

RESPONSIBLE CONDUCT OF RESEARCH TRAINING POLICY

Basic Principles:

John Carroll University is committed to the ethical conduct of research and is in compliance with Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science (America COMPETES) Act which requires that an institutional plan be in place to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in National Science Foundation funded research projects.

Application:

The Principal Investigator (PI) will be responsible for providing appropriate RCR training to undergraduate and graduate students and post doctoral employees who are working on the PI's NSF-funded projects. At this point, only those students and post docs who are part of a NSF-funded project are required to undergo RCR training.

Principal Investigators will be offered training on the RCR policy by the Office of Sponsored Research .

Definitions:

Principal Investigator can also be known as the co-investigator (for collaborative grants) or the project director and is the faculty member or administrator responsible for directing the work of the grant project at John Carroll.

Educational training can be offered as various activities such as lectures, workshops, online courses, discussion groups, or any other trackable educational activity as approved by the John Carroll Office of Sponsored Research.

The core instructional areas (modules) of the Responsible Conduct of Research as indicated by the U.S. Office of Research Integrity are:

- **Data Acquisition, Management, Sharing, and Ownership:** Accepted practices for acquiring and maintaining research data. Proper methods for record keