsored research activity for FY12. The graphs include funding processed through ORSP and not gifts or fellowship awards made to individual faculty.*

# PROPOSALS BY DEPARTMENT



# FUNDING SOURCES



Department/Center	Awards	Amount
Health & Exercise Science	21	\$2,176,269
Physics	18.5	\$2,139,074
Biology	10	\$1,040,957
Psychology	7	\$856,463
Chemistry	8	\$608,908
Philosophy	1	\$508,403
Center for Nanotechnology & Molecular Materials	2	\$438,850
Computer Science	5.5	\$392,585
Communication	3	\$333,175
Translational Science Center	0.5	\$196,210
Graduate School	2	\$97,115
Humanities Institute	3	\$90,000
Political Science	2	\$62,425
Mathematics	2.5	\$54,050
English	1	\$37,551
Innovation, Creativity & Entrepreneurship Program	2	\$31,500
Romance Languages	1	\$25,000
Magnolia Scholars	1	\$19,425
Economics	1	\$17,065
WFDD	2	\$13,000
Divinity School	1	\$4,850
WFU Schools of Business	1	\$2,500



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