

# RESEARCH *News*

OFFICE of RESEARCH and SPONSORED PROGRAMS

## A NEW LOOK

The R&SP website has a new look. Director Lori Messer had a lot of good ideas to simplify, clarify, and amplify the information it provides, and Will Ford, IRB Coordinator and webmaster, implemented them in a clean design that's readily navigable.

Among the new features:

- Under Proposal Preparation, you'll find easy access to the internal routing form that all grants must have to secure university approval; the indirect rate agreement; and NSF FastLane information
- Under Award Administration, you'll find a chart defining "Where to go for help" in grant-related areas; a timeline for selected sponsored program activities, such as hiring, purchasing, establishing subcontracts, and foreign travel; definitions of direct and indirect costs; and glossaries of grant terms from Harvard, UC Berkeley, and the NIH.
- Under IRB and Compliance Management, you'll find expanded information about the Institutional Review Board, including Reynolda campus guidelines and forms and access to the online training course.

The office itself has been freshly reconfigured under the new leadership. Director Lori Messer is the first point of contact. She can tell you how to get started in seeking research support and direct you to the necessary resources. She prepares, reviews, and negotiates contracts and subcontracts. She also develops policy and professional development activities.

Assistant Director Stephen Williams is responsible for proposal submission generally and for a number of departments particularly (see [www.wfu.edu/RSP/staff.html](http://www.wfu.edu/RSP/staff.html)). He assists in

interpreting sponsor guidelines and assures the budget's completeness and accuracy; its adequacy to fulfill the proposed project's aims; single and multiple-year projections; and direct and indirect rates.

Research Services Coordinator Kandise Connor administers internal awards and assists with the preaward process. Kandise tracks the proposals, implements review procedures, notifies the PIs, and assures policy compliance. She also works on proposal submission in specific fields and on special projects.

Institutional Review Board Coordinator Will Ford handles procedures for proposals involving research with human subjects. He disseminates the latest information on IRB policies to investigators. Most recently, he has launched the mandatory online training modules for everyone connected with research on human subjects from our website. Will is our new webmaster.

Editor and Researcher Julie Edelson is responsible for funding search, proposal editing, and information dissemination. She uses the Community of Science database, with records on sponsors in all fields for all sorts of projects. She can also offer suggestions on a proposal's approach, language, and formatting. She passes along information through targeted emails, this newsletter and other office publications, and helps to update the website.

Administrative Assistant Dianne Weavil handles meetings, directs phone and foot traffic, coordinates newsletter production, and makes sure our office tools run and supplies are at hand.

The R&SP team is ready and eager to assist faculty seeking research support. Call 758-5888 and get the ball rolling!



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## REQUIRED TRAINING FOR HUMAN SUBJECTS – UPDATE

All investigators receiving federal funding must document proof of human subjects training before initiating research involving human subjects. In the September 2002 issue of *Research News*, we reported that Wake Forest has selected the online CITI program to help investigators satisfy this requirement. Most researchers only have to complete modules 1-5 and 7. Additional modules may be assigned, depending on the type of research being performed and/or the study population. Currently, completing the CITI program is only mandatory for federally funded investigators.

*Effective immediately, however, ALL investigators are requested to review the human subjects training materials. Beginning 1 January 2003, ALL investigators submitting IRB proposals will be asked to indicate whether or not they have reviewed these materials.*

Several options are available for review:

1. Read the CITI program modules 1-5 and 7 (without completing the test).
2. Review the presentation, "Investigator 101" (CD available from R&SP).
3. Read and complete the exercises for the National Institutes of Health online training program, found at <http://cme.nci.nih.gov>

Reminder: IRB proposals are due the first Monday of the month, and the board meets the third Monday of each month.

## REVISIONS TO NSF GPG

The National Science Foundation's *Grant Proposal Guide* has been revised, and some proposal requirements have changed, effective 1 October 2002. Some of the most important follow.

- The use of color copies is discouraged. "PIs who must include in their project descriptions high-resolution graphics or other graphics where exact color representations are required for proper interpretation by the reviewer" will have to submit paper copies of the entire proposal in addition to submitting it via FastLane. PIs should contact their program officer regarding the submission of paper copies.

