RESPONSIBLE CONDUCT OF RESEARCH

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What is RCR?

• Honesty
• Accuracy
• Objectivity
• Fairness

RCR is important for YOU!

- Establish credibility as a researcher
- Establish a clear “path” of data
- Enable further research
- Contribute to the field of research
- Meet the expectation of public trust
- Membership in the community of scholars-- traditions, values, ethics
Traditions and values

• “The scientific research enterprise, like other human activities, is built on a foundation of trust.”

General categories

• Lab notebooks, chemical, radiation, and biological safety, and mentoring
• Responsibility to human subjects
• Responsibility to animal subjects
• Objectivity/conflict of interest
• Avoiding falsification & fabrication of data and plagiarism ("misconduct")
Laboratory Notebooks

• Complete and accurate lab notebooks are important as a primary source of data, to track protocols and equipment, to record your thoughts for future papers, and as the source of data for a potential patent.

• Check with your major prof/advisor for more guidelines

• Websites: [www.life.uiuc.edu/mcb/580/lab-notes.html](http://www.life.uiuc.edu/mcb/580/lab-notes.html) or [www.swarthmore.edu/NatSci/cpurrin1/notebookadvice.htm](http://www.swarthmore.edu/NatSci/cpurrin1/notebookadvice.htm)
Institutional Review Boards

• Human Subjects
• Animal Subjects

Other University committees on radiation, chemical, and biological safety
Human Subjects

• Research using surveys, focus groups (SBES) or tissue samples (STEM)
• Identifiable private information (confidentiality)
• Interactions or interventions
• IRB application, approval process

• (45 CFR 46-102: federal definition)
Welfare of Lab Animals

- Humane care and treatment
- “Meaningful” research
- IACUC = institutional animal care and use committee; University veterinarian
- Non-animal models
Conflicts of Interest

• Financial
  – Funding
  – Companies: employees, equity
  – Use of products
  – Royalties
  – Relationships

• Federal requirements for disclosure
Mentoring

• Responsibilities of mentors to mentees
• Responsibilities of mentees
• Honesty, collegiality, fair and open work relationships, letters of reference, helping students develop into professionals

• http://grad.msu.edu/all/ris04.pdf  Best practices from Michigan State University
Research Misconduct

- Defined by federal policies
- Adhered to by all universities taking any federal money
- Misconduct
- “Questionable” research practices
- “Unacceptable” research practices
Plagiarism

• “Copying the language of another and passing it off as your own” (New American College Dictionary)

• CITATIONS

• ACKNOWLEDGEMENTS
• Referring directly to the ideas and words of others
• Using previous work as a foundation for your own
• Referencing outside material important to support your argument
• Citing information that is not “common knowledge”
• Acknowledging contributors
  – Group work
  – Services from others
• Copying sections or passages of text
• Using previously submitted work
• Paraphrasing
• Summarizing
Whistleblowing

• Good faith


• http://poynter.indiana.edu/see-ckg1.pdf
Gunsalus suggestions

• Consider alternative explanations
• Ask questions, instead of making charges
• Documentation
• Separate personal and professional
• Seek advice and listen to it

(1998) How to Blow the Whistle and Still Have a Career Afterwards