

#### OFFICE of RESEARCH and SPONSORED PROGRAMS

September 2005

#### **CONGRATULATIONS** TO FACULTY

# RECORD \$8.6 MILLION IN EXTERNAL RESEARCH SUPPORT

As you will see throughout this newsletter, FY05 was a banner year for sponsored projects on the Reynolda campus. Faculty submitted a record number of proposals in FY04, and a significant number were funded in FY05. While all are to be congratulated, I will single out a few departments and faculty for special note. Both pre- and postaward staff in ORSP, departments, and FAS have worked hard to make this happen, and I express my appreciation for their efforts.

Many of you will remember that for FY01, 02, and 03, the Reynolda campus posted about \$4 million a year in sponsored project revenues. This number increased significantly in FY04 to about \$5.7 million and now, in FY05, has more than doubled to about \$8.6 million.

- Faculty in the Department of Physics were awarded grants totaling almost \$3 million.
- Department of Chemistry faculty received close to \$2 million in new awards.
- Health and Exercise Science faculty were awarded over \$1 million in new awards.
- Anthropology faculty submitted the most proposals, and their funding increased almost five-fold over FY04.

- Biology, Communication, Economics, and Psychology all significantly increased their funding levels over those of FY04.
- The Calloway School and the Babcock School both posted large gains over FY04 dollars awarded.

In my mind, several faculty should also be recognized individually.

- Dany Kim-Shapiro in Physics received a 5year NIH K award for research career development.
- Rebecca Alexander in Chemistry earned a similarly prestigious NSF CAREER grant.
- History's Monique O'Connell won an NEH Summer Stipend as our one institutional junior faculty nominee in that highly competitive program.

Again, I extend my congratulations and thanks to all who contributed to an outstanding FY05.

Sincerely,

Mark E. Welker Associate Provost for Research

If faculty were extraordinarily successful last year, recent awards bode well for next.

INSIDE

**Outstanding Project Profiles** 

**IRB News** 

J

WAKE FOREST

5

HNIVERSITY

WFU Funded Research, 1 March-30 July 2005

6

# BIOLOGY'S ALWINE EARNS ADVANCED CERTIFICATE

Gary Alwine, Administrative Coordinator for the Biology Department, has received his DA 201 certificate from the Society of Research Administrators (SRA). The Departmental Administrators Training Program offers practical, real-life solutions to preaward, postaward, regulatory, and compliance questions. DA 201 specifically covers budget reallocations, dealing with retroactive charges, rebudgeting between direct and indirect costs, forecasting and seeking approval for no-cost extensions, and allocating budgets for multi-investigator grants.

ORSP congratulates Mr. Alwine on his initiative and achievement. Wake Forest is fortunate to have highly trained staff to assist departments, individual faculty, and ORSP in grants administration.

#### AAALAC ACCREDITATION

The Animal Care and Use Program, housed at WFUHS, once again received full accreditation in June 2005. David J. Lyons, Assistant Director for Research Development, Operations, and Planning and Assistant Professor of Physiology and Pharmacology, thanks Reynolda campus faculty and staff who participated in the triennial site visit by the Association for Assessment and Accreditation of Laboratory Animal Care International. WFUHS's program was among the first to be evaluated by this body and has been continuously accredited since 1966.

#### SMALL INCREASE FOR NSF

from Federal Grants and Contracts Weekly 29, 26 (20 June 2005)

House appropriators recommended \$5.6 billion for the National Science Foundation in FY06, an increase of \$171 million, or 3 percent over the current NSF budget. The increase is reserved for research. NSF's Education and Human Resources directorate will get \$34 million less, although, even at that amount, the \$807 million total for EHR exceeds President Bush's request by \$70 million. In addition, the House report instructs NSF to initiate a special incentive prize to promote scientific work, particularly programs that emphasize innovation and high risk, on specific problems. See <a href="https://www.nsf.gov/about/">www.nsf.gov/about/</a>.

#### INTERNAL COMPETITION DEADLINES

**Archie Fund for the Arts and Humanities**: 28 October; 10 February

**Cross-Campus Collaborative Research Support Fund**: 10 February

Science Research Fund: 14 October; 24 February\*

Social, Behavioral, and Economic Science Research Fund: 21 October; 24 February\*

#### **ORSP EVENTS FOR 2005-2006**

September 20: NSF Graduate Research Fellowships Workshop. Mark Welker, Gloria Muday, Charlie Richman, Natalie Holzwarth, Tom Phillips and Julie Edelson will discuss why, when, and how to prepare and apply for a fellowship. 2-4 pm; Autumn Room; reservations required.