- The GPG provides information to help PIs determine "Reviewers Not to Include." Consult Appendix D for "Potentially Disqualifying Conflicts of Interest."
- The Project Summary must address merit review criteria (the intellectual merit of, and broader impacts resulting from, the proposed activity) in the 1-page Project Summary. Proposals will be returned without review if these criteria have not been addressed.
- The content of the Project Description section has been reordered. In addition, PIs may no longer include URLs.
- The Biographical Sketch has been modified to solicit more information about Co-editors to "identify potential conflicts or bias in the selection of reviewers."

See <http://www.nsf.gov/pubs/2003/nsf032/032sigchanges.htm> for full documentation of changes to the NSF guide.

## CHANGES TO NIH NONCOMPETING GRANT PROGRESS REPORTS

For National Institutes of Health noncompeting renewal progress reports due 1 October or later:

1. NIH is no longer providing preprinted face pages; the last ones were sent in June 2002.
2. R&SP will check the NIH website monthly and notify PIs via email of report due dates.
3. A list of Institute/Center mailing addresses for progress reports can be found at: [http://grants.nih.gov/grants/type5\\_mailing\\_addresses.htm](http://grants.nih.gov/grants/type5_mailing_addresses.htm).
4. Eventually, this information will be available through the NIH Commons.

These changes are part of NIH's efforts to transition the notification of Noncompeting Grant Progress Reports from a hard-copy mailing of preprinted electronic PHS 2590 and PHS 416-9 face pages to an electronic format.

URL for more information: <http://grants2.nih.gov/grants/guide/notice-files/NOT-OD-02-066.html>

Please call X5888 or email Lori Messer with questions and concerns.

# OUTSTANDING PROJECT PROFILES

## WAKE FOREST FACULTY LEAD DIGITAL BRIDGE PROJECT EVALUATION

Deborah Best, Wake Forest Professor of Psychology, is the primary investigator in an exciting pilot project with Habitat for Humanity sponsored by the AOL Time Warner Foundation. Her co-investigators are Wake Forest colleagues Michael Hazen, Professor of Communications; Earl Smith, Professor of Sociology and Rubin Professor of American Ethnic Studies; Ananda Mitra, Associate Professor of Communications; and Stephen Davis, Research Instructor of Computer Science, Department of Family Medicine, School of Medicine. Psychology graduate student Lauren Yadley is the Project Coordinator.

Since 60 percent of US jobs now require computer skills, and workers who use computers earn 43 percent more than other employees, the significant number of low-income families who do not have regular access to computers or the internet are at a double disadvantage. While some research has examined the effects of home access to computers and the internet, none suggests the best ways to introduce these tools to low-income families.

Building 5,000 new homes a year for the nation's poor, Habitat for Humanity provides an ideal way to bridge this digital divide. The AOL Time Warner Foundation will partner with Habitat of Forsyth County to install computers and internet connectivity in all homes they build over the next 2 years. Forsyth County Habitat was selected as the national test site, because it has been involved for several years with Hatch Technology & Toys in a similar, smaller-scale project. Approximately 100 Habitat homes will receive a new computer, a printer, 2 years of free internet connection, and training for all household members. The program aims to insure that clients know how to use their computers and the internet and how to apply this knowledge for educational purposes.

Wake Forest faculty and students will evaluate the program's educational, social, and economic benefits. The pilot project will employ a longitudinal design with 6 evaluations. Prior to computer installation, families will fill out questionnaires assessing their computer competency and use, socioeconomic indicators (e.g., income, occupation, educational level), children's school performance, and attitudes toward technology. Across the 5 posttests, at 2, 6, 12, 18, and 24 months, participants will be evaluated on computer competency; computer use, particularly in educational activities; attitudes toward technology; effects on social behavior and community

integration; economic impact; educational impact; and role of the new computer in the home. Not all variables will be evaluated at each testing, but all will be included across the 2-year study, and some measured repeatedly. Teachers and school records will help to evaluate school performance.

A comparison group of approximately 100 Habitat households in Charlotte, which will not receive computers, will participate in the 6 evaluations. These families will be matched with Forsyth participants by demographics (e.g., mortgages, number of children) and socioeconomic indicators.

Two hours of computer training be required for all Forsyth County participants. Children below 3<sup>rd</sup> grade will be trained in the home but not evaluated. Habitat staff and volunteers will conduct the training and focus on general computer use, web search, using the internet to complete homework assignments and to connect to the community, and parents will have a session on the appropriate use of technology with children. All family members will be required to pass a computer competency test before their computers are installed and must participate in all postinstallation evaluations.

During fall 2002, Habitat volunteers will install a computer in each participant's home. Hatch will provide a technology help line, and each family will be encouraged to continue its technology training through free computer classes offered at the Forsyth County Library.

## POET-IN-RESIDENCE WINS GUGGENHEIM

Jane Mead, poet-in-residence and member of the English department, has been awarded a Guggenheim Fellowship for 2002-2003. These prestigious stipends fund blocks of time in which scholars and artists can work with as much creative freedom as possible, as no special conditions attach to them. Mead is taking the full 12 months to write.

Mead earned a grant from the Lannan Foundation in 1999 and won the Morton Prize from Sarabande Books in 1995 and the Whiting Writer's Award in 1992. Her first poetry collection, *The Lord and the General Din of the World* (Sarabande, 1996) has gone into three printings, and *House of Poured-Out Waters* was published by the University of Illinois Press in 2001.

## HISTORY'S LOCKYER WINS SSRC FELLOWSHIP

Angus Lockyer, Assistant Professor of History, was awarded a Social Science Research Council Japan Society for Promotion of Science Postdoctoral Fellowship. The SSRC annually recommends to the JSPS up to 20 candidates in the social sciences and humanities. The awards allow highly qualified recent PhDs to conduct research in Japan. Dr. Lockyer also won a Japan Foundation Research Fellowship but declined it in favor of the SSRC.

He is now spending five months as a Visiting Scholar at the University of Tokyo, completing research for a book, *Japan at the Exhibition, 1867-2005*. In addition to consulting archives and colleagues, he is also interviewing the bureaucrats, producers, architects, and protesters concerned with the 2005 Aichi Expo. His book will explore Japan's long-term enthusiasm for both world's fairs and domestic exhibitions by examining the diversity of interests accommodated in their planning and preparation as well as the complexity of the resulting display.

Dr. Lockyer thanks Julie Edelson for "providing crucial, eleventh-hour editorial help that pruned my proposal of jargon, emphasized its strengths, and imbued it with a sense of purpose."

## 2002-2003 FULBRIGHT SCHOLAR VISITING THE BABCOCK SCHOOL

Verica Babic, Associate Professor of the Department of Economics, University of Kragujevac, Kragujevac, Federal Republic of Yugoslavia, will be visiting the Babcock Graduate School of Management from September 2003 to February 2003 on a Fulbright research fellowship. She will be performing an "International Comparison of Corporate Governance Models."

## PRACTICING ANTHROPOLOGY COMES TO WAKE FOREST

*Practicing Anthropology*, a quarterly journal of the Society for Applied Anthropology, will move to WFU's Anthropology department in January 2003. Under the editorship of Professor and Chair Jeanne Simonelli, the journal will continue to publish scholarly articles providing a vehicle of communication for anthropologists working outside academia; bridging practice inside and outside the university; exploring anthropology's use in policy research and implementation; and inquiring into the present and future of anthropology generally.

Simonelli will guide the publication's direction by selecting articles and guest editors. Students will be involved in the editorial phase, reading articles that expose them to the research process, style, and caliber of work they will soon be asked to produce.

## MAKE THAT CALL: BLOCK THAT KICK!

*Research News* consistently counsels Principal Investigators to phone their Program Officers, not only to secure firm answers directly from the agency's mouth, but to get a sense of enthusiasm, to sniff out the unspecified priorities and earmarks. Chemistry Professor Mark Welker, who served as a PO at NSF last year, advises PIs developing proposals to visit potential sponsors early in the process; in personal contact, POs are more likely to reveal what they might not trust to the phone. Securing a \$300K grant is worth a \$500 visit.

Although private agencies, especially in the humanities, often claim they don't have enough staff to assist applicants, a WFU professor interested in a Fulbright phoned CIES. "Confidentially," said the PO and went on to provide a precise protocol for his application based on the unpublicized priorities of a new program director.

Even at the NIH, where POs have little influence on review, a phone call was critical for another PI. Dr. Wake was seeking the best study section to review his proposal, which, while health-related, relies on biophysical techniques that might seem arcane to clinicians. He emailed one section's PO, briefly describing his project and asking for the best time to phone with questions. Within a few minutes, he got a call back, asking, "What's light scattering?"

