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Making the right choices in research with regard to research integrity and ethics is essential for many reasons. The following article, *Research Integrity: Making the Right Choices* is very enlightening and contains excellent information for everyone who participates in any way in scientific research.

Research Integrity: Making the Right Choices

Author: Elisabeth Pain

United Kingdom, January 4, 2008

When the *US Department of Health and Human Services*, the *European Science Foundation (ESF)*, the *European Commission and Portuguese Ministry of Science, Technology, and Higher Education*, the *International Council of Science (ICSU)*, *NATO*, the *European Molecular Biology Organization (EMBO)*, and the *UK Research Integrity Office and Committee on Publication Ethics (COPE)* join forces to tackle an issue, you know it's a big one. The first world conference on research integrity, which took place in Lisbon last September under the auspices of these organizations, set an unequivocal tone: Researchers are human, and there is more scientific misbehavior in scientific labs than makes headlines.

For early-career researchers, it's a minefield.

"There will be temptations" – and pressures – to misbehave, says Nicholas Steneck, Emeritus Professor of history at the University of Michigan in Ann Arbor and co-organizer of the Lisbon conference on behalf of the U.S. Department of Health and Human Services Office of Research Integrity (ORI). Young scientists who succumb to those pressures may see their careers derailed. But even those who don't succumb can be brought down by scientific misconduct. Sitting idly by – or, alternatively, speaking out – as others in the lab commit research sins can sink the careers even of those who do nothing wrong. It's hard to know what to do.

Pressures and temptations

The U.S. Office of Science and Technology Policy defines research misconduct as "fabrication, falsification, or plagiarism in proposing, per-

forming, or reviewing research, or in reporting research results." But "the definition of misconduct varies from university to university, and from country to country," Steneck says. And though they may not rise to the level of 'misconduct,' there are some less serious research sins that should also be avoided, and often these come from merely cutting corners or getting sloppy.

Serious or not, scientific misbehavior is far more common than most people realize, according to a 2002 survey of 3,600 mid-career scientists and 4,160 postdocs whose research was supported by the National Institutes of Health (NIH). 33% of respondents – 38% of mid-career scientists and 28% of early-career scientists – admitted sanctionable misbehavior in the previous 3 years, including falsifying or fabricating data, not disclosing conflicts of interest, using others' ideas without credit, and failing to present data that contradict one's previously published research.

Scientific misbehavior "always has been a problem, but [it is] today in particular," says Ulrike Beisiegel, chair of the German Research Foundation's (DFG) ombudsmen committee and director of the Institute of Molecular Cell Biology at the University of Hamburg. "We have so many more researchers and not that many more positions. It's a very tight competition which is putting a lot of pressure" on researchers. Scientists "who see competition as a major factor in their environment are more likely to misbehave..., including engaging in misconduct," says Melissa Anderson, associate professor of higher education at the University of Minnesota in Minneapolis, a co-author of the 2002 survey.

A recent study of ORI's investigations of cases of plagiarism, falsification, or fabrication in the biomedical and behavioral sciences in the United States suggests that postdocs and graduate students are especially vulnerable to temptations. Some fraction of these researchers are likely to respond by lowering standards or cutting corners to meet their deadlines and obligations if "they don't know how to answer demands on their time," says Elizabeth Heitman, associate professor of medical ethics at the Center for Biomedical Ethics and Society at Vanderbilt University,

Tennessee. Worse, they're likely to experience pressure from supervisors and advisors "to clean up results," or to publish them too quickly in an effort to beat the competition, Anderson says.

Choose your poison

But while early-career scientists may be under greater pressure to misbehave, they're also the most likely to do something about it when they see other people doing it. Of the 60-or-so cases the DFG ombudsman handles each year, Beisiegel says, about two-thirds are initiated by early-career scientists. Young scientists, she believes, are less likely to look the other way. "Old professors have gentlemen's agreements on what to do ... or not, not always according to the best scientific practices," she says.

Those unfortunate enough to witness misconduct face difficult decisions. Expose wrongdoing and your lab may be shut down or have its funding withdrawn. Your research may be stalled and your graduation may be delayed. You could even lose your job. Even if the guilty party survives the accusation, the young researcher who rats him out is likely to take a fall. All this is bound to take a toll on your mental and physical wellbeing.

Many whistleblowers manage to put their careers back on track, but others leave science and a few suffer permanent damage. "They are very frustrated and are turning into these people who are very unhappy and blame others," Beisiegel says. The alternative – choosing not to expose wrongdoing – is hardly a more promising option. In addition to a heavy weight on your conscience, you may have to share the frying pan with your supervisor if the misconduct is discovered.

