The Office of Research and Sponsored Programs welcomes Amy L. Comer, CRA, as its new Associate Director. She comes to us from Wake Forest Baptist Health, where she was Assistant Director in the Section of Grants and Contracts Administration. She brings over 23 years of experience in Research Administration and strong knowledge of all phases of proposal development, including complex applications, such as center grants and cooperative agreements, and federal contracts. Below are a few of the large active contracts and grants that she reviewed, submitted, negotiated, and administered:

- SPRINT – Data Coordinating Center ($44.4M) and Clinical Center Network ($10.2M), both with many subcontracts (NIH contract)
- ACCORDION - $38.2M, 8 subcontracts (NIH contract)
- Women’s Health Initiative (WHI) - $7.5M, multiple subcontracts (NIH contract)
- Armed Forces Institute of Regenerative Medicine (AFIRM) - a consortium spearheaded and co-led by the WFU Institute for Regenerative Medicine; $80M, multiple subcontracts and subprojects (DOD contract)
- Comprehensive Cancer Center of Wake Forest University (CCCWFU) – Amy managed this NIH P30 grant, active over 35 years, for over 8 years, including submissions and awards.

Amy is deeply familiar with federal policies and procedures regarding grant and contract administration and protection of human research participants. She helped to implement an electronic submission database for Grants.gov submissions and was responsible for implementing a PeopleSoft Grants pre-award module. She co-developed an institutional training program for research administrators.

At ORSP, Amy will assist Director Lori Messer in preparing, reviewing, and developing contracts and subcontracts. She will assist faculty in the Departments of Computer Science and Health and Exercise Science with such pre-award activities as proposal and budget development and interpretation of sponsor guidelines. She will also assist Pam Moser, Associate Director for Faculty Research Compliance and Support, in IRB administration and provide guidance on application of compliance-related federal/state laws, regulations, and guidelines as well as university policies.

Our previous Associate Director, Diane Samuel, has moved on to serve as Director of Research and Grant Development at Southeast Missouri State University.

ORSP feels extremely lucky to have Amy on our team.
On 13 February 2012, President Obama released a $3.8T budget request. Details on agencies of most relevance to Wake Forest University researchers follow.

**DOD.** The Department of Defense is allocated $76.7B for research, development, testing, and evaluation, including $12.2B for basic and applied research and early technology development for biodefense, cybersecurity, information access, and cleaner, more efficient energy use.

**DOE.** The Department of Energy Office of Science is allocated $4.99B, an increase of $118M (2.4%). The Basic Energy Sciences (BES) program would receive $1.8B to promote materials and chemical research; the Biological and Environmental Research program, $625M (up 2.6%); and the Advanced Research Projects Agency-Energy, $350M to support early-stage projects that may lead to groundbreaking clean energy technologies. The request does not allocate funds to continue the agency’s Graduate Fellowship Program.

**ED.** The president hopes to increase spending to $69.8B, up 2.5%, although funding is level or only slightly higher for competitive grants that reward reforms and innovation.

**NEA.** The $154M request for the National Endowment for the Arts increases grantmaking funds by $6.7M, with $2.7M for state arts agencies and regional arts organizations and $4M for not-for-profit arts organizations.

**NEH.** The National Endowment for the Humanities also would receive $154M, a modest 3.6% increase over the current appropriation. It includes $103.5M for grant programs; $9M for the Bridging Cultures initiative; and $11.5M in matching funds, including Challenge Grants.

**NIH.** Funding for the National Institutes of Health is flat at $30.7B. The agency will invest in areas of “extraordinary promise” and workforce development, including a 2% stipend increase for pre- and postdoctoral National Research Service Awardees. It will support an estimated 9,415 new and competing research project grants, an increase of 672 (~7%), to a total of 35,888. To maximize resources for investigator-initiated grants and first-time applicants, it will discontinue out-year inflationary allowances for competing and continuation grants; reduce noncompeting continuation grants by 1%, and negotiate the budgets of competing grants to curtail increase in the average award size, which is $431K. It will keep working to equalize success rates of new and established investigators and review awards to any principal investigator receiving $1.5M or more in total costs.

National Human Genome Research Institute funding would be cut $1M to $511M, while the new National Center for Advancing Translational Sciences gains $64M, for a total of $639M. These figures are said to reflect a sharp drop in the cost of genome sequencing and increased emphasis on clinical applications of genomic findings. NCATS funding will come primarily from the Office of the Director, the dissolved National Center for Research Resources (NCRR), and NHGRI. Its portfolio includes the Food and Drug Administration’s Regulatory Science Program, the Office of Rare Diseases Research Program, parts of the Molecular Libraries Program, and the Therapeutics for Rare and Neglected Diseases Program.

Funds for the National Institute of Biomedical Imaging and Bioengineering are cut $1M to $337M; the National Cancer Institute budget increases $3M to a total of $5.1B; the National Institute of Allergy and Infectious Diseases gains $10M for a total of $4.5B; the National Institute of General Medical Sciences budget is cut $48M to $2.4B. Reflecting the shift toward translational research, the request includes $50M for the Cures Acceleration Network, up $40M, to fund science aimed at “high-need cures” and lowering “barriers between research discovery and clinical trials.” Around 10% of the NIH budget is allocated for HIV/AIDS research.

Roughly 53% of the total budget would fund research project grants, 9.6% research centers, 10% R&D contracts, 11% intramural research; 5% research management and support, and 8% other research and the Office of the Director.

**NSF.** The National Science Foundation budget would increase $340M (4.8%) to $7.373B to support 3 goals: enhanced access to digital products of NSF-funded research, NSF undergraduate programs, and the NSF Innovation Corps program. The Directorate for Biological Sciences (BIO) is allocated $734M, a 3% increase; it plans to focus on 5 Grand Challenges: “genomes to phenomes”; synthetic biology; neurosystems; Earth, climate, and biosphere; and biological diversity. The Graduate Research Fellowship program would receive $243M to support 2,000 new awards.

Some highlights:
- $308M for multidisciplinary research in new materials, wireless communications, smart infrastructure, and robotics;
- $63M to enhance multidisciplinary high-risk, high-reward research;
- $110M for cybersecurity research and education;
- $106M for the Cyberinfrastructure Framework for 21st Century Science and Engineering initiative;
- $203M for the Science, Engineering, and Education for Sustainability portfolio, which includes work on clean

*(Continued on page 3)*
energy alternatives, sustainable chemical and manufacturing practices, water conservation, ocean acidification, natural disaster prediction and response, and changes in coastal and Arctic ecologies;

- $19M to jumpstart a national innovation ecosystem, bridging the gap between discovery and downstream technological innovations.

Educational investments include:

- $30M to transform K-16 mathematics teaching and learning through a new partnership with the ED;
- $20M to scale up undergraduate STEM instructional best practices and curricular innovations;
- $61M for the Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics program to create learning materials and improve teaching strategies, faculty development, and evaluation approaches informed by the latest scientific research;
- $49M for Expeditions in Education to bring engaging science to more learners.

**CAN NIH RESEARCHERS BE TOO SUCCESSFUL?**

(see [http://www.nature.com/news/extra-scrutiny-for-grandee-grantees-1.10062](http://www.nature.com/news/extra-scrutiny-for-grandee-grantees-1.10062))

In its FY2013 budget proposal, the National Institutes of Health said that before approving more funding, external advisors will look twice at researchers granted over $1.5M. Nearly 1,500 principal investigators, about 5% of those who held grants in 2011, would be subject to the review. As the agency tries to raise its current success rate of 18%, a historic low, will it penalize applicants on the basis of their success?

A $750K threshold for extra review, in place at the National Institute of General Medical Sciences since the 1990s, works well, according to the former director. “You look at people with more than a certain number of grants and ask, ‘Is this a good investment for the NIH?’” He found that the richest laboratories are not always the most productive. Do some PIs win funding from different institutes for the same experiments?

The NIH deputy director for extramural research says the agency will not limit the number of grants per scientist or mandate extra review for everyone with many grants. An analysis she presented in October 2011 found that if a PI were restricted to 2 grants, the overall success rate would increase only 2%. In 2008, two NIH panels on peer-review reform recommended that PIs spend at least 20% of their time on each grant, a de facto cap of 5, but the recommendation was not adopted.

John Tainer, formerly at Duke, is a structural biologist at the Scripps Research Institute in La Jolla, California, with 7 grants together worth over $5M. Competitive renewal of a grant he has held since 1985 was recently declined, and he suspects that the decision “reflects the fact that I have other projects.” He added, “The science hasn’t changed. What we’re doing now is better than what we’ve ever done. . . . For the next decade, people will be publishing parts of things that I had done better. The cost to the NIH will be higher. If you’re a leader and you have momentum and technology, the impact of taking that away and having other people do it at a different level is destructive.”

**NSF MODIFIES MERIT REVIEW CRITERIA**


Since 1997, the National Science Foundation has required grant applicants to address two review criteria, intellectual merit and broader impacts. However, the National Science Board (NSB) received persistent reports that the broader impacts criterion is not well defined or clearly understood, and its execution is flawed. NSF staff feel that reviewers should emphasize it more. Many researchers see the guidelines as a checklist. Many think methods for assessing the outcomes are unclear and inconsistent across projects and institutions and would be more meaningful if aggregated at a higher level than individual projects. A large majority of stakeholders believe that institutions can do more to support broader impacts; for example, facilitate connections among PIs engaged in similar activities or coordinate assessment.

Consequently, the NSB decided not to recommend specific activities related to broader impacts. Intellectual merit encompasses the potential to advance knowledge; broader impacts encompass the potential to benefit society, and for both criteria, reviewers will consider what PIs want to do and why, how they plan to do it, how they will know if they succeed, and what benefits will accrue if they do.

Now, both criteria will be judged by the same guidelines:

- What is the potential for the proposed activity to advance knowledge and understanding in the field or across fields (Intellectual Merit); and benefit society or advance desired societal outcomes (Broader Impacts)?
- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
- Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does it incorporate a mechanism to assess success?
- How well qualified is the individual, team, or institution to conduct the proposed activities?
- Are adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?
New Faculty Luncheon. On 11 January, ORSP hosted a luncheon to apprise new faculty of the research and professional development resources at Wake Forest. The third floor of Reynolda Hall now houses the Humanities Institute, Institute for Public Engagement, Teaching and Learning Center, Office of Diversity and Inclusion, Professional Development Center (PDC), and ORSP to help faculty realize their ambitions as teachers, scholars, mentors, and world citizens. After ORSP personnel explained their roles in the research enterprise, Director Andrea Ellis and life coach Melissa Clodfelter described PDC services.

Two recently tenured faculty, both graduates of ORSP’s CRADLE program, offered advice. Stavroula Glezakos of the Philosophy Department recommended first defining your own goals and fears. Second, gain clarity about what the department requires for tenure at the highest level of specificity. Third, consult with your peers and mentors, here and elsewhere. She described how fellow faculty in CRADLE and another ORSP-hosted program, Successful Writers Write, provided interdisciplinary feedback on her work, encouraging her to highlight what was important about it, and helping her to see that she was not alone.

Jed Macosko of Physics agreed. Find out what your department expects. Should you co-author or publish alone? Are many papers in mediocre journals better or worse than one paper in Science? Develop a plan and work with others who will hold you accountable—peers, mentors, postdoctoral fellows, graduate students. CRADLE provided direction, but Jed also counseled letting go of the stress. He found solace in God and a prayer group, and grants, publications, and tenure followed.

Navigating the IRB Process. On 8 February, hosted by the Institute for Public Engagement, ORSP Associate Director Pam Moser and Beverly Nesbit of the Department of Health and Exercise Science and the Translational Science Center, informed faculty, staff, and graduate students in all academic disciplines about the Institutional Review Board (IRB), which assures the protection of human research participants. Pam and Beverly addressed such basic questions as how to determine if a project needs IRB approval; how to submit a proposal; how to determine if research objectives can be fulfilled without going through the IRB process; what CITI (Collaborative IRB Training Initiative) is, who must complete it, and how; what support ORSP provides; and what support the IPE provides for community-based research. The workshop was part of the IPE’s Engaged Scholarship Initiative. See http://www.wfu.edu/rsp/irb/index.html for the answers to all these questions and much more.

Humanities Institute Grantwriting Workshop. On 23 February, hosted by the Wake Forest University Humanities Institute, represented by French Professor Sally Barbour, Stephen Williams and Julie Edelson spoke to faculty about how ORSP can help them to win funding for projects in the arts and humanities. National Endowment of the Humanities (NEH) Fellow, grantee, and English Professor Claudia Kairoff and Summer Stipend awardee Kendall Tarte, Associate Professor of French, related their experiences in applying for and securing funds. Claudia also warned colleagues to be careful what they wish for—leaving the comforts of home and family for the bedbug– and cockroach infested lodgings supplied by the Folger Library; finding and working with consultants to execute elements beyond your expertise, sometimes on less money than you requested. Stephen was essential in finding ways to do all with less, interpreting guidelines, and submitting proposals.