October 11: Publishers' Workshop. University press editors will talk about when and how to prepare a book prospectus and meet with individual faculty. Designed primarily for junior faculty in the humanities and social sciences but all interested junior and senior faculty are welcome. 10 am-2 pm; Benson 410; reservations required.

November 11: Reception/Dinner for 2004-05 WFU Authors, Editors, and Performing Artists. Z. Smith Reynolds Library. 5:30-7:30 pm; by invitation.

November 18: ORSP Honors Excellence in Grantsmanship, 2004-05. 4-5:30 pm; by invitation.

January 6, 2006: New Faculty Orientation Luncheon, 12 -2 pm; Autumn Room; by invitation.

February 16: Workshops with Bob Lowman, Associate Vice-Chancellor for Research at UNC-Chapel Hill

- Building Industrial Partnerships. Collaborate successfully with industry and retain control of the research agenda. 8:30 am-12:00 noon.
- A Guide to Foundation Grant Funding. Identify promising foundations, learn to network in preparing a grant request, how to apply formally, build a budget, and more. 1:00-4:30 pm.

Both are designed for those with grantwriting experience; Benson, TBA; reservations required.

<sup>\*</sup> Spring competition contingent upon available funds

## **OUTSTANDING PROJECT PROFILES**

Rebecca Alexander, Assistant Professor of Chemistry, has won a 5-year Faculty Early Career Development (CAREER) grant. The NSF's most prestigious award supports junior teacher-scholars whose integration of research and education predicts lifetime contributions. Her project, Dissecting Domain-Domain Communication in Methionyl-tRNA Synthetase, uses an array of approaches to investigate how a specific peptide component at the domain interface of MetRS, one of 20 enzymes essential for protein biosynthesis, promotes interdomain communication. If the Central Dogma of molecular biology is DNA-RNA-protein, then, in the broadest sense, these results will help to explain how conformational changes communicate information from RNA to protein over distances. The project engages undergraduate and graduate students in cutting-edge research at the interface of biology, chemistry, and physics. Dr. Alexander also carries her expertise and enthusiasm to teacher workshops and student enrichment activities in local rural and urban schools. She is the PI on 4 other current awards.

Jack Rejeski, Thurman D. Kitchin Professor of Health & Exercise Science, has won a 5-year NHBLI research grant supporting The Cooperative Lifestyle Intervention Program (CLIP). Its long-term objectives are to evaluate the effects of lifestyle interventions on health outcomes for older adults living in NC rural communities and to develop innovative approaches to reach them. A collaboration with investigators from WFUHS, the University of Florida, and NC State, this study is uniquely designed to build partnerships with Cooperative Extension Agencies (CEAs) in 4 counties surrounding Winston-Salem and eventually to disseminate results throughout the state, building additional partnerships with CEAs in the delivery of health-based interventions. Study participants will be over 60, overweight, and have cardiovascular disease or the metabolic syndrome. A 3-arm randomized controlled trial, CLIP treatments include a successful-aging education condition, group physical activity, and a lifestyle intervention addressing both sedentary behavior and weight loss. The primary aim will compare the effects of the 3 treatment arms on change in mobility disability after 18 months. Secondary aims include changes in adiposity, cardiovascular fitness and risk factors, physical activity, and health-related quality of life. The interventions use state-of-the-art behavioralchange theory, consistent with research that Dr. Rejeski and his colleagues have conducted with older adults for the past 15 years.

After persistent and assiduous application, several faculty will receive their first federal awards in FY06.

Bernie Brown, Assistant Professor of Chemistry, will investigate *Structural and Functional Analyses of Archaeal sRNPs* with NIH funding. The project aims to explain how ribosomal RNA modification is accomplished and regulated and the functional consequences of these processes. It will study protein/RNA and protein/protein interactions in the highly conserved RNA/protein complexes that carry out these enzymatic reactions. Results will elucidate the molecular structures and intermolecular interactions vital to complex assembly and biological activity and ultimately provide insight into the etiology and evolutionary origin of human diseases, like dyskeratosis congenital, that are caused by aberrant or deficient RNA modification.