Dr. Wake resisted the temptation to hang up, confident that he had his answer (not *this* section). The SRA went on to say that "if worse comes to worst," he could ask someone like Dr. Wake to serve as an ad hoc reviewer. Dr. Wake had been an ad hoc reviewer for this group and noted that the other members of the panel were puzzled by, and ultimately rejected, good work with a basic science approach.

Dr. Wake will not let "worse come to worst." Happily, he contacted two other study sections and found the better match.

## INTERVIEW WITH A PROGRAM OFFICER

from *Grantseeker Tips* nos. 95 & 96 (1, 14 October 2002)

A former National Cancer Institute program officer, or Scientific Review Administrator (SRA), responded to questions seeking secrets for success.

*What was your most memorable experience?*

Nearly every day, I was talking to prospective applicants on the phone about the science behind their applications. Such conversations were usually the intellectual high point . . . Another, more intense . . . intellectual stimulation concerned the scientific meetings I organized for experts in specific areas. . . . I was able to advance the science by providing a forum for discussion of new ideas and, using recommendations generated at the meeting, to garner more funding for RFAs in these areas.

*What did you look for in selecting grant recipients?*

In the NIH system, POs have limited influence. Approximately 95 percent of all individual awards are based on priority scores from peer-review committees. The remaining 5 percent are selected by a complicated administrative process. First, POs select high-quality applications near the cut-off score that appear to fill a programmatic need. Next, they argue their case for funding these applications before 2 internal groups: one at the division level and the other at the institute level. These groups decide whether to list these projects for out-of-sequence funding. Money always runs out before all the recommended projects are funded. Due to my experience with out-of-sequence funding, I recognize the extreme importance of faculty making sure that their POs understand the projects' significance. I recommend that they communicate with the PO and explain their projects' importance in a larger context. I call it 'building enthusiasm' for their application.

*What were some common problems you experienced with grantees?*

I encountered 4 major problems: not following the directions; not clearly addressing the criticisms of peer reviewers in revised applications; repeatedly submitting the same application, although priority scores are not improving significantly; and submitting unusable progress reports. By *unusable* I mean either none were submitted, or they were too long or technical to be understood by a nonspecialist. We use these reports to build our annual progress reports, which, in turn, NIH uses to support funding from Congress.

*What was the most challenging aspect of your job?*

. . . giving applicants good scientific advice, especially when I was trying to explain a peer reviewer's comment in a summary statement [and] helping applicants with their science or how they described their science [were] . . . challenging. Although I am a PhD biochemist, I was not an expert in many of the fields covered by the applications in my portfolio. I always kept my advice on the level of what I thought was good scientific practice, such as having adequate experimental controls, taking into consideration possible confounding factors. I stayed away from the technical details, like whether one type of sample preparation was superior to another. I always cautioned the applicants to seek confirmation of my advice from their scientific colleagues. When necessary, I contacted peer reviewers to get a clarification of their comment.

The second challenge was giving bad news to applicants who did poorly and then phoned to see if they had a chance for funding. I always tried to be hopeful about a resubmission. . . . Some of the distressed applicants wanted to talk about the problems that a rejection meant for them professionally. Some were in danger of losing their jobs. If they wanted to talk, I listened and responded the best I could.

*What kinds of things could grantees do to make your life easier?*

a) Follow the directions in the application kit. b) Contact the right NIH program office. It is relatively easy to get to appropriate contact place if you read the missions of the various NIH units. c) Do some homework about the NIH application and review system so that POs will not have to go over the basics for the millionth time. d) Write short (2-page) progress reports designed to be read by the nonspecialist.

## CROSS-CAMPUS COLLABORATIVE RESEARCH SUPPORT FUND

Deadline: 14 March 2003

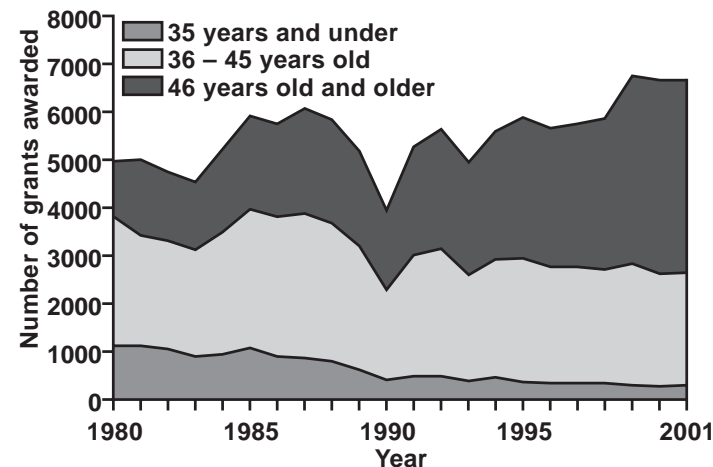
The Cross-Campus Collaborative Research Support Fund (CCCRSF) was devised to stimulate pilot research between Reynolda Campus and School of Medicine faculty. See <http://www.wfu.edu/RSP/internal/collab.html> for details.