"It's a terrible position for a young scientist because you are caught between blowing the whistle with all the consequences for your own career, or being [associated with] fraudulent research, which can also destroy your career," Anderson says.

What should you do?

"The integrity of research is everyone's responsibility," Steneck says. "If you see something that you don't think is right, all professionals have a responsibility to raise their concerns."

But if you proceed, proceed with great care. Before blaming anyone, make sure you understand what's going on and that what you have seen violates specific scientific, professional, or ethical standards. If you keep having problems repeating experiments done previously in your lab and you suspect the results have been falsified, start by asking how the original work was done.

"Students ... can say, for example, ... 'I have never seen this procedure, can you explain to me how it works?'" Heitman says. If your questions are systematically evaded or the results still can't be reproduced, you may have a problem. Just don't jump to conclusions too quickly.

Once you're convinced that misconduct has occurred, find help. A young scientist "shouldn't try to take on an issue like that alone. He or she needs to talk to another faculty member or supervisor or maybe there is someone in the institution ... willing to have a confidential conversation about what may be happening," Anderson says. In countries and institutions where they exist, the ombudsman is usually the right person to approach.

Once you've reported your suspicions to the right people, they should help you deal with them. "Find out what the options are, and work with someone who you think will take the matter seriously," Anderson says. If they don't, what then? Young scientists "have a responsibility to bear witness, but institutions and public universities shouldn't expect students to go out on their own and be the whistleblower. They can't be a canary in a coalmine," Heitman adds.

Playing it safe

For the most part, landing in a research environment with shoddy ethics is just bad luck. "It's very difficult to know in advance. If you look at the worst cases of scientific misconduct, the people involved are very productive, charismatic, brilliant ... They are the kind of people who will attract young scientists," Anderson says.

Still, you can tweak the odds in your favor. Before committing to a new place, visit and talk to people there. While "no one is going to admit to pressures to engage in questionable practices," asking people privately "whether they'd choose to come back again [and whether] they'd choose their current PI again" may yield some indirect insight, Heitman says. Beisiegel also recommends checking the publication record of the lab: be wary of those that publish at lightening speed or rarely mention Ph.D. students and postdocs as contributors.

Needless to say, it's not always the PI's fault. Early-career scientists need to learn to hold themselves to high ethical standards. "If someone were watching over [your] shoulders, would you do anything differently? ... Don't cut corners. Don't try to make your findings better than they really are," Anderson says. "It's not only being honest to others but particularly to yourself as very often you are driven by your hypothesis and

you get a slightly unreal picture of what you are doing. Look carefully at the data,” says Beisiegel. Ultimately, “know yourself and what your temptations are,” Heitman says.

This of course requires knowing the ethical rules. “I would recommend ... [that young scientists] spend time looking at the professional codes in their area of research,” Steneck says. Check the guidelines and protocols at your university, read the publication rules for the journals you want to publish in, attend meetings and courses on the responsible conduct of research, and talk to trusted senior confidants. “Young people ... need to talk to their mentors and other supervisors and find out how they’ve learned to cope with these pressures” without compromising their integrity, Anderson says.

“Many researchers think that [research integrity] is something they don’t really have to think about,” Steneck says. But “there are a couple of reasons why one should take it seriously. One is self-interest: If you are not aware of the rules, you can make mistakes and these ... could come back to haunt you.” But there are collective reasons, too, for taking research integrity seriously. It is in “our interest to maintain ... a good reputation. That’s not a given.” Losing the public’s trust could have political repercussions and mean less funding and freedom for researchers in the future.

Source:

http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2008_01_04/credit_a0800001

**UNIVERSITY OF ARIZONA
RESEARCH SUPPORT SERVICES GROUP
(RSSG)**



Good Laboratory Practices (GLP)

Ensuring Equipment Data Quality

To ensure equipment data quality there is an expectation of a collection of **documented evidence** that an instrument **performs suitably for its intended purpose** which includes the process of **qualification, implementation and on going use of the equipment.**

Documentation

- SOP’s and Policies
- Checklists
- Maintenance Records
- Calibration
- Quality Checks

Equipment data quality is a continuous process designed to assure that a piece of equipment produces consistent and reliable data.

**If it is not written down
it did not happen.....**

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Radiation Control



IRPA Conference Information

IRPA 12 – Buenos Aires, Argentina
October 19-24, 2008
13th Annual Congress of the International
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The Congress motto is:

“Strengthening radiation protection worldwide.”

You may also view the conference web site at:

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Registration and fees:

<http://www.irpa12.org.ar/index.php>.

For more information, please use the following

email address: secretariat@irpa12.org.ar.



News from HIPAA.....