Julie was helpful, first, in finding the right programs to support projects. The NEH is the major but not the only sponsor of the arts and humanities, and she will either search our sponsor database, Pivot, for you or teach you how to search. Second, she offered good advice about talking to the program officer before applying and requesting a reading of the abstract or significance section. Many faculty members profited from an NEH seminar hosted by ORSP, where they were able to speak with Division of Research Programs Deputy Director Russ Wyland. Third, Julie will edit your proposal, wrestling with you over order and expression, so the resulting reviewer-friendly application boldly asserts the project’s importance and substantiates your singular ability to accomplish it. Kendall noted that while Julie’s suggestions are not always right, they do show where a sensitive reader is not getting your point. Everyone advised applying for internal support from the Archie and other funds to conduct preliminary research or pilot projects that establish feasibility for the external application.

Quality Circles. On Friday, 13 April, from 9:00 A.M. to 12:30 P.M., CRADLE advisor Dr. David Bauer will show participants how to conduct a quality circle, in which colleagues from diverse disciplines help each other to improve proposals or other written work before submission. The group will learn how to provide and maintain a positive atmosphere; follow the relevant scoring system to budget time to each section appropriately; role-play the potential panel based on typical reviewer backgrounds, viewpoints, and biases; and assure that all circle members contribute, follow the rules, and stay on time and task. See http://pdc.wfu.edu/event/4532/.
FACULTY BOOKS
October 2011—February 2012

CHAPLAIN'S OFFICE, WAKE FOREST BAPTIST CHURCH

COUNSELING

DIVINITY

EDUCATION

ENGLISH
Kairoff, Claudia. *Anna Seward and the End of the Eighteenth Century.* Johns Hopkins UP.

HISTORY
Wakild, Emily. *Revolutionary Parks: Conservation, Social Justice, and Mexico’s National Parks, 1910-1940.* U Arizona P.

LAW

MUSIC
———. *PHOENIX Processional (Trumpet and Organ Version).* Subito Music.

PHILOSOPHY

RELIGION

ROMANCE LANGUAGES
Mayers, Kathryn. *Visions of Empire in Colonial Spanish American Ekphrastic Writing.* Bucknell UP.

SCHOOLS OF BUSINESS

SOCIOLOGY
Harnois, Catherine. *Feminist Measures in Survey Research.* SAGE.

THEATRE
FUNDED FACULTY RESEARCH
October 2011—February 2012

BIOLOGY
David J. Anderson, LTREB: Evolutionary Ecology of Seabird Reproductive Life Histories, National Science Foundation (NSF), $10,400

T. Michael Anderson
• Collaborative Research: Mechanisms of Tree Recruitment Limitation across a Savanna Soil Moisture Availability Gradient, NSF, $167,689

• Foraging Ecology and Habitat Selection of Reintroduced Black Rhinoceros (Diceros Bicornis michaeli) in Serengeti National Park, National Geographic Society, $24,200

William E. Conner, INNOVATION, CREATIVITY, AND ENTREPRENEURSHIP PROGRAM, Student Ambassador Program, National Collegiate Inventors and Innovators Alliance, $2,500

Susan Fahrbach, Role of Nuclear Receptors in Neural Plasticity, NSF, $140,000

Gloria Muday, with Jacquelyn Fetrow, COMPUTER SCIENCE; PHYSICS, Arabidopsis 2010 Project Collaborative Research: Modeling Biological Networks in Arabidopsis through Integration of Genomic, Proteomic, and Metabolomic Data, NSF, $256,585

William K. Smith, CBIN: A Research Network for Sustaining Barrier Island Ecosystems in a Changing Global Environment, NSF, $76,170

CHEMISTRY
Patricia Dos Santos, Targeting Bacilithiol and Thiol-based Redox Homeostasis in Bacillus anthracis, North Carolina Biotechnology Center (NCBC), $37,011

Stephen Bruce King, Ca093389-targeted Nanoparticles for Kidney Cancer Therapy, Army Research Office/Wake Forest Baptist Health (WFBH), $25,000

Ronald Noftle, Low Band-Gap Oligomers and Metal Organic Framework Ligands Based on Thiophene, Dreyfus Foundation, $10,000

COMMUNICATION
Ananda Mitra, Study to Prevent Alcohol-Related Consequences (SP-ARC), National Institutes of Health (NIH), $36,375

COMPUTER SCIENCE
Jacquelyn Fetrow, with Gloria Muday, BIOLOGY, Arabidopsis 2010 Project Collaborative Research: Modeling Biological Networks in Arabidopsis through Integration of Genomic, Proteomic, and Metabolomic Data, NSF, $256,585