**Will Fleeson,** Ollen R. Nalley Associate Professor of **Psychology**, will study *Integrating Processes and Structure in Personality* with NIH support. Understanding the basic processes of behavioral flexibility would aid mental health theory and treatment. The project will explore when flexibility becomes adaptive or maladaptive by correlating individual differences with various indicators of mental health. Results may help to integrate schools of theory that have been at odds for some 40 years over the person/situation debate and to validate 2 important methodological tools: experience sampling and self-report.

Jim Schirillo, Associate Professor of Psychology, will acquire *Instruments to Measure Visual Bias of Occluded Auditory Signals in Three-Dimensional Space* with NSF funds. State-of-the-art 3-D visual and auditory stimulus generators linked via oscilloscope timing will be used to explore auditory occlusion in an environment that best mimics real-world conditions. Study results can potentially change how psychophysicists model auditory occlusion and change how engineers design environments like cockpits to account for how objects affect the accurate localization of sound sources.

#### **HOW NOT TO GET A GRANT**

from Grantseeker Tips 161 (13 June 2005)

Since WFU is so adept at securing funding lately, failing may become a lost art. Here are 4 tips that will ease proposal development and virtually assure your free time.

**Guidelines**. Ignore them! Write what you want, regardless of page limits, in any font – think *whimsy*. Rather than pitch to the sponsor's priorities, submit the same proposal you've been sending elsewhere or cut and paste from an article. Strut your stuff, using every trendy phrase heard at the annual conference.

**Preproposal Contact**. Do *not* contact program officers, past awardees, or experienced colleagues. No one can understand your project as well as you do. Definitely don't tell ORSP when you plan to apply; they thrive on pressure.

**Focus on** *Your* **Needs.** Sponsors are more concerned with helping you than solving problems or answering questions. Reviewers will instantly see the significance of your project without your spelling it out.

**Show Me the Money**. Once you identify a sponsor's typical award, request either half of the smallest grant or double the largest. Asking for a small grant says you're not greedy like those other applicants; asking for a large one says you are more committed. On second thought, you haven't paid attention to the sponsor's interests before; why start now?

## TALES FROM THE CRYPT

- † A recent review panel for the American Heart Association was allowed 6 minutes per grant.
- † A PI suggests 4 reviewers for his NSF proposal. "In any case," he asks the Program Officer, "please don't let that jerk who was reviewer 3 last time any where near this new proposal." The PO notes that the previous reviewer 3 is Number 1 on the current list.
- † At a meeting, Dr. Wake is chatting with a colleague, when an other scientist barrels into them and loudly berates the colleague for a nasty review of his recent proposal. When Dr. Bluster stalks off, the colleague tells Dr. Wake, "I didn't review his proposal."
- † A professor applies to a foundation for support in completing a book for which she has a publisher. The foundation director phones the publisher to say that the grant application is a mere formality. A few

- months later, the PI is rejected and told never to apply or even call again. She tells this story to someone who has just applied to that foundation.
- † A professor asks his dissertation adviser to write a recommendation to a granting agency. Phoned several months past deadline, the adviser says he forgot to write the recommendation but didn't like the proposal anyway.
- † All-time favorite: PO to soon-to-be-funded WFU PI: "You have to be at Yale or Harvard!"

#### **GRANTEES BEHAVING BADLY**

from Federal Grants and Contracts 29, 26 (20 June 2005)

About a third of the 3,247 junior and midcareer researchers responding to an NIH survey said they've ignored research rules, from stealing ideas to violating confidentiality: 15% had modified a study in response to pressure; 12.5% had overlooked others' flawed data; 10.8% had selectively reported results; and 1.5% admitted to falsifying data or plagiarism.

Sociologist Brian Martinson, lead author of a 9 June *Nature* commentary on the study, said the data suggest fundamental problems in the scientific enterprise. Postdocs, in particular, feel that peer review at agencies and journals favors established researchers and that their career development is driven by senior scientists' need for labor. "It's important to think about science from a labor force perspective," said Martinson. "If people feel they are treated unfairly, they misbehave."

#### **HHS Finalizes New Misconduct Rules**

Although Martinson thinks that more regulation is not the answer, new rules for addressing scientific misconduct by HHS-funded investigators took effect 16 June. Review has been added to the areas under scrutiny. Responsibility for investigating allegations remains with grantee institutions, which must assure HHS that misconduct policies and procedures are in place. Administrative actions may include debarment from federal funding and service on PHS advisory and peer review committees. (See <a href="http://ori.dhhs.gov/">http://ori.dhhs.gov/</a>.)