**Hospital Workers Break
HIPAA Privacy Law**

A hospital in Laramie, Wyo., is reminding its staff that federal law prohibits them from looking at even their own medical records, after several employees came forward in the wake of several firings and suspensions, and admitted peeking at their own records.

In the past month, Ivinson Memorial Hospital has terminated one employee, suspended two others and reprimanded four for violating HIPAA, the Associated Press (AP) reported.

Those employees who were reprimanded also looked at medical records other than their own, but several employees have since come forward saying they had looked at their own records, the *Laramie Boomerang* newspaper reported.

“You can’t look at your own records or any family member records unless there is a clinical need to do so,” said Nick Braccino, interim CEO of the hospital. “If you are doing so just because they are there and you have a private interest, you

are violating HIPAA regulations and patient confidentiality.”

No employees who looked only at their own patient records will be fired, Braccino told the AP news service.

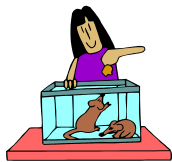
The employees looked at their own records with harmless intent, said hospital board of trustee member Shelbie Bershinsky. “I’ve been in health care 19 years and I, until today, I didn’t think there was anything wrong with me looking at my records,” she said. “I now know that I shouldn’t do that.”

Board of trustee member Dan Baccari also pointed out that employees are allowed to view their own information under certain conditions. “There is an appropriate process for employees to inquire about their medical or financial information,” Baccari told the AP.

Source: <http://health-care-it.advanceweb.com/general/hipaa/hipaanewslist.aspx#2>

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University of Arizona – Animal Care



Quality Care for Research Animals

eSirius is Coming!  by: Andi Mitchell

University Animal Care, in conjunction with the UofA Institutional Animal Care and Use Committee (IACUC), is in the beginning stages of implementing an online research information management software package called eSirius which encompasses the submission, review, and approval of protocol applications and amendments, animal requisitions, account management, invoicing, and census management in a secure environment. The current software (Sirius) used by University Animal Care is an older product and unfortunately is no longer supported by the software company (NTM). Even though the current software has worked well in the past, UAC Business Services is concerned about future issues occurring that could possibly jeopardize the business operations of Animal Care. A good comparison to make for this change in software programs is the move from DOS to Windows based applications pre-2K. Just as DOS was no longer supported, Sirius as the

older desktop server based program is also being replaced by a much more powerful and useful package. Another reason eSirius is being implemented at this time is to proactively anticipate the rise in animal populations, protocols, compliance reporting, animal requisitions, breeding colony cage cards and invoices in the near future with the opening of the BIO-5 research facility.

Who will use eSirius and to what purpose?

Principal Investigators and members of their staff who submit protocols and/or animal requisitions, or who would need to have access to invoices and account management tools will have access to eSirius.

eSirius will be used by the IACUC office staff and IACUC members for protocol management, facility inspections and compliance; by the UAC Directors office for AAALAC, USDA and OLAW reporting and compliance; by UAC Husbandry Purchasing and Bar Code staff for animal ordering, breeding colony support and animal census; by UAC Business Support staff for invoicing and account management; and by UAC Management staff for facility management.

What are the advantages to the Research community?

eSirius is a powerful management tool that allows the PI and their approved staff quick and easy access to their protocols, animal requisitions and all associated processes via a password protected homepage. (Census and invoicing to come at a later date)

All protocols, amendments and animal orders are entered directly into eSirius by the PI and their staff, reducing paper usage, processing time and increasing efficiency.

Electronic alerts are created by eSirius and posted on the homepage to notify a PI when:

- A protocol has been submitted to the IACUC and later when the protocol is approved.
- A protocol has reached 80% of the approved number of animals used.
- It is time to complete an annual report for a protocol
- A protocol is expiring.
- A protocol amendment has been submitted to the IACUC and later when it is approved.
- An animal order has been submitted and later placed by UAC staff.
- An animal order has been waitlisted by the vendor

- Animals have been received.

Invoicing and census alerts to come in the future!

Where do we stand in the implementation process?

Currently the protocol application and IACUC screens are being customized to meet the needs of the IACUC office staff and its members. Protocol pick lists are being loaded into the database to ensure that the PI and their staff can easily select procedures, drugs, housing and work locations when completing their protocol. Active personnel lists are being compiled for inclusion in the data tables so that the PI has the bulk of their staff listed in eSirius prior to going live. Principal Investigators will be mailed a report of all current staff listed on their protocols to approve and assign eSirius access rights (protocols, animal orders, invoices/account management or no access). Additional staff not currently listed on a protocol (ex. – fund accountant or Business Manager) can be identified and added during this initial phase of access rights assignment. After this initial loading of personnel into eSirius, the PI will need to complete an eSirius Access Request form and return it to the eSirius office to give access to additional personnel. A PDF form will be available in the future on the UAC web page in the forms section

What's next?