## IS IT YOUR DATA OR YOUR AGE?

from *Science* 298 (4 October 2002):40-41

Since 1980, the percentage of biomedical grants awarded to 35-and-under investigators has plummeted from 23 percent to 4 percent. In 2001, NIH gave out 6,635 competing grants, but only 251 went to people under 35. Meanwhile, the share of grants to scientists 46 and older has grown sharply. When biomedical leaders examined similar data in the early 1990s, they perceived a crisis. The National Research Council (NRC) launched an inquiry that produced two reports in which the authors called on government agencies to break the logjam that keeps many scientists waiting until their 40s for an academic position. The 1994 report warned that, "the implications for the future of biomedical research are extremely serious."

The NRC panel's cochair, biologist Torsten Wiesel of Rockefeller University, is surprised to learn that the trend continues: "You'd think with all the money that's going into NIH, [young scientists] would be doing better." Cochair Shirley Tilghman, now president of Princeton, says, "It's appalling." The data reviewed by the 1994 panel looked "bad, but compared to today, they actually look pretty good." She adds: "The notion that our field has such a tiny percentage of people under 35 initiating research is very unhealthy and worrisome."



Experts differ on why older biomedical researchers are receiving a growing share of the pie and what should be done about it. The long wait for independence takes a heavy toll on the individual, says evolutionary biologist Michael Cummings, who contributed to the 1998 NRC report. Many scientists must now work until midlife before they can obtain a stable income and benefits. It's tough on families.

Why is the pool of young investigators shrinking? Some suggest that young scientists are spending more time in training, because biology has become more complex, and don't apply for grants until later. Some say the trend reflects demographics and the tendency for professors to stay longer on the job now that mandatory retirement rules have been scrapped.

But the decline in awards to young investigators illustrates more than a demographic shift, says Orfeu Buxton, a University of Chicago postdoc and a founder of the National Postdoctoral Association. "It clearly reflects the lengthening of the postdoctoral on-the-job training period," he says. Frank Solomon, a cell biologist at MIT, agrees. Coauthor of a major study on biomedical training, he says, "We interviewed postdocs in 20-odd prominent laboratories," and "virtually all" said they were functioning as research scientists and not getting training. The plight of postdocs is "deplorable," says Mary Golladay, program director for the Human Resources Statistics Program at NSF. According to NSF data, there were 28,688 postdocs in the biological and health sciences in 2000. The count has risen since 1993, at a rate of about 750 per year. In contrast, there were only 5,880 postdocs in the physical sciences (chemistry, physics, and astronomy) in 2000, a number that has remained stable since 1993.

Although NSF doesn't specifically target young investigators, it does support promising "teacher-scholars." NIH doesn't earmark grants for young investigators but asks reviewers to give special attention to proposals from first-time applicants. The Deputy Director for Extramural Research says that in recent years, NIH has increased funding for grants to first-timers.

No one doubts that this trend in biology should be reversed. Tilghman is convinced that the government should take the initiative: "I think there is a real failure of leadership at the NIH." She claims that grantees are hiring young scientists as cheap labor and, to end this practice, NIH grants should establish a career track for technical workers that would offer "reasonable salaries" and benefits, which would reduce some of the competition for tenured academic positions.

Marvin Cassman, a former NIH official who now heads the Institute for Bioengineering, Biotechnology, and Quantitative Biomedicine, says that, "if the trend continues, people will be applying for their first NIH grant the year before they retire."

