Responsible Conduct of Research Workshop Series, 2015-2016

Scientific Communications, Rights to Data, and Authorship

-- October 14, 2015--
Expectations

- **Read the Syllabus for each Workshop**
  - Pre-Workshop Readings and completing the Pre-Workshop Tasks are important for identifying the issues and questions that are most important to your interests.

- Because these sessions are designed to promote discussions, **no cell phones or laptops will be allowed on desks or be used during the workshops.**

Adapted from: Ebert-May and Hodder (2008) Pathways to Scientific Teaching (Chapter 1)
Common Understandings

- Rights to Data
  - What constitutes “data”

- Authorship
  - Implies “writings”
  - Other means?

- “Scientific” Communications
  - Personal & Confidential ← Open to all
“Misconduct accounts for the majority of retracted scientific publications” – PNAS – October 1, 2012

http://www.pnas.org/content/early/2012/09/27/1212247109.abstract

“A detailed review of all 2,047 biomedical and life-science research articles indexed by PubMed as retracted on May 3, 2012 revealed that only 21.3% of retractions were attributable to error.

In contrast, 67.4% of retractions were attributable to misconduct, including fraud or suspected fraud (43.4%), duplicate publication (14.2%), and plagiarism (9.8%).
Research Data

- **Control**
  - physical management of research data and records

- **Access**
  - conditions under which various people may inspect or use research data

- **Ownership**
  - in a legal sense, who owns the data
Research Data in Your Discipline

- “Raw” data – typical research data in your discipline!
- Research records
  - Research plans as described in funding or dissertation proposals
  - Procedures documented in IRB, IACUC, or ORCBS protocols
  - Lab notebooks or other records of the implementation of your research
  - Manuscripts and other reports
These are Raw Data

Rat Thoracic Aorta

Force (milligrams)

Log Tyramine [M]

+PVAT

-PVAT

wash
Management of Research Data

- Do you maintain lab notebooks?
  - Where are they stored?
  - Frequency of review by PI?
- How can you protect the integrity of your research data and specimens?
- How can you protect the security of your research data?
- What are your disaster recovery plans?
- Who has access to your data?
- Who decides to share research data?
The Office of Research Integrity

http://ori.hhs.gov/TheLab/

- KIM PARK, a third-year graduate student, who questions the use of her data by another researcher.
- HARDIK RAO, a postdoctoral researcher, who deals with the competitiveness in an up-and-coming lab while balancing the responsibilities of a home life.
- AARON HUTCHINS, a principal investigator, whose overwhelming responsibilities as a professor, researcher, and grant writer lead to his decline as a responsible mentor.
- BETH RIDGELY, a research administrator, who has accepted the role as the university’s Research Integrity Officer and must quickly learn how to handle allegations of research misconduct.
The Lab

- Life Status: Talented and Promising.
- You're on your way to earning your PhD degree early and then on to a successful career as a scientist.
What do you want to do?

1. Tell him you need to read it
2. Just sign
What do you want to do?

1. Read the article
2. Skip reading and get to work
What do you want to do?

1. Ask Greg about the article
2. Just let it go
3. Seek out more advice about what to do
MODULE 4: REPORTING; Authorship

To be listed as an author on a paper, you need to make a substantial intellectual contribution to the research that is described. Not all contributions are substantial enough to merit authorship. In the following activity, drag and drop the different types of contribution at the top of the screen into the appropriate column depending on whether you consider them to be substantial or not.

<table>
<thead>
<tr>
<th>Substantial contribution</th>
<th>Not a substantial contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed the research project</td>
<td></td>
</tr>
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</table>
All authors should receive equal credit from and have equal responsibility for a published paper’s contents.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
All authors should have equal responsibility for accuracy of data in a published paper.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
All authors should have equal responsibility for a finding of plagiarism in a published paper.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
All authors should have equal responsibility for falsification and fabrication of data in a published paper.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
An author should always read original papers cited in a publication. **Why?**

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
Discussion Slide

- Do all named authors share academic credit equally? Why?
- What are the primary responsibilities of an author?
- Do all named authors share these responsibilities equally? Why?
MSU Authorship Principles

