

Research News

Please circulate to:

OFFICE of RESEARCH and SPONSORED PROGRAMS

March 2010

CENTERS TAKE HOLD

In fall 2008, Associate Provost for Research and Faculty Affairs Mark Welker and the Office of Research and Sponsored Programs held a research retreat to spark development of interdisciplinary collaborative centers. Successful centers enable faculty and students across disciplines, departments, and schools to coalesce their expertise and widen the scope of their research. Centers build a university's reputation and attract funding, new partnerships, and new faculty.

Two exciting exemplars are now up and running.

At the **Translational Science Center** (<http://ctsfh.wfu.edu/>), researchers in biology, chemistry, health and exercise science, medicine, physics, physiology, and psychology integrate their expertise to elucidate why certain clinical and community-based interventions targeting physical and cognitive health in the aging are effective and how they can be improved. In addition to supporting four pilot research projects, it is initiating a junior scholars program; working with the graduate program in Molecular Medicine and Translational Science at the School of Medicine; developing a translational science minor for undergraduate students and a summer program for undergraduate research fellows from Wake Forest and Winston-Salem State University; and hosting seminars by visiting scholars.

The **Center for Bioethics, Health, and Society** (<http://bioethics.wfu.edu/>) believes that Wake Forest has a responsibility to ensure that the ethical

challenges inherent in providing healthcare, formulating health policy, conducting scientific research, and marketing its discoveries are widely understood and addressed. It brings together faculty, students, and staff in philosophy, religion, the life sciences, social sciences, health economics, arts and humanities, and the professions—law, medicine, business, and divinity—with other regional and national stakeholders. It aims to encompass the social and cultural contexts of bioethics research and scholarship from theory to policy to practice.

At professional development seminars, faculty discuss current topics, readings, works in progress, and new directions. CBHS makes small grants to new, multidisciplinary research and curricular efforts and offers advice and assistance in drafting proposals. It hosts a Visiting Scholar Program and draws from the Graduate Student Assistantship Program created by the Master in Bioethics program. It conducts public educational activities, including national and local conferences. It supports student projects and bioethics course development at the undergraduate and graduate levels. It is working to form a consortium across Alabama, Florida, Georgia, North and South Carolina, Tennessee, and Virginia to pool resources and confront common concerns.

In 2010-2011, the Provost's Office will again award one-year planning grants of up to \$50K to develop a 5-year operational plan for a new center. The deadline is 28 May; another Request for Proposals will be issued in spring 2011. See www.wfu.edu/rsp/funding.html.

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WAKE FOREST
UNIVERSITY

FRANTIC, CAUTIOUS, HAREBRAINED: NEW FACULTY LUNCHEON

On 11 January, Associate Provost for Research and Faculty Affairs **Mark Welker** and the Office of Research and Sponsored Programs hosted a luncheon to introduce new faculty to campus resources to support research and scholarship.

First, Associate Director of Professional Development **Andrea Ellis** described the Professional Development Center (<http://pdc.wfu.edu/>). It provides an array of educational opportunities and can assist in hosting meetings by posting them online, registering attendees, collecting fees, sending out reminders, and other tasks that formerly ate staff time.

Next, ORSP Director **Lori Messer** gave an overview of support services for faculty seeking grants. Her signature authorizes contracts, subcontracts, and other mechanisms that commit the university to sponsor requirements. All grant proposals must be routed through ORSP; routing a preproposal is voluntary but assures you get credit for doing so, and contacting us for assistance with fellowships will assure that your salary and fringe benefits are handled properly during the fellowship period. Lori pointed faculty to www.wfu.edu/rsp as a rich source of information and contacts and to the CRADLE program, a 2-year course that nurtures junior investigators in successful proposal development under the expert guidance of Dr. David Bauer.

Assistant Director **Stephen Williams** helps faculty with guideline interpretation, budget development, and proposal submission, especially through the federal portal, grants.gov.

Susan Edwards, Coordinator of Research Services, administers such postaward functions as account set-up and the Science; Social, Behavioral, and Economic; and Cross-Campus Collaborative Research Funds.

Pam Moser, Associate Director for Faculty Research Compliance and Support, administers the Reynolda campus Institutional Review Board (IRB) to assure protection of human research participants. She also monitors conflicts of interest and application of compliance-related federal and state laws, regulations, guidelines, and university policies.

Julie Edelson edits and offers suggestions for improving grant proposal discourse. She disseminates funding information via email, discipline-targeted monthly newsletters, and the spring and fall *Research News* and searches for potential sponsors.

Other relevant offices include Accounting, where **Debbie Hellman** oversees grant spending; **Advancement**, for applications to private foundations and corporations, and Medical School oversight committees, such as Animal Care and Use and bio-, chemical, and radiation safety.

Mark then asked two recently tenured faculty to speak.

