



Volume 4, Number 4
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SAVE THE DATES

January 14, 2011

Half-Day Workshops
with Franklin Medio, Ph.D.
*Improving Supervision,
Evaluation, and Remediation*

January 15, 2011

HPERS: Recognizing, Teaching,
and Modeling Professionalism

February 9, 2011

Faculty Development Seminar
with Patrick Hardigan, Ph.D.
Creating Educational Tests

March 14, 2011

Half-Day Workshops
with Effel Harper, M.B.A.
*Let's Web 2.0 Our Way
in the Classroom*

February 10, 2012

HPD Research Day

RSVP to Kathleen Hagen
at (954) 262-1235
or khagen@nova.edu

SCIENTIFIC MISCONDUCT

By Patrick C. Hardigan, Ph.D.

In August of 2010, Harvard University found a prominent researcher, Marc Hauser, Ph.D., "solely responsible" for eight instances of scientific misconduct. Dr. Hauser is a leader in the field of animal and human cognition and in 2006 wrote a well-received book—*Moral Minds: How Nature Designed Our Universal Sense of Right and Wrong*. This type of academic misconduct is not new. The case involves issues of integrity that are at the very core of proper science. These issues are the same whether they are raised in a pharmaceutical clinical trial, in a basic science laboratory, or by a behavioral scientist.

David Goodstein, Ph.D., a professor of physics at the California Institute of Technology, examined the issue of scientific integrity. In his book entitled *On Fact and Fraud: Cautionary Tales from the Front Lines of Science*, Goodstein suggests there are three reasons for this behavior.¹⁻²

The first is career pressure. Scientists face keen competition to make discoveries, which occasionally spurs a few to cheat. The second reason, which is related to the first, involves overly confident or ambitious investigators "who know or think they know what the answer to the problem they're considering would turn out to be if they went to all the trouble of doing the work properly." Since they are certain they know the result, they simply leapfrog past the steps that require them to produce it. These scientists are not necessarily lazy, Goodstein says. "They may just feel intensely driven to complete research quickly."

The third reason is that scientists who work in a field "where individual experiments are not expected to be precisely reproducible" may be tempted to cheat because the nature of what they're doing makes it easier to misrepresent data or, at the extreme, simply fabricate it out of whole

cloth. One of Goodstein's chapters deals with the astonishing case of an apparent physics wunderkind who, at the height of his career, churned out on average a paper a week in which he reported stunning and widely heralded breakthroughs in organic semiconductor technology. Then, as Goodstein notes wryly, "The wheels started to come off." Not only were there no breakthroughs, there had in fact been no experiments. There was only a deeply embarrassed and shaken physics community whose debate over how this could possibly have happened is, as Goodstein notes, "still going on."

Two approaches to preventing scientific misconduct have been discussed.³ First is primary prevention, or identifying and removing causes of events and identifying factors whose presence, rather than absence, actively reduce such occurrences. The second option is secondary prevention, which involves increasing opportunities for discovering misconduct and procedures for investigating cases as well as sanctions delivered to those responsible for the misconduct.³ As the pressure to "publish-or-perish" continues in academic centers, scientific misconduct will remain a prominent issue.

1. Rogers M. Caltech's David Goodstein investigates sham science in *On Fact and Fraud*. <http://weblab.caltech.edu/features/15>. Accessed October 20, 2010.
2. Goodstein D. *On Fact and Fraud: Cautionary Tales from the Front Lines of Science*. Princeton, NJ: Princeton University Press; 2010.
3. Weed DJ. Preventing scientific misconduct. *Am J Public Health*. 1998;88(1):125-129.

**Put your
sandwich
in this bag**



and join us on Thursdays for any or all of the

2011 Brown Bag Grant Workshops

To whet your appetite...dates and topics:

- 01/06The NSU Grant Process
- 01/13Show Me the Money! Finding Grant Funding
- 01/20Reading Between the Lines: Understanding and RFP
- 01/27Why They Should Fund You—Winning with Words
- 02/03S.M.A.R.T. Goals and Objectives
- 02/10Budgets Aren't Boring!
- 02/17Your Award and You (Part I)
- 02/24Your Award and You (Part II)
- 03/03Understanding the IRB
- 03/10Putting it All Together: Tips and Tools

