Class Aims:

1. To partially fulfill the recommendation of the Office of Research Integrity (ORI) that all federally funded researchers receive training in the responsible conduct of research (RCR).

2. To not only provide students with this training but to give them sources of information for more in-depth analysis and greater comprehension of the problem of unethical behavior, potential consequences for this behavior, and steps that can be taken to avoid or stop unethical conduct of research.

Homework to be done before class:

I) Read the Office of Research Integrity document “Introduction to the Responsible Conduct of Research,” available on course website as a pdf file and at this address - http://ori.hhs.gov/ori-intro. Topics to be discussed based on these readings include the following:

a. Definition of misconduct
   i. Egregious examples
   ii. Who and why do scientists do it?
   iii. Can the motives be changes?

b. Data management
   i. What constitutes selective culling of data?
   ii. What rules should be followed in statistical analysis?
   iii. Who owns data?

c. Mentor/Trainee Responsibilities

d. Ethical standards in publication practices and authorship
   i. Crediting the work of others
   ii. Disclosure of privileged information
   iii. Sharing information among scientists
   iv. Responsibility of collaborators who encounter questionable behavior

e. What constitutes conflict of interest?
   i. Industrial support of research
   ii. Technology transfer
   iii. Commingling public and private funding
   iv. Legal obligations

f. Misuse of scientific research by policy makers and the responsibility of scientists to society


g. The ethical use of animal subjects (including humans). Three acts of congress relevant to federally funded research to be discussed are:
   i. The 1966 Animal Welfare Act (PL 89-544)\(^1\)
   ii. The 1976 National Research Act (PL 93-348)\(^2\)
   iii. The 1985 Health Research Extension Act (PL 99-158)\(^3\)

h. Will training, increased reporting of misconduct, harsher punishments reduce misconduct?

II) Find an example of unethical conduct in research that you find interesting. Conduct an investigation of the case and come to class prepared to present the case (approximately 3-5 minutes). You may use power point if you wish but this is not required. In past years, a few incoming graduate students already have seen unethical behaviors. It is fine to use one of these personal examples or you can peruse the New York Times and other published resources for publicized examples.

Provide the class with:

a. An outline of the important events of the case (Karen Zundel can make copies for you if you give her plenty of time: there should be 10 copies made for class).

b. A list of at least 3 questions about the case you would like the class to answer collectively. These questions should be thought provoking and help us understand motivations and backgrounds of the people involved.

c. Optionally you can also provide the class with copies of papers (news articles) on the case.

Additional resources can be found at:

National Academy of Sciences. Committee on the conduct of science.

http://www.nap.edu/books/0309062373/html

American Association for the Advancement of Science. Integrity in Scientific Research.

http://www.aaas.org/spp/video/

\(^1\) http://awic.nal.usda.gov/government-and-professional-resources/federal-laws/animal-welfare-act


\(^3\) http://history.nih.gov/research/downloads/PL99-158.pdf