Since coming to Wake Forest, Anthropology's **Ellen Miller** has won 4 external grants to study the fossil evidence for primate and human evolution in Egypt and Kenya. Ellen says you can get funding for anything you want to do, no matter how harebrained. Don't be afraid to phone the Program Officer to ensure the agency is interested in your project; the National Science Foundation, for example, wants the best possible proposals. Go to meetings and network; people find it harder to turn down a proposal from someone they know or of whom they know. ORSP is an excellent partner – available, responsive, knowledgeable, and where else can you find a professional reader? Make sure to have colleagues read your proposals, too.

Christian Miller, Zachary T. Smith Faculty Fellow and Associate Professor of Philosophy, agrees about the value of working with ORSP. He spoke on publication strategies, describing two styles. Cautious writers fine-tune one article, but a difficult reviewer or editor may reject it or demand extensive revisions that will delay the publication crucial to securing tenure. Frantic writers may have 10 papers under review, but they are more likely to be rejected, and if they are published, will they stand up to critique? Christian favors the latter approach when seeking tenure and the former once it's achieved. You have 5 years to build a record, and editorial review can take from 3-13 months, so have a few irons in the fire. He agreed that networking is vital; the more conferences you attend the better, and Wake Forest departments and administration will help with expenses. Protect your research and writing time in the summer.

Mark noted Provost Funds for Faculty Travel, supplementary support for research-related travel or to participate in a conference or other professional event, and Academic Excellence, which provides 2:1 matching up to \$10K for endeavors that showcase pedagogical and creative efforts (see http://provost.wfu.edu/121.131.2/Grants_and_Funding).

ORSP will pay for faculty visits to sponsors. After meeting you, the PO will be more inclined to select you as a reviewer, which will give you a better idea of how to write a proposal. You may ask the PO to read and advise on your project summary or other brief section of the proposal.

On the subject of student assistance, Mark advised requesting a summer supplement to your grant or asking the student to apply for a WFU summer research fellowship (www.wfu.edu/college/research-fellowship). He feels that the continuity of summer mentoring lets faculty make their biggest impact. Funding during the year depends on the department. While you can request funds for student assistance on an internal proposal, ask students to apply for their own fellowships, both as good training and to use the whole sum for your research.

OUTSTANDING PROJECT PROFILES

Last spring, at an ORSP-hosted seminar, Russ Wyland, Assistant Director of Research Programs at the National Endowment for the Humanities, had a few discouraging words. Statistics from 1979 to the present showed that Wake Forest grant applicants had only a 12 percent success rate, while UNC-G, for example, had a 25 percent success rate. His advice? More must apply.

This year, two Wake Forest faculty not only applied but won prestigious year-long NEH fellowships.



Michaëlle L. Browsers, Associate Professor of Political Science, will study and write on *Arab Shi'i Political Thought Since 1958: A Generation's Politicization*.

The work focuses

on a generation of Arab Shi'i intellectuals who studied in Najaf, Iraq, in the 1960s and went on to found some of the most important Shi'i political and social organizations in various Arab countries, particularly Lebanon. Their discourse of resistance took hold, first, in communist and socialist guises and, later, by revitalizing Islamic notions of protest and revolution and reconceptualizing authority and political agency. Dr. Browsers argues that this trend differs from the understanding of Shi'i Islamism that emerged in Iran since it developed in response to the political marginalization of the Shi'i compared to other religious and ethnic groups in Arab countries and was negotiated against competing nationalist, Arab nationalist, socialist, and traditionalist discourses.

Dr. Browsers has written two books, *Democracy and Civil Society in Arab Political Thought: Transcultural Possibilities* (Syracuse University Press, 2006) and *Political Ideology in the Arab World: Accommodation and Transformation* (Cambridge University Press, 2009), and co-edited *An Islamic Reformation?* with Charles Kurzman (Rowman and Littlefield, 2003). Previously, she received a Fulbright Scholar Award; a Council of American Overseas Research Centers (CAORC) Multicountry Fellowship from the Bureau of Educational and Cultural Affairs of the United States Department of State; and awards from the American Academic Research Institute in Iraq and the American Institute for Maghribi Studies.

Dr. Browsers credits her participation in the CRADLE program with this latest achievement.

With Jennifer Keith, Associate Professor of English at UNC-G, Professor and Chair of English **Claudia Kairoff** was awarded one of only three annual NEH Fellowships supporting long-term residence at the Folger Shakespeare Library in Washington, DC. The research partners will draw on its resources to complete a two-volume critical edition of *The Works of Anne Finch*, which will be published by Cambridge University Press in 2013. Of the approximately 230 poems and two plays known to be Finch's, 112 poems (two addressed to her) and both plays appear in the folio manuscript, "Miscellany Poems with Two Plays by Ardelia," housed at the Folger.



In an era known for the public and political poetry of Dryden, Swift, and Pope, the poet Anne Finch, Countess of Winchelsea (1661-1720), articulated a different literary and political authority. From her position as a female aristocrat, once at the center of court and then an internal exile, she viewed the individual spiritual condition as inextricable from social and political life. Her work is crucial to placing abiding questions about how to articulate and connect politics, personal desire, spiritual ideals, and women's artistry and experience in historical context. Despite her importance, no scholarly edition has yet gathered her complete poems, plays, and correspondence.

Dr. Kairoff co-edited "More Solid Learning": *New Perspectives on Alexander Pope's Dunciad* (Bucknell University Press, 2000) with Catherine Ingrassia, Professor of English at Virginia Commonwealth University, and wrote *Alexander Pope and His Eighteenth-Century Women Readers* (Southern Illinois University Press, 1994) following an NEH Travel-to-Collections award that allowed her to complete research for that project.

Congratulations to both scholars on their stellar accomplishment in pursuing individual and collaborative research of vital interest to wide audiences.

COMPLIANCE WITH NSF RULES

When submitting a proposal, following the sponsor's guidelines is critical, even when you do not agree with them or consider them trivial or redundant. The National Science Foundation (NSF) Grant Proposal Guide (GPG) stipulates the required content and format for an NSF proposal. For example, the project description should be no more than 15 pages. Everyone would agree that if you submitted a 16-page proposal, it could or should be returned without review (RWR). However, did you know that if you list more than 5 synergistic activities on your biographical sketch or do not alphabetize the names of your collaborators, your proposal can be RWR?

Another common problem with compliance is not submitting a Postdoctoral Mentoring Plan when you are requesting funds to support a postdoctoral fellow. The mentoring plan should be included as Supplementary Documentation, not as a part of the project description.

We recently learned of significant changes within the Biological Sciences Directorate (BIO) that will make opportunities to correct even minor oversights a lot less likely in the future.

As of the January target dates, BIO did not allow proposal file updates. When GPG noncompliance was discovered, a proposal had to be withdrawn and a new one submitted within 5 business days. Since FastLane will not accept a proposal with a title that is exactly the same as that of a proposal submitted but not yet RWR, the title of the new proposal had to be changed by at least one character—adding a period at the end was sufficient.

As of May 2010, BIO will *officially* no longer allow file updates. It is not clear whether PIs will be given *any* opportunity to resubmit, so we must make sure we get it right the first time.

Finally, as of May 2010, BIO is changing from target dates to deadlines for all solicitations. Program Officers will not be able to allow extensions for late submissions.

Unfortunately, many instances of GPG noncompliance cannot be detected by clicking the *check* button in FastLane to scan the proposal for errors or warnings. ORSP has developed an internal checklist that we use to review proposals prior to submission. We will do our best to catch these problems, but we ask for your cooperation in giving us enough time for a thorough review.

Please contact ORSP if you would like a copy of our NSF checklist or to discuss any of the upcoming changes.

RESPONSIBLE CONDUCT OF RESEARCH TRAINING

If you have an NSF grant and students or postdocs work in your laboratory, they must receive Responsible Conduct of Research training. Look for a future message from ORSP, URECA, or the Graduate School on how to arrange it.

REQUIRED SAFETY TRAINING

Please note that the Occupational Safety Health Act (OSHA) requires all employees to attend an annual safety refresher course. The Office of Environmental Health and Safety in the Facilities and Campus Services Department offers a 1.5-hour session that describes how to communicate hazards, protect against blood-borne pathogens, and maintain fire and life safety. Contact the Professional Development Center (<http://pdc.wfu.edu/custom/>) for more information.

EFFORT REPORT MANUAL VERIFICATION

Please remember to fill in and return your Effort Report Manual Verification form to Susan Edwards (edwardss@wfu.edu) either electronically or via campus mail by 31 March.

BUDGET FORECAST

from *Grantseeker Tips* 281 (16 February)

The proposed FY2011 NIH budget is \$32.2B, a \$1B increase. Priorities include DNA sequencing, imaging, computational biology, and, based on the success of the Human Genome Project, identifying risk factors for autism, cancer, diabetes, heart disease, and hypertension. New academic and industry partnerships are encouraged to revitalize the drug development pipeline as we move toward personalized medicine.

NIH anticipates that funding increases will target many trans-NIH programs, such as Therapeutics for Rare and Neglected Diseases, Clinical and Translational Science, the Basic Behavioral and Social Sciences Opportunity Network, and the Nanotechnology Initiative.

The President requested \$7.4B for the NSF, an 8% increase. The bulk will go to research and related activities (81%) and Education and Human Resources (2%). The Major Research Equipment and Facilities Construction program is scheduled for a 40.8% increase, which sounds great but amounts to \$165M, or 2% of the total NSF budget. The aging research infrastructure continues to impede scientific advances.

Funding priorities include graduate research fellowships, CAREER awards, climate change education, STEM sustainability, and cyberlearning. NSF reports that over \$2B was awarded through the American Recovery and Reinvestment Act. It peer-reviewed over 45,000 proposals and made 14,600 awards (32%).

INSTITUTIONAL REVIEW BOARD

I HEAR YOU KNOCKING

A large number of students and faculty conducting research with human subjects are using our electronic Institutional Review Board system, eIRB, for the first time. To help them and to review for our repeat customers, we address some of the most frequent queries.

Why can't I log into eIRB?

Gaining access to eIRB is a multistep process. All new users must:

- **complete the CITI program.** Certification in this human subjects protection course must be current. See www.wfu.edu/rsp/irb/education.html for guidance.
- **request an eIRB account.** After completing the CITI modules appropriate for your research, email irb@wfu.edu with your full name, WFU ID number, and, for students, anticipated month and year of graduation. The account will be processed within 24 hours of this request.
- **change DEACNET password.** Once the account is processed, you will receive an automated email from WFU Information Systems (IS) with instructions for changing your DEACNET password so it is eIRB compliant. Note that your password for *all* DEACNET functions, such as WFU laptop Windows log-in, will change.
- **log into eIRB.** Using Internet Explorer, go to <http://eirb.wfubmc.edu/CookieAuth.dll?GetLogon?curl=Z2F&reason=0&formdir=6>. If you are on campus, you must use an Ethernet connection or secure wireless, not a guest connection; if off campus, connect via VPN. At the blue log-in screen, select *private computer*. Enter your new password and click *log in* (upper right).

If you have followed these steps and still can't log in, please contact irb@wfu.edu.

Why isn't my IRB-approved informed consent document stamped with the approval?

When you created the informed consent document for your study, you placed an IRB merge field in its footer. Once the study's approval memo is electronically signed, the merge field is completed with the IRB number, approval date, and expiration date. It appears as a stamp, or watermark, at the bottom of each page. The document located on the informed consent page within your approved application will

not bear the watermark because it is the draft version. The approved version, with watermark, can be found under the Attachments tab on the Study Workspace, which is the home page to which the study link opens. All hard copies for obtaining the consent of your subjects must be printed from this version only! Always remember to provide your subjects with a copy of the signed and dated consent form.

I know I made the changes the reviewers' requested to my application, but they disappeared! What happened?

The cardinal rule of eIRB is *save often*. If you navigate to a new page without hitting *save* at the top and bottom of each application page while creating or editing your application, your changes will be lost. It's always a good idea to draft lengthy sections or responses in a Word document and then cut and paste them into the application, just in case you forget the cardinal rule.

Why aren't my protocol and consent revisions showing up in eIRB?

In addition to hitting *save* after all changes, note that all uploaded documents in eIRB are *read-only*; therefore, they can't be altered within the system. You must save these documents elsewhere—desktop, USB drive, userdata—make the changes using *track changes*, and upload the red-lined and clean copies to the eIRB application. This safeguard ensures that *all* revisions are readily visible, and the most current version can be easily identified. Naming your documents systematically to prevent accidental upload of the wrong version (e.g., Great Study Informed Consent_redline_1) is also a good idea.

A TEMPORARY GLITCH

Recently, eIRB users may have noticed some changes to application pages and processes. They are driven by WFU Health Sciences' application to the Association for the Accreditation of Human Research Protection Programs (AAHRPP). Those changes that are not appropriate or useful for Reynolda users will be reversed soon. Tailoring the eIRB application to be compatible with both compliance requirements and the predominantly social, behavioral, and educational research conducted by Reynolda campus faculty and students is a top priority of the WFU IRB.

COMPLIANCE HOTLINE. Call 1-877-880-7888 or email www.tnvinc.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.

WFU SOCIOLOGY PROFESSOR SHARES NSF EXPERIENCE

On 7 December, Associate Professor of Sociology Saylor Breckenridge gave faculty the benefit of his year as a National Science Foundation Program Officer at a wine-and-cheese event hosted by the Associate Provost for Research and Faculty Affairs and the Office of Research and Sponsored Programs. Dr. Breckenridge directed the Methodology, Measurement, and Statistics program in the Directorate of Social, Behavioral, and Economic Sciences. Because its mission applies across disciplines, MMS has high rates of co-review with other programs, Divisions, and Directorates.



Dr. Breckenridge said that at PO “bootcamp” both mission – *To promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense* – and vision – *NSF pledges to provide the stewardship necessary to sustain and strengthen the Nation's science, mathematics, and engineering capabilities and to promote their use in service to society* – were stressed, with the common mantra, “Where’s the science?”

NSF evaluates proposals based on three central criteria: intellectual merit, broader impacts, and transformative potential. Proposals should clearly identify the question asked, problem solved, or error corrected and aim to *transform* current thinking. Methods should be valid, reliable, practicable, and supported by the best possible data. Among other things, broader impacts might emphasize tangible changes to the field and other disciplines; practical applications and publications; and educational outcomes for students involved in the research and in the classroom. Proposals should avoid “trust me” components; strategies and procedures should be described in sufficient detail to promise success. Write with both specialists and smart generalists in mind as possible reviewers.

At the moment, WFU social science proposals are eligible for Research in Undergraduate Institutions (RUI) funding. If a university awards, on average, no more than 10 PhDs a year in NSF-supported disciplines, and the Principal Investigator’s department does not grant the PhD, then, while still submitting to the core program, checking a box on the cover sheet gains access to this resource. RUI proposals should state the project’s impact on the institution’s research environment, the PI’s career, and student preparation for advanced degrees and science careers. They may discuss factors affecting research productivity, such as teaching loads, support personnel, experimental and computational facilities, and features of the student population. RUI grantees may apply for Research Opportunity Awards, which support travel to conduct research at another NSF-supported university.

Other foundation-wide mechanisms include the prestigious Faculty Early Career Development (CAREER) award in support of exemplary junior faculty research, teaching, and their integration; Rapid Response Research (RAPID) for one-year projects investigating natural or anthropogenic disasters and similar unanticipated events; and EARly-concept Grants for Exploratory Research (EaGER) for high-risk, potentially transformative projects. RAPID and EaGER proposals are typically reviewed internally, and RAPID proposals must clearly make the case for urgency.

In addition to writing the best possible proposal, PIs must identify the right program for the project. POs are happy to answer questions but will not comment on the project itself, the purpose of the review process. If you believe your project may not be transparent to the expertise on one panel, discuss the possibility of co-review across programs.

Typically, POs assign proposals to both ad hoc reviewers and panelists. They all write separate reviews. NSF allows PIs to suggest ad hoc reviewers to include or exclude, as long as they have no conflict of interest. The panel convened in the months following submission discusses the proposals and makes determinations. Ad hoc and panel reviewers assign scores from E (excellent) to V (very good), G (good), F (fair), and P (poor), and at the meeting, the panel ranks proposals into a hierarchy that varies across programs but often uses such terms as high-, medium-, or low-competitive, revise and resubmit, or noncompetitive. Reviews, rankings, and awards do not always correlate perfectly, and successful proposals need not achieve all E reviews. Ultimately, POs use the reviews, ranking, and panel discussion to recommend award or declination, and their recommendation is reviewed and either supported or returned by the Division, Directorate, and the Division of Grants and Awards. If declined, regardless of the reviews and rankings, the proposal can be revised and resubmitted; talk to the PO about the wisdom of devoting space to an explicit response to critique.

PIs should be familiar with the latest Grant Proposal Guide (GPG) and significant changes effective in January 2010 (www.nsf.gov/pubs/policydocs/pappguide/nsf09_1/gpg_sigchanges.jsp).

The NSF homepage will direct you to upcoming deadlines and target dates, and you can register to get emails on programs in your area. PIs should contact ORSP as soon as they decide to work toward a deadline and try to get the proposal in a week early if at all possible. ORSP will help you to develop the budget, proofread and edit your proposal for organization and style, assist with questions about compliance and human subjects research, and guide you through the FastLane submission process.

IF IT'S TUES, IT MUST BE CCLI

The National Science Foundation has changed more than the name of its long-term, agency-wide Course, Curriculum, and Laboratory Instruction (CCLI) program, which has supported many educational initiatives at Wake Forest, including instrument purchases. The new name, Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics (TUES), demonstrates NSF's new emphasis on making an immediate difference. Review criteria have always prioritized transportable projects that develop novel materials and approaches, but now PIs are asked to exert significant effort to facilitate adaptation at other sites and, at minimum, to institutionalize the innovation at their home school.

Award types grow in scale:

Type 1: Up to \$200K over 2-3 years; \$250K when 4-year institutions collaborate with 2-year colleges. **Examples:** develop a new, research-based instructional approach; determine how students learn specific content or skills; integrate new instrumentation into undergraduate laboratories or fieldwork in a way that demonstrably improves learning; collaborate with faculty from 2-year schools to develop courses for seamless, efficient transfer; explore the use of remote laboratories or instruction among several institutions; integrate current science and pedagogy into the teacher preparation curriculum; explore Internet-based faculty professional development; develop an instrument to assess students' knowledge, skills, or attitude.