SPACE IS LIMITED—RSVP at www.nova.edu/ogc/brownbag



RESEARCH GRANT APPROVALS

September 2010

College of	Investigator	Protocol Title	Sponsor	Amount
Dental Medicine	Burak Taskonak, D.D.S., Ph.D.	Strengthening of All-Ceramic Dental Prostheses Using Heat Treatment	NSU-HPD	\$5,000 for two years
Dental Medicine	Ambar Pagani, D.D.S.	Bond Strength of Veneering Porcelain to Milled Titanium	NSU-HPD	\$5,000 for two years
Dental Medicine	Robert L. Smith, Ph.D.	Effect of Silane Concentration on Resin Composite Cement Bonding to Zirconia	NSU-HPD	\$5,000 for two years
Osteopathic Medicine	Raymond Ownby, M.D., Ph.D.	Development and Validation of a Computer-Administered Health Literacy Assessment	US DHHS NIH – National Heart, Lung, and Blood Institute	\$336,980 for one year

October 2010

College of	Investigator	Protocol Title	Sponsor	Amount
Optometry	Annette Bade, O.D.	Adaptation to Spectacle Wear in Children and Adolescents with Autism	NSU-HPD	\$5,000 for two years
Osteopathic Medicine	Joshua Berg (Fourth-Year Student)	Nicotine and the P300 Event-Related Brain Potential	NSU-HPD	\$5,000 for two years
Osteopathic Medicine	Marlow Hernandez, M.P.H. (Fourth-Year Student)	Development of the "Health Index" (HI) Statistical Equation as an Alternative Clinical Parameter to Body Mass Index (BMI) in the Prediction and Progression of Metabolic Syndrome and its Cardiovascular, Cerebrovascular, and Endocrine Complications	NSU-HPD	\$5,000 for two years
Osteopathic Medicine	Cyril Blavo, D.O., M.P.H. and T.M.	Evaluation of Interdisciplinary Generalist Curriculum Impact on Medical Student Clinical Performance and Primary Care Preference	NSU-HPD	\$5,000 for two years

November 2010

College of	Investigator	Protocol Title	Sponsor	Amount
Dental Medicine	Talia Puma Pike, D.M.D.	Do Vacuum-Formed and Pressure-Laminated Sports Mouthguards Provide the Same Amount of Protection Against Orofacial Injuries?	NSU-HPD	\$2,500 for one year
Dental Medicine	Peter E. Murray, Ph.D.	Preclinical Trials of Regenerative Endodontic Root Canal Therapy	NSU-HPD	\$2,500 for one year
Dental Medicine	Margaret Cielecki, D.M.D.	Investigation of the Oral Pathogens, Antibiotics, and Disinfectants on Regenerative Endodontic Treatment	NSU-HPD	\$2,500 for one year
Dental Medicine	Mark Anthony Limosani, D.M.D.	Stem Cell Therapy to Regenerate the Roots of Teeth	NSU-HPD	\$2,500 for one year
College of Pharmacy	Nile Khanfar, Pharm.D.	Cultural Differences in Leadership Styles of Pharmacists	NSU-HPD	\$5,000 for two years
Osteopathic Medicine	Jaclynn Moskow Rosenthal (Third-Year Student)	The Relationship Between Motor Function, Endocrine Function, Inflammation, Mood, and Cognition in the Geriatric Population	NSU-HPD	\$4,924.40 for two years
Dental Medicine	Giuliana Diaz, D.D.S.	Bond Strength of Fiber Posts Cemented with Different Resin-Based Luting Cements	NSU-HPD	\$5,000 for two years
Medical Sciences	Andrew T. Mariassy, Ph.D.	Characterization of the Carbohydrate Alterations in the Remodeling of Lower Airways in Asthma	NSU-HPD	\$5,000 for two years
Dental Medicine	Ira Scott Rothstein, D.M.D.	The Effects of Synthetic Cortical Bone Thickness and Cancellous Bone Density on the Primary Stability of Temporary Anchorage Devices	NSU-HPD	\$4,961 for two years

Nova Southeastern University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur Georgia 30033-4097. Telephone number: 404-679-4501) to award associate's, bachelor's, master's, educational specialist, and doctoral degrees.

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Office of Clinical Research

Clinical Trial Investigator

Pathway to Success

February 8, 2011

*Investigator's Roles,
Responsibilities, and
Regulations*

March 8, 2011

*Clinical Trial
Management:
Where to Begin and
How to Succeed*

April 5, 2011

*Applying Good Clinical
Practice
in Research*

The 3 Rs
Rules
Responsibilities
Resources