# WFU FUNDED RESEARCH

August through October 2002

## ANTHROPOLOGY

Kenneth Robinson and Joe Ned Woodall

- *Archeological Investigations, Sidestown Cemetery, Forsyth County, NC*, \$1,200, Sidestown Historic Preservation Committee
- *Archeological Survey of proposed sewer line, Mount Holly, Gaston County, NC*, \$16,268, F&R, Inc.
- *Archeological Survey and Assessment of Phase 1 of Riverpark, Davie and Rowan Counties, NC*, \$7,521, Coolemeec Historical Association

These surveys will identify archeological resources, assess their significance, and make recommendations involving their avoidance or protection.

Stephen Whittington, *Ancient Mexican Ceramics Exhibit*, \$1,200, North Carolina Humanities Council

This minigrant will help the museum to present "Worldviews: Maya Ceramics from the Palmer Collection" from November 2002 to January 2003. At least 14 Wake Forest professors in 7 departments and program will use the exhibit in support of their teaching in the fall and spring semesters.

## BIOLOGY

Kathleen A. Kron, *The Origin and Diversification of Vaccinieae: Using Molecular and Morphological Data to Determine Major Clades of the Blueberry Tribe*, \$6,000, National Science Foundation

The *Vaccinieae* are a diverse group of temperate and tropical woody plants found on all continents except Antarctica. Dr. Kron's is the first study to rigorously analyze evolutionary relationships in this widespread, ecologically, economically, and systematically important group.

## CHEMISTRY

S. Bruce King, *Reactions of Hydroxyurea with Sickle Cell Hemoglobin*, \$240,837, National Institutes of Health

Hydroxyurea is a new treatment for sickle cell disease, which affects 1 in 600 Americans of African descent. The long-term goal is to understand the molecular mechanisms of the reaction between hydroxyurea and sickle cell hemoglobin to inform the design and application of superior therapeutics.

## HEALTH AND EXERCISE SCIENCE

Michael J. Berry

- *Exercise and Disability in COPD Patients*, \$699,596, National Institutes of Health

The investigation aims to determine if chronic obstructive pulmonary disease (COPD) patients assigned to a lifestyle activity program will exercise more than patients assigned to a traditional exercise program, relying on centralized facilities and trainers and often limited in duration by

factors extraneous to optimal health. The study will also measure the impact of both long- and short-term interventions on exercise capacity, physical function, self-reported disability, and quality of life.

- *Minority Undergraduate Research Supplement to Exercise and Disability in COPD Patients II*, \$6,427, National Institutes of Health

A Winston-Salem State University undergraduate will participate in exercise training and testing of COPD patients that will expose her to all aspects of a randomized clinical trial.

Anthony P. Marsh, *Development of a Lateral Mobility and Stability Task to Identify Individuals At Risk for Mobility Disability and Functional Decline*, \$19,500, National Institutes of Health

The project aims to develop a mobility task to assess function in older adults, targeting lateral mobility, stability, and transfer, that is reliable, valid, easy to administer in the clinic or the community, and sensitive to changes in physical activity intervention strategies.

Stephen P. Messier, *Rocking Intervention Study in the Elderly (RISE)*, \$38,591, WFU School of Medicine

Gary D. Miller and Stephen P. Messier, *Effect of Intensive Weight Loss on Physical Function, Inflammation, and Body Composition in Older Adults with Knee Osteoarthritis*, \$236,159, Slim-Fast Nutrition Institute

This investigation will provide preliminary data for a large-scale randomized trial examining the mechanisms underlying both the beneficial and potentially harmful effects of weight loss among older overweight and obese adults with knee osteoarthritis, the leading cause of disability in the US.

Paul M. Ribisl, *CHANGE: An Intervention to Increase Exercise Maintenance*, \$12,828, National Institutes of Health

The project investigates the outcomes of increasing exercise in older cardiac patients.

## PHYSICS

Natalie A. Holzwarth, *Summer Research Program*, \$14,939, Sandia National Laboratories

Dr. Holzwarth has been awarded a contract to test an "open-source" electronic structure code that will be available to materials physics investigators. She will compare code developed at Sandia National Laboratory with code developed at Wake Forest (<http://pwpaw.wfu.edu>) in collaboration with Dr. Alan Tackett (WFU PhD, 1998) and G. E. Matthews.

Richard T. Williams, *Evaluation of Birefringence-based PTFE Film Inspection*, \$12,500, Gillette Company

In part of an on-going research initiative, two graduate students will look at what light scattering can reveal about edges coated with teflon (PTFE).

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RESEARCH  
*News*

December 2002

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