Type 2: Up to \$600K for 2-4 years. Projects at a single institution must work toward systemic change across STEM disciplines; otherwise, the scale should go well beyond one institution. Evaluations should adduce evidence to support claims of effectiveness and inform wide distribution or commercialization. At minimum, participating institutions should implement the innovations. **Examples:** develop material for a course sequence that vertically integrates a conceptual or pedagogical approach at several institutions; provide the community college courses needed for a true 2-plus-2 transfer program; use faculty professional development at diverse institutions to beta-test proven, innovative instructional material or approaches; convert effective, in-person faculty professional development to an Internet-based or blended approach; use an existing instrument at diverse institutions to assess students' knowledge or skills; identify factors that affect how faculty and departments adopt innovative approaches.

Type 3: Up to \$5M over 5 years to support large-scale, ground-breaking efforts. Evaluations should describe the project's impact on prevailing models of undergraduate

STEM education and strategies to implement it in new contexts. **Examples:** regional or national efforts to disseminate proven materials or pedagogies; self-sustaining models that introduce new faculty to a field or retrain experienced faculty; regional or national efforts involving a wide range of institutions to develop a database on students' knowledge or abilities in a specific area; a systematic comparison of several instructional methodologies, such as hands-on, remote, and virtual laboratories, at diverse institutions.

Central Resource Projects: Up to \$3M for up to 5 years to lead and sustain the TUES community as it works to transform undergraduate STEM education. Projects may be supported either as cooperative agreements or grants. Activities should help the entire STEM community discover and use products and ideas generated by TUES projects. **Examples:** organize and implement large-scale meetings of all TUES or CCLI grantees or smaller meetings of interest groups and publish their proceedings; conduct targeted research or evaluations on CCLI and TUES projects and their impact; develop an approach to describe or characterize the TUES portfolio, preferably new techniques for presenting large quantitative and qualitative datasets; assure that development of the CCLI and TUES community of practice is supported by current cybertools; provide workshops that increase potential and current PIs' understanding of how to conduct project evaluations, broaden participation, use cyberinfrastructure, and incorporate engaging pedagogies.

Deadlines: May 27 for Type 1 proposals from organizations located in states beginning with N-W; January 14, 2011 for Type 2 and 3 and TUES Central Resource Project proposals, although Central Resource proposals for small focused workshops may be submitted at any time after consulting with a program officer.

See www.nsf.gov/funding/pgm_summ.jsp?pims_id=5741&org=DUE&from=home

NORTH CAROLINA BIOTECH RESOURCES ONLINE

Since ORSP hosted a North Carolina Biotechnology Center (NCBC) workshop on Fundamentals of Successful Grant Writing, many faculty have been applying for and winning its awards. The workshop has now been adapted into a 4-part series of narrated PowerPoint presentations, with tips available as a pdf. It's available from NCBC's new website, <http://www.ncbiotech.org/grants/>, and linked to the ORSP webpage under Proposal Preparation for ready reference.

NEW FACULTY BOOKS

October 2009—February 2010

ART

Barnes, Bernadine. *Michelangelo in Print: Reproductions as Response in the Sixteenth Century.* Ashgate, 2010.

Jones, Glyn E., ed., and **Jennifer N. Gentry,** illustrator. *Bostwick's Plastic and Reconstructive Breast Surgery*, 3rd ed. Quality Medical Publishing, 2009.

Carter, Roymieco A. *Game Design/Art and Interaction Development.* Piedmont Triad Partnership, 2009.

BIOLOGY

Anderson, David J. *Laysan Albatross* (Phoebstria Nigripes). *Birds of North America*, vol. 66, 2009.

———. *Masked Booby.* *Birds of North America*, vol. 73, 2009.

Pfaff, Donald W., Arthur P. Arnold, Anne M. Etgen, Robert T. Rubin and **Susan E. Fahrbach,** eds. *Hormones, Brain and Behavior.* 2nd ed. Elsevier Academic Press, 2009.

Johnson, Daniel A. *40 Inquiry Exercises for the Biology Lab.* National Science Teachers Association, 2009.

BUSINESS

Laszlo, Chris, **Daniel Fogel,** Peter Whitehouse, Karen Christensen, and Gernot Wagner, eds. *Berkshire Encyclopedia of Sustainability*; vol. 2, *The Business of Sustainability.* Berkshire Publishing, 2010.

CHEMISTRY

Salam, Agha Akbar. *Molecular Quantum Electrodynamics: Long-range Intermolecular Interactions.* John Wiley, 2009.

CLASSICAL LANGUAGES

Ulery, Robert W., Jr., ed. and trans. *Pietro Bembo's History of Venice*; vol. 3: *Books IX-XII.* Harvard University Press, 2009.

COMMUNICATION

Hyde, Michael J. *Perfection: Coming to Terms with Being Human.* Baylor University Press, February 2010.