WFU's scientific misconduct policy is being revised to meet the new requirements; current policy is published in the *Faculty Handbook*. (See also <a href="https://www.wfu.edu/rsp/policies.html">www.wfu.edu/rsp/policies.html</a>.)

### INSTITUTIONAL REVIEW BOARD NEWS

#### IRB Members in 2005-2006

Steven Folmar (Anthropology), IRB Chair, 336/758-6065, folmarsj@wfu.edu; Mika Hazen (Communication); Deborah Newsome (Counseling); Bob Evans (Education); Tony Marsh (Health & Exercise Science); Batja de Mesquita (Psychology); Joseph Soares (Sociology); Nancy Crouch (Information Systems); Rob Sanchez-Langston (Nonaffiliated Community Representative). Alternates are Paul Thacker, Steve Giles, Laura Veach, Pat Nixon, and Janine Jennings.

#### **IRB Contacts**

Check the updated 2005-6 IRB web page at <a href="https://www.wfu.edu/rsp/irb">www.wfu.edu/rsp/irb</a>. Contact the IRB chair or a member for research-related questions, such as whether a proposed study might be exempt or informed consent can be waived. Contact Lori Messer or Henny Wakefield (ORSP, 758-5888) for questions about participant rights in research or information on the status of an application or approved protocol.

#### **Deadlines for Submission**

2005 IRB meetings are listed below with the deadline for submission in parentheses.

9/19/05	(9/5/05)	1/16/06	(1/2/06)
10/3/05	(9/19/05)	2/20/06	(2/6/06)
10/24/05	(10/10/05)	3/20/06	(3/6/06)
11/21/05	(11/7/05)	4/17/06	(4/3/06)
12/12/05	(11/28/05)		` ,

#### **IRB Departmental Binders Distributed**

Please check with your department chair or administrative assistant for the current University and IRB policies and procedures and investigator's guide or look on the updated IRB website.

#### Guide for Faculty Advising Student Researchers

Access the new IRB flyer at <a href="www.wfu.edu/rsp/irb">www.wfu.edu/rsp/irb</a> and in 2005-06 department IRB binders. Excerpts appear below.

Q. Why isn't student research automatically exempt?

Student research may be conducted solely within the classroom and overseen by a faculty member. However, the IRB cannot exempt potentially sensitive studies or those that include human participants from a protected population. Since student projects are

performed as an assignment from a WFU employee, the university is ultimately responsible for their proper conduct. The review process protects the university and ensures that any research done in its name optimally protects human participants.

Q. What are my responsibilities as a faculty adviser for student researchers?

#### You must:

- Complete CITI training (<u>www.citiprograms.org</u>).
- Instruct students in the ethical conduct of research involving human participants, including basic human rights.
- Educate students on the role of the IRB, including the procedures to maintain confidentiality and obtain in formed consent from each participant.
- Review, approve, and sign off on students' protocols.
- Q. How does IRB approval benefit me?

Having the IRB approve your proposal or those of your students tells research participants that appropriate steps have been taken to assure their protection and, if called into question, that you have the university's protection. IRB approval also assures that the results of your research can be published in professional journals, many of which have standards for treatment of human research participants in accordance with federal regulations 45 CFR §46.

A revised *Tips for Student Researchers* (2005) is also available on the web and in your department's IRB binder.

#### **IRB Forms**

New forms are available at <a href="www.wfu.edu/rsp/irb/forms.html">www.wfu.edu/rsp/irb/forms.html</a>. Remember, applications submitted on old forms will be returned without review.

# NSF AUDIT REVEALS PIS ARE SLOW AND LOOSE WITH REPORTS

In a recent audit, the NSF's Inspector General found that 47% of required final and annual reports over the past 5 years were submitted late or not at all. Moreover, against policy, 13% of PIs received new awards before NSF had received or approved reports on previous grants. In response, NSF is considering a system that would prevent PIs who have overdue annual or final reports from receiving new awards. (See <a href="https://www.nsf.gov/oig/05-2-006Final.pdf">www.nsf.gov/oig/05-2-006Final.pdf</a>.)