Errin Fulp, with Ken Berenhaut, MATHEMATICS, Modeling Mobile Agent Populations and Movement for CEDS, Pacific Northwest National Laboratory/Battelle Memorial Institute, $222,868

Victor Paul Pauca, Analysis of Ultrasound Signal Reconstruction, Boeing Company, $4,230

Robert Plemmons, Comprehensive Space-Object Characterization using Spectrally Compressive Polarimetric Imaging, Air Force Office of Scientific Research (AFOSR), $70,000

ECONOMICS
Michael Lawlor, Healthy Living Partnership to Prevent Diabetes (HELP PD II), NIH/WFBH, $17,065

GRADUATE SCHOOL
Lorna Moore, Graduate Research Fellowship Program, NSF, $49,565

HEALTH AND EXERCISE SCIENCE
Jeff Katula, Healthy Living Partnership to Prevent Diabetes (HELP PD II), NIH/WFBH, $36,363

Anthony Marsh
• Physical Exercise to Prevent Disability Pilot Study—LIFE Field Center, NIH/WFBH, $235,945

• with Walter J. Rejeski and Peter Brubaker, Cooperative Lifestyle Intervention Project (CLIP II), NIH, $604,693

Gary D. Miller, Intentional Weight Reduction and Physical and Cognitive Function, NIH/WFBH, $16,297
FUNDED FACULTY RESEARCH
October 2011—February 2012, continued

Patricia Nixon, *Prenatal Events, Postnatal Consequences II*, NIH, $69,949

Walter J. Rejeski
• with Gary D. Miller and Paul Ribisl, *Look Ahead*, NIH/WFBH, $73,786
• with Peter Brubaker and Anthony Marsh, *Cooperative Lifestyle Intervention Project (CLIP II)*, NIH, $604,693
• *LIFE DMAQC (Data Management, Analysis, and Quality Control)*, NIH/WFBH, $143,499

HISTORY

HUMANITIES INSTITUTE
Mary Foskett, *RELIGION*, Wake Forest University Humanities Institute, NEH, $15,000

MAGNOLIA SCHOLARS
Timothy French, *WFU Summer Bridge Program*, US Department of Education/North Carolina Independent Colleges and Universities, $19,425

MATHEMATICS
Ken Berenhaut, with Errin Fulp, *COMPUTER SCIENCE*, *Modeling Mobile Agent Populations and Movement for CE:DS*, Pacific Northwest National Laboratory/Battelle Memorial Institute, $222,868

Robert Plemmons, *Comprehensive Space-Object Characterization using Spectrally Compressive Polarimetric Imaging*, AFOSR, $70,000

PHYSICS
David Carroll, *CENTER FOR NANOTECHNOLOGY AND MOLECULAR MATERIALS*
• *PF-DT WOLED Development*, CeeLite Technologies LLC, $165,700
• *FiberCell*, Camel City Solar, $600,000

Jacquelyn Fetrow, with Gloria Muday, *BIOLOGY*, *Arabidopsis 2010 Project Collaborative Research: Modeling Biological Networks in Arabidopsis through Integration of Genomic, Proteomic, and Metabolomic Data*, NSF, $256,585


Richard T. Williams, *Physics of Scintillator Nonproportionality*, National Nuclear Security Administration, Lawrence Berkeley National Laboratory, $75,000

POLITICAL SCIENCE
Sarah Lischer, *Voices of the Living, Voices of the Dead: Atrocity Narratives and Reconciliation after Genocide*, Berghof Foundation, $55,065

William Walldorf, Jr., *The Rise and Fall of the Democracy Consensus in United States Foreign Policy*, Earhart Foundation, $14,000

PSYCHOLOGY
Will Fleeson, *Integrating Process and Structure in Borderline Personality Disorder*, NIH, $283,833


SCHOOLS OF BUSINESS
Len Preslar, *2012 Wake Forest Schools of Business Biotechnology Conference and Case Competition*, NCBC, $2,500

WFDD
Denise Franklin, *NCME American Graduate Community Engagement Grant*, Corporation for Public Broadcasting, National Center for Media Engagement, $3,000
COMPLIANCE HOTLINE
Call 1-877-880-7888 or email www.tnwinc.com/Reportline/International/ to report suspected violations of laws, regulations, rules, policies, procedures, ethics, or other information anonymously. The operator, who is not a university employee, will report your concerns to the University Compliance Office.

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Research News

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