ECONOMICS

Boko, Sylvain, and Diery Seck. *Back on Track: Sector-led Growth in Africa and Implications for Development.* Africa World, 2009.

Cottrell, Allin F., Paul Cockshott, Gregory John Michaelson, Ian P. Wright and Victor Yakovenko. *Classical Econophysics.* Routledge, 2009.

EDUCATION

Cunningham, Patricia Marr. *Classrooms that Work: They Can All Read and Write.* 5th ed. Prentice Hall, 2010.

Friedman, Adam M., and John Lee. *Research on Technology in Social Studies Education.* Information Age Publishing, 2009.

ENGLISH

Biespiel, David. *The Book of Men and Women.* University of Washington Press, 2009.

Ettin, Andrew Vogel. *The Service of Beauty.* BookSurge, 2009.

HISTORY

Escott, Paul D. *Confederacy: The Slaveholders' Failed Venture.* Praeger, 2010.

Hellyer, Robert I. *Defining Engagement: Japan and Global Contexts, 1640-1868.* Harvard University Press, 2010.

Wilkins, Charles L. *Forging Urban Solidarities: Ottoman Aleppo, 1640-1700.* Brill, 2010.

NEW FACULTY BOOKS

October 2009—February 2010, continued

INTERNATIONAL STUDIES

Akinc, Helen W. *Praeger Handbook for College Parents*. Praeger, 2009.

LAW

Korzen, John. *Make Your Argument: Succeeding in Moot Court and Mock Trial*. Kaplan Publishing, 2010.

Nickles, Steve H. *Debtor-Creditor: Creditor Remedies and Debtor Rights under State and Non-bankruptcy Federal Law*. West Group, 2009.

Palmiter, Alan, and Frank Partnoy. *Corporations: A Contemporary Approach*. West, 2009.

Wright, Ronald F., and Marc L. Miller. *Criminal Procedures: Cases, Statutes, and Executive Materials (2009 Supplement)*. 3rd ed. Aspen Publishers, 2009.

MUSIC

Borwick, Susan. *Benediction*. Morningstar Music, 2009.

Locklair, Dan. *Descants to Traditional Hymns*. Subito Music, 2009.

———. *Glory and Peace: A Suite of Seven Reflections for Organ, Inspired by George Herbert's poem, "King of Glory, King of Peace."* Subito Music, 2009.

———. *In the Sight of God*. Subito Music, 2009.

———. *The Lilacs Bloomed*. Subito Music, 2009.

PSYCHOLOGY

Smith, Peter B., and **Deborah L. Best**, eds. *Cross-Cultural Psychology*. Sage Publications, 2009.

ROMANCE LANGUAGES

Furmanek, Olgierda, ed. and trans. *Poezje Wybrane: Translation of Selected Poems of Ana Maria Fagundo*. Księgarnia Akademicka, 2010.

Hardcastle, Anne, Roberta Morosini, and **Kendall Tarte.** *Coming of Age on Film: Stories of Transformation in World Cinema*. Cambridge Scholars Publishing, 2009.

Howe, Linda S., and Antonio Eligio. *Cuban Artists' Books and Prints/Libros y Grabados de Artistas Cubanos: 1985-2008*. J. La' Verne Print Communications, 2009.

Swier, Patricia Lapolla. *Hybrid Nations: Gender Troping and the Emergence of Bi-gendered Subjects in Latin American Narrative*. Farleigh Dickinson University Press, 2009.

Venegas, Jose Luis. *Decolonizing Modernism: James Joyce and the Development of Spanish American Fiction*. Legenda, 2010.

THEATER

Gendrich, Cynthia, Stephen M. Archer, and Woodrow B. Hood. *Theatre: Its Art and Craft*. 6th ed. Rowman & Littlefield, 2009.

FUNDED FACULTY RESEARCH

October 2009—February 2010

ANTHROPOLOGY

Lorna G. Moore, *Perinatal origins of chronic mountain sickness*, Fogarty International Research Collaboration Award (FIRCA), National Institute of Child Health and Human Development (NICHD), \$100,000

Kenneth Robinson

- *Preparation of Historic Context, Northwest Piedmont Railroad Development*, Piedmont Triad Research Park, \$7,196
- *Archeology assessment, wayside exhibit*, Town of Elkin, Main Street, \$900
- *Mapping Brooks Cemetery, Kernersville, NC*, Brooks Cemetery Restoration Group, \$2,620
- *Archaeological Investigation, Historic McDowell House, Marion, NC*, McDowell House Restoration Committee, \$6,910

BIOLOGY

Michelle DaCosta, *Defensive Signaling Behaviors and the Influence of Predator Learning on Communication Modalities in the chebeisa species in the Galapagos Islands*, National Science Foundation (NSF), \$5,000

