

# Responsible Conduct of Research

An Introduction to  
the Basic Concepts



## Objective at Purdue

- To promote and sustain an environment of academic honesty and research integrity through instruction, cultivation and maintenance of a Responsible Conduct of Research program available to all graduate students, post doctoral fellows, staff, and faculty at Purdue University.

# RCR - What does it mean?

- To be honest in all academic and research endeavors
- To maintain the highest possible standards when engaging in research

# RCR - Departmental Objective

- Stating and defining departmental policies and protocols relevant to RCR
- Discussion of specifics relevant to the discipline(s) of the department
- Encouraging discussion with advisor and thesis/dissertation advisory committee

# RCR - Is a life long behavior

- Does not end with graduate study at Purdue University
- This frame of mind and method for action should be maintained throughout one's career and life
- Many pressures face researchers regularly but RCR should be maintained

# Why is RCR important?

- For many obvious reasons:
  - Researcher's reputation and success
  - Advisor/Department's reputation
  - University's reputation
  - Graduate Student retention and graduation
  - Continued funding
  - Working climate within department/university and externally with collaborates/colleagues

# Consequences of Misconduct

- Personally and financially costly for all involved
- University investigation initiated
- Personal reputation may be impaired
- University's reputation may be impaired
- Guilty individual debarred from research
  - Student expulsion from University
  - Employee's loss of job
- Loss of funding to project

# Examples of Recent Misconduct

- Plagiarism at Ohio University
  - Consequence - Revoking of dissertations
  - <http://thepost.baker.ohiou.edu/articles/2006/02/23/news/2486.html>
- Fabrication and Falsification
  - <http://ori.dhhs.gov/misconduct/cases/Jin.shtml>
- Faculty at University of Vermont
  - Poehlman's case (The New York Times, Oct 22, '06)
  - [http://ori.dhhs.gov/misconduct/cases/poehlman\\_notice.shtml](http://ori.dhhs.gov/misconduct/cases/poehlman_notice.shtml)

# Major RCR topics

1. Research Integrity (Misconduct?)
2. Roles and Responsibilities
3. Data Management
4. Authorship and Publication
5. Intellectual Property and Copyright
6. Conflict of Interest
7. Compliance Requirements

# 1. Research Integrity/Misconduct

- Misconduct is the “**fabrication, falsification, or plagiarism** in proposing, performing, or reviewing or in reporting research results”\*\*
  - \*\*Purdue University policies (C-22) and [http://www.ostp.gov/html/001207\\_3.html](http://www.ostp.gov/html/001207_3.html)
  - How to avoid plagiarism, see OWL workshops <http://owl.english.purdue.edu/owl/resource/589/01/>

## 2. Roles and Responsibilities

- Refers to roles and responsibilities in the Mentor and Mentee relationship
- Must define roles of faculty and students
  - Establish and clarify R&R early through discussion with all involved
  - Hold regular meetings and reviews of every individual's R&R
  - More info see Grad School publication

## 3. Data Management

- Data Acquisition
- Data Storage and Protection
- Data Analyses and Interpretation
- Data Ownership (Funding agencies, Research Institutions/ Data Sources)
- Data Sharing
- Granting agency policy on data

## 4. Authorship and Publications

- All successful students will publish their thesis or dissertations and associated monographs, journal articles, book chapters and/or books resulting from their research
- Understand and abide by criteria for authorship/publication in ‘your’ field of study
  - First conform to publisher’s criteria for authorship
  - Additional departmental criteria may exist

## 5. Intellectual Property

- Ownership of intellectual property created by Purdue employees and students, or through use of Purdue University resources is determined through the application of Purdue's policy on intellectual property
  - OVPR policy VIII.4.1  
[http://www.purdue.edu/policies/pages/teach\\_res\\_outreach/viii.4.1.htm](http://www.purdue.edu/policies/pages/teach_res_outreach/viii.4.1.htm)

## 5. Intellectual Property (con't)

Purdue definition "...property such as an invention, patent, copyrightable work, copyright, trademark, service mark, trade secret, integrated circuit mask, research data, plant variety protection certificate, tangible research property, or physical embodiment such as a model, machine, device, design, apparatus, instrumentation, circuit, computer program, visualization, biological material, chemical, other composition of matter, or plant that originates in or relates to academic or research activity and that is protectable by any law."

[http://www.purdue.edu/policies/pages/teach\\_res\\_outreach/viii.4.1.htm](http://www.purdue.edu/policies/pages/teach_res_outreach/viii.4.1.htm)

## 6. Conflict of Interest (COI)

- University's policy on conflict of interest is outlined in President's executive memorandum C-39  
[http://www.purdue.edu/policies/pages/human\\_resources/c\\_39.html](http://www.purdue.edu/policies/pages/human_resources/c_39.html)
- Policy does not discourage all outside activities but defines those that are acceptable and the procedures required for their disclosure and management

# 7. Compliance requirements

- Protecting Human Research Subjects  
<http://www.irb.purdue.edu/>
- Animal Care and Use  
<http://www.purdue.edu/research/vpr/compliance/animals/index.shtml>
- Bio-hazards and rDNA  
<http://www.purdue.edu/research/vpr/compliance/rdna/index.html>
- Radiation or Lasers  
<http://www.purdue.edu/research/vpr/compliance/index.html>
- Export Control regulations  
<http://www.purdue.edu/research/vpr/compliance/exportregulations.html>

## For more information see:

- Grad School RCR web site  
[www.gradschool.purdue.edu/rcr/](http://www.gradschool.purdue.edu/rcr/)
  - University Policies  
<http://www.purdue.edu/policies/index.html>
  - Additional Resources
    - NSF RCR training module
    - CITI-RCR training module

# Upcoming Workshops

- Plagiarism:
  - Sept 19,'07 at 5:00 p.m. - Pfendler Hall
- Roles and Responsibility: Mentoring:
  - Oct 10,'07 at 5:00 p.m. – Pfendler Hall
- Copyright and Intellectual Property:
  - Nov 20,'07 at 5:00 p.m. – Pfendler Hall