

The Responsible Conduct of Research

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With contributions from Timothy J Ng, Ph.D.

“Integrity is vital to the scientific process.”

- Sigma Xi, the Scientific Research Society

“With great power there must also come great responsibility.”

- Spider-Man’s Uncle Ben

Research and Education at Universities

- Academic Degrees with training in liberal arts or towards a profession (University of Pennsylvania School of Medicine and Yale (1st Ph.D. in 1861)
- American vs. European Systems of Graduate Education and Academic training
- Establishment of the Land Grant System (1862)
- Establishment of “Graduate Schools” (1892 to early 1900’s)

**The Responsible Conduct of Research
Considers research involving:**

- Human subjects
- Animal subjects
- Conflict of Interest
- Recombinant DNA and “select agents”
- Research misconduct
- Publication practices , data management, IP issues
- Collaborative research
- Publication Practices and Responsible Authorship

Recombinant DNA & “Select Agents”

Federal

NIH Office of Biotechnology Activities (OBA)

<http://www4.od.nih.gov/oba/>

Centers for Disease Control and Prevention (CDC)

<http://www.cdc.gov/>

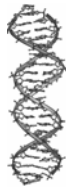
USDA Animal and Plant Health Inspection Service (USDA)

<http://www.aphis.usda.gov/>

University

UM Institutional Biosafety Committee (IBC)

http://www.des.umd.edu/general/committee/ibc/ibc_charter.html



Further Reading on RCR

US Office of Research Integrity - RCR Instructional Resources
<http://ori.dhhs.gov/education/>

Sigma Xi, the Scientific Research Society - Ethics and Research
<http://www.sigmaksi.org/programs/ethics/index.shtml>

Public Responsibility in Medicine & Research (PRIM&R)
<http://www.primr.org>

National Academy of Science – “On Being a Scientist: Responsible
Conduct in Research”
<http://www.nap.edu/readingroom/books/obas/>

Some Case Studies

DES (diethylstilbestrol) was first synthesized in 1938

- Animal experiments indicated potential issues
- Marketed to obstetricians as a prevention for miscarriage in high risk pregnancies
- Some issues came to light in the 1940s and 1950s
- Young women had a higher incidence of cervical cancer
- Banned from use in 1971

PCBs (polychlorinated biphenyls)

- Developed as a lubricant; long lasting and temperature resistant
- Some release into the environment permitted by EPA
- Where are we today?

BPA (bisphenol A)

- Plasticizer; infant bottles and toys...regulation?

Presenters

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- ☐ Amanda Underwood, Institutional Animal Care and Use Committee Manager

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