- A person claiming authorship or being designated as an author of a creative endeavor should meet all of the following criteria:
  - Participation in conception and design of the creative work, study, analysis or interpretation of any data.
  - Participation in the drafting of the creative work or manuscript or in the editing of the creative work or manuscript.
  - Final approval of the version of the creative work or manuscript to be published.
  - Ability to explain and defend appropriate portions of the work or study in public or scholarly settings.

https://vprgs.msu.edu/announcement/msu-authorship-guidelines-updated
Pre-Workshop Task

☐ What are 1 or 2 journals in which you are expected to publish? Choose one of those and look at the “Notes or Instructions to Authors”. Look for any instructions about who can be considered an “author” for a paper or their policies regarding authorship. Do they have an authorship agreement form that requires a signature from all authors?

☐ Discuss with your research integrity consultant how authorship and author order is decided in your discipline, who decides about who is an author on a paper, and who is acknowledged in the paper.

☐ Deposit a PDF of the “Instructions to Authors” in ORA.

☐ MUST BE DONE BY MIDNIGHT TONIGHT FOR YOU TO RECEIVE CREDIT!
Have you published? How many publications do you list on your CV or Resume?

1. No
2. Yes, 1
3. Yes, 2
4. Yes, 3
5. Yes, 4-5
6. Yes, 6-8
7. Yes, 9-10
8. Yes, 10 or more
Expected Number of Publications

- In your discipline, how many publications are needed by:
  - An undergraduate or master’s degree student seeking admission to a top doctoral program?
  - A doctoral student seeking admission to a top post-doctoral program?
  - A doctoral student seeking a job at a university or other setting?
  - An assistant or associate professor seeking reappointment, promotion, or tenure at MSU?

- How do you know? Where can you find this information?
“Ann Green (not her real name) spent seven years on her doctoral project at an East Coast university. In her mind, she had made a major breakthrough, the kind of discovery that could establish a career. When the results were finally published, she was missing from the list of authors. Her adviser … had mysteriously risen to first author. Ms. Green's only appearance came in the acknowledgement section, where she was thanked for her ‘generous advice.’ … ‘It wrecked my career. I went out into the world with no manuscripts behind me.’ In the meantime, she says, her adviser has been cited over and over for her research. According to Ms. Green, he has also used her data to secure $5-million in grants.”

http://chronicle.com/article/When-a-Mentor-Becomes-a-Thief/45995
What’s wrong with this?

- How do you deal with it?
Scientific Communication

- Professional Communication
  - Private, personal & confidential
  - Open for academic credit
  - Reasons to limit communications

- Are modes of professional communication different in different disciplines?
Do you have a profile in Social Networking sites? (multiple answers are allowed).

1. No
2. Facebook
3. LinkedIn
4. Both Facebook and LinkedIn
5. Others
Professional information about your research may be distributed through Social Network sites.

1. Strongly Agree
2. Agree
3. Neutral
4. Disagree
5. Strongly Disagree
Which of the following are OK to list on your CV or Resume as publications? (multiple answers are allowed)

1. Social Networking notes
2. Personal blog
3. Dept seminar
4. Class paper
5. Professional Association paper
6. Book chapter
7. Journal article

![Bar chart showing percentages for each type of publication listed above.]

Research & Scholarly Integrity
Research/Scholarly Integrity Resources

- The Graduate School
  - [http://grad.msu.edu/researchintegrity/resources/](http://grad.msu.edu/researchintegrity/resources/)

  - Guidelines for Graduate Student Advising and Mentoring Relationships
  - Guidelines for Integrity in Research and Creative Activities
TAKE-HOME DISCUSSION

☐ Expectations!

☐ Has your advisor or PI discussed authorship and rights to data within your research or scholarly group? Is there a plan for publications? If not, discuss why with your research integrity consultant and what routinely happens in your department/program.
How do we Verify RCR Education?

https://www.egr.msu.edu/rcr/

https://www.egr.msu.edu/secureresearchcourses/
NEXT WORKSHOP

- Crediting the Works of Others and Avoiding Plagiarism
  - Wednesday, October 28, 2015
  - http://grad.msu.edu/rcr/career.aspx

- Workshop Series Syllabus
  - http://grad.msu.edu/rcr/docs/syllabus.pdf
On your folder sheet for 10/15/2014

Sign out your name