A review and comment session with the IACUC staff and interested IACUC members will occur after the initial customization has been completed. Any changes identified during the IACUC session will be addressed and then a test period will take place with a few PI's entering protocols into eSirius for review by the IACUC. Further changes resulting from the protocol test will be implemented and reviewed by the IACUC. Concurrent with the protocol testing phase, the animal requisition screens and processes will begin to undergo customization. After the protocol portion of eSirius has been tested and updated as necessary, the testing process will move on to animal ordering.

What about training sessions for eSirius?

After eSirius has been configured and thoroughly tested, individualized training sessions will be offered to UAC, IACUC and PI staff in both group and one-on-one sessions. Training will be offered monthly or on an "as needed" basis to accommodate the needs of new staff members after eSirius has been implemented.

How will existing data be entered into eSirius from Sirius?

Data, including current protocols and active personnel, will be transferred from the old system (Sirius) to eSirius electronically by NTM AFTER process testing and customization has been completed and before going "live."

How soon will I be able to use eSirius?

We're still very early in the implementation process at this time. PI's will be given lots of notice when the transition to eSirius is scheduled to take place.

Who do I contact if I have questions concerning eSirius?

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HUMAN SUBJECTS PROTECTION PROGRAM

≡Highlights≡

Family Educational Rights and Privacy Act of 1974 (FERPA)*

One of the laws that protects private identifiable information is the Family Educational Rights and Privacy Act of 1974 (FERPA). This law focuses on student records and is overseen by the Department of Education. The following are major concepts found in FERPA:

- ✚ Student records are considered "education records." An educational record includes any information or data recorded in any medium, including but not limited to handwriting, print, tapes, film, e-mail, microfilm, and microfiche which is directly related to a student and maintained by the "institution" or by a person acting for the "institution."
- ✚ All education records are confidential in most cases (except directory information) and cannot be disclosed unless the student (or parent if the individual is under 18 years of age) consents to the disclosure. Directory information does not generally require a written consent from the student or student's parent and may be viewed and released to

the public unless the student or parent has placed an affirmative “restriction” on its release. Directory information can include the following and may vary from institution to institution:

- Students’ name, date of birth, local address/telephone number, electronic mail address, college, class standing, academic program, dates of attendance, status (full or part-time registration), degrees received, honors and awards received, participation in officially recognized activities, and weight and height of members of athletic teams.

A general rule to remember is that if the information is personally identifiable, you need to obtain written consent from the student or from the parent. Personally identifiable means the information would make the student’s identity easily traceable. If you are obtaining written consent, it must include the following:

- The precise records to be disclosed
- The purpose of the disclosure
- To whom the disclosure will be made

The form must be signed and dated by the student or the student’s parent.

Faculty and staff generally may not see a student’s education records without first identifying a legitimate educational interest or one of the other exceptions under which records may be reviewed.

Access to student records carries with it a bond of trust which requires close attention and compliance with FERPA. In other words, access should only be obtained when information is needed to perform a specific task and communication to other parties should only occur when the communication is authorized under FERPA law.

*<http://www.registrar.arizona.edu/ferpacourse/Majorconcepts.htm>

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Registration and fees:

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For more information, please use the following email address: secretariat@irpa12.org.ar.

Upcoming Conferences/Workshops

July 23, 2008

[Public Service, Public Trust: Deepening the Experience of Research Integrity for Medical Scientists and Clinicians](#)

Bethesda, MD

Co-Sponsor: Uniformed Services University

September 17, 2008

[A Research Integrity Education Conference for the Federal Nursing Community](#)

Bethesda, MD

Co-Sponsor: Uniformed Services University

October 2-3, 2008

Fostering International Research Collaborations

Co-Sponsor: University of Minnesota

Minneapolis, MN

October 19-14, 2008

IRPA 12 – Buenos Aires, Argentina

October 19-24, 2008

13th Annual Congress of the International Radiation Protection Agency (IRPA)

<http://www.irpa12.org.ar/index.php>

May 15-17, 2009

Fifth Biennial Research Conference on Research Integrity

Niagara Falls, NY

Co-Sponsor: University of Minnesota

University of Arizona Program in Research Integrity Education staff:

Ruth K. Daniels, Program Coordinator and Editor
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Words of Wisdom:

“When an American says that he loves his country, he means not only that he loves the New England hills, the prairies glistening in the sun, the wide and rising plains, the great mountains, and the sea. He means that he loves an inner air, an inner light in which freedom lives and in which a man can draw the breath of self-respect.”

~Adlai Stevenson