Gloria Muday, *Auxin and ethylene cross talk in regulation of root development in tomato*, United States Department of Agriculture (USDA), \$349,999

Miles R. Silman, *Sensing Approach to Large-Scale Assessment of Carbon Storage in Tropical Forests*, Blue Moon Fund, \$178,038

Wayne Silver, *Can a fruit fly assay be used to screen a cola formula?* PepsiCo, \$10,000

CHEMISTRY

Rebecca Alexander, *Symposium on RNA Biology VIII: RNA Tool and Target*, North Carolina Biotechnology Center (NCBC), \$3,000

Christa L. Colyer, *Acquisition of a User-accessible Q-TOF Mass Spectrometer*, NSF, \$442,102

S. Bruce King, *Nanotubes in tumor imaging and therapy*, NIH/Wake Forest University Health Sciences (WFUHS), \$53,612

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

Mark E. Welker

- **with Freddie Salsbury, Physics**
Preparation and Evaluation of P13 Kinase Inhibitors for Treatment of Prostate Cancer, NIH/WFUHS, \$152,002
- *Sequential Reactions of Main Group Element-Substituted Dienes*, NSF, \$126,000

COMPUTER SCIENCE

Jacquelyn Fetrow, *Integrin function cartilage*, NIH/WFUHS, \$622.48

Robert Plemmons, *Combining Imaging and Nonimaging Observations for Improved Space Object Identification*, Air Force Office of Scientific Research (AFOSR)/University of New Mexico, \$29,994

ECONOMICS

Jac Heckelman, *Delegate Voting at the Constitutional Convention*, NSF/University of Georgia, \$29,536

GRADUATE SCHOOL OF ARTS AND SCIENCES

Lorna G. Moore, *Graduate Research Fellowship Program*, NSF, \$81,000

HEALTH AND EXERCISE SCIENCE

Anthony Marsh, *Physical Exercise to Prevent Disability Pilot Study - LIFE Field Center*, NIH/WFUHS, \$106,238

Gary Miller, *Intentional weight reduction and physical and cognitive function*, NIH/WFUHS, \$17,246

FUNDED FACULTY RESEARCH

October 2009—February 2010, continued

Jack Rejeski

- with Gary D. Miller and Paul Ribisil
Look Ahead, NIH/WFUHS, \$132,877
- with Peter H. Brubaker and Jeffrey Katula
Life DMAQC (Data Management, Analysis, and Quality Control), NIH/WFUHS, \$143,622

MATHEMATICS

Ken Berenhaut, *CURM Mini-Grant*, Brigham Young University/Center for Undergraduate Research in Mathematics, \$5,250

Robert Plemmons, *Combining Imaging and Nonimaging Observations for Improved Space Object Identification*, AFOSR/University of New Mexico, \$29,994

PHYSICS

David Carroll

- *MURI: Self-Assembled soft optical NIMS*, AFOSR/Kent State University, \$115,677
- *PureLux*, PureLux, Inc., \$230,000
- *FiberCell*, FiberCell, Inc., \$223,000
- *Hybrid Organic-Inorganic Composite Solar Cells for Efficient, Low-Cost, Photoelectric Energy Conversion*, DOE/USC, \$102,500

Jacquelyn Fetrow, *Integrin function cartilage*, NIH/WFUHS, \$622.48

Natalie Holzwarth, *First Principles Simulations of Battery Materials*, NSF, \$75,000

Daniel B. Kim-Shapiro

- *Role of Nitrite Reduction to NO by Hemoglobin in Control of Fetal Vascular Tone*, NIH/Loma Linda University Adventist Health and Science Center, \$163,902
- *Storage lesion in banked blood due to disruption of nitric oxide homeostasis*, NIH, University of Pittsburgh, \$127,407

Freddie Salisbury

- *Drug, Design, Discovery and Development - Molecules to Medicine*, NCBC/WFUHS, \$2,500
- with Mark Welker, Chemistry
Preparation and evaluation of PI3 Kinase Inhibitors for use in treatment of prostate cancer, NIH/WFUHS, \$70,492

POLITICAL SCIENCE

Sarah Lischer, *Going Home to Fight? Explaining Refugee Return and Violence*, International Peace Research Institute, Oslo, \$53,664

Luis Roniger, *Exile, transnational migration, and the transformation of public culture: Argentina, Chile, Uruguay, and Paraguay*, Bi-National Science Foundation, \$7,360

PSYCHOLOGY

Janine Jennings, *Life DMAQC (Data Management, Analysis, and Quality Control)*, NIH/WFUHS, \$18,788

Eric Stone, *Graphic versus numerical presentation of quantitative environmental risk information about unexploded ordinance*, NSF, \$39,099

SECRET ARTISTS SERIES

Lillian B. Shelton, *Arts in Education Grant*, Arts Council of Winston-Salem, \$3,000

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