## WFU Funded Research, March - 30 July 2005

# ANTHROPOLOGY Kenneth Robinson

- Endor Iron Furnace Archaeological Investigation, City of Sanford, \$8,350
- Archaeological Assessment of Land Near the William Smith Historic House, Averasboro Battlefield, Cumberland County, Averasboro Battlefield Commission, \$1,632
- Historic Overview of Pekin Area, Uwharrie National Forest, Montgomery County, NC, US De partment of Agriculture, Forest Service, \$2,400
- McCray Farms Cemetery Boundary Confirmation, Burlington, NC, Russell-Koury Properties, LLC, \$697.94
- Archaeological Investigation of Salisbury Confederate Prison, Salisbury Confederate Prison Association, \$14,000

**Paul Thacker**, Local Raw Material Variability and Hunter-Gatherer Lithic Economy in the Portuguese Magdalenian, NSF, \$70,059

### Stephen L. Whittington

- Asian Games: The Art of Contest, North Carolina Humanities Council, \$1,200
- Travel Grant to Borrower, Museum Loan Network, \$7,485.97
- Anthropology/Hispanic Arts Initiative Classes, Arts Council of Winston-Salem, \$3,000

#### **BIOLOGY**

**Miriam Ashley-Ross,** From Water to Land: Salamanders as a Model for Understanding the Evolution of Tetrapod Locomotion, NSF, \$65,518

**Susan Fahrbach**, Role of Orphan Nuclear Hormone Receptors in the Adult Honey Bee Brain, NSF, \$103,668

Anita McCauley, A Stereomicroscope Imaging System for Faculty/Student Research in the Microscopy Core Facility at Wake Forest University, NSF, \$52,999

**Wayne Silver**, *Multiple Mechanisms of Nasal Chemoreception*, NIH, \$16,832

**William K. Smith**, Ecological Facilitation in the Alpine Treeline Ecotone of Georgia: Implications for Future Global Change, US Civilian Research and Development Foundation, \$7,000

### **CHEMISTRY**

#### Rebecca Alexander

- Structural and Mechanistic Studies of MethionyltRNA Synthetase, National Foundation for Cancer Research. \$25,000
- Support for Research Technician for Collaborative Projects, Scripps Research Institute, \$36,000
- CAREER: Dissecting Domain-Domain Communication in Methionyl-tRNA Synthetase, NSF, \$126,616

**Ulrich Bierbach**, *Novel DNA-metalating Hybrid Antcancer Agents*, NIH, \$226,016

#### **Bernard Brown**

- Structural and Functional Analysis of Archaeal sRNPs, NIH, \$225,975
- Structural Analysis of Human Kininogen and Its Interaction with Ferritin, WFUHS / American Cancer Society, \$10,000
- With Rebecca Alexander. Biochemistry Through Biotechnology: Undergraduate Laboratory Enhancement, North Carolina Biotechnology Center (NCBC), \$18,000

**Brad Jones,** Faculty Recruitment Grant: Associate Professor of Chemistry, NCBC, \$100,000

**S. Bruce King**, *Profiling of Redox-Sensitive Signaling Proteins*, NIH, \$32,300

**Abdessadek Lachgar**, *Inter-American Materials Collaboration: Hybrid Inorganic Organic Materials*, NSF, \$33,000

**Akbar Salam**, Wiley-International *Journal of Quantum Chemistry* Young Investigator Award, University of Florida's Quantum Theory Project; the Sanibel Symposium on Atomic, Molecular, Biophysical, and Condensed Matter Theory; and John Wiley & Sons, Inc., \$1,000 plus conference registration

Mark Welker, New Organosulfur Anticarcinogenic Enzyme Inducers, NIH, \$208,705

## COMMUNICATION

- Steven GilesPromoting Fidelity Using Remote and On-Site
- Support, NIH, \$23,911
- Building Teacher Mastery via an Internet Training System, NIH, \$99,132

**Ananda Mitra**, Rapid Responses to Problem Drinking on College Campuses, WFUHS / NIH, \$11,296

#### **COMPUTER SCIENCE**

#### Jacquelyn Fetrow

- Algebraic and Statistical Models of Redox Signaling, NIH, \$268,179
- Profiling of Redox-Sensitive Signaling Proteins, NIH, \$18,371
- Integrated Process for Functional Site Feature Analysis, NSF, \$168,390

### **Robert Plemmons**

- A Practical, Enhanced-Resolution, Integrated Optical-Digital Imaging Camera System, Department of Energy, \$160,794
- Innovative Computational Methods for Inverse Problems in Optical Imaging, Army Research Office, \$51,255

**Todd Torgersen**, Innovative Methods for High-Resolution Imaging and Feature Extraction, Army Research Office, \$49,003

# HEALTH AND EXERCISE SCIENCE Michael Berry

- Claude D. Pepper Older Americans Independence Centers, NIH, \$20,132
- Exercise and Regional Fat Metabolism after Menopause, NIH, \$18,310

**Gary Miller**, Physical Activity Monitoring in the LIFE Study Using the Actigraph Accelerometer, NIH, \$10,685

#### Jack Rejeski

- Cooperative Lifestyle Intervention Program, NIH, \$585,424
- With Anthony Marsh, Co-Core Leaders for Clinical Research at Claude Pepper Older Americans Independence Centers, NIH, \$14,640
- With Paul Ribisl and Gary Miller, SHOW Grant Look Ahead, NIH, \$100,229

#### **HISTORY**

**Jeffrey D. Lerner**, Margo Tytus Visiting Fellowship, University of Cincinnati's Department of Classics, 3 January-31 March 2006

**Monique O'Connell**, Empire in the Balance: The Venetian Maritime State in the Early Modern Mediterranean, NEH Summer Stipend, \$5,000

# MATHEMATICS Robert Plemmons

 A Practical, Enhanced-Resolution, Integrated Optical-Digital Imaging Camera System, Department of Energy, \$160,794  Innovative Computational Methods for Inverse Problems in Optical Imaging, Army Research Office, \$51,255

### **PHYSICS**

#### **David Carroll**

- Smart Coatings Material Program, Office of Naval Research. \$93.000
- Carbon Nanotube Synthesis: Assessing Economic and Environmental Tradeoffs in Process Design, NSF, \$27,000
- Agile Response Coatings, Air Force Office of Scientific Research, \$1,443,000

#### Jacquelyn Fetrow

- Algebraic and Statistical Models of Redox Signaling, NIH, \$268,179
- Profiling of Redox-Sensitive Signaling Proteins, NIH, \$18.371
- Integrated Process for Functional Site Feature Analysis, NSF, \$ 168,390

**Daniel B. Kim-Shapiro**, Effects of Nitric Oxide in Sickle Cell Blood, NIH, \$310,994

#### **POLITICAL SCIENCE**

Michaelle Browers, Cross-ideological Alliances in the Arab Region: Strategic Framing and Ideological Transformation, Fulbright Scholar Award, summer 2006 in Egypt, Lebanon, and Yemen

#### **PSYCHOLOGY**

**William Fleeson,** *Integrating Processes and Structure in Personality*, NIH, \$193,594

#### Michael Furr

- Behavioral Models of Impulsivity: Alcohol and 5-HT Effects, NIH, \$9,403
- Impulsivity Models: Behavioral Mechanisms, NIH, \$9,404

**James Schirillo**, Acquisition of Instruments to Measure Visual Bias of Occluded Auditory Signals in Three-Dimensional Space, NSF, \$57,147

#### **SECREST SERIES**

**Lillian Shelton**, *Treemonisha Project, presented by the Secrest Artist Series*, Pennsylvania Performing Arts on Tour, \$4,000

#### **WOMEN'S AND GENDER STUDIES**

**Wanda Balzano,** Everett Helm Visiting Fellowship, Lilly Library at Indiana University, Bloomington

### ORSP has updated its website as of July 1, 2005.

**New to ORSP web** (www.wfu.edu/rsp): Opportunities for Junior Faculty in the Arts and Humanities; Social, Behavioral, and Economic Sciences; and natural and mathematical Sciences.

Office of Research and Sponsored Programs
Wake Forest University
117E Reynolda Hall, PO Box 7528
Winston-Salem, NC 27109
336-758-5888; fax 336-758-1959; http://www.wfu.edu/rsp

LORI MESSER Director 336/758-4910 messerlj@wfu.edu

STEPHEN WILLIAMS Assistant Director 336/758-4909 williasl@wfu.edu

JULIE EDELSON Researcher, Editor 336/727-0464 edelsojb@wfu.edu

GLORIA STICKNEY
Coordinator, Research Services
336/758-4189
stickngd@wfu.edu

HENNY WAKEFIELD Coordinator, IRB Administration 336/758-5195 wakefihk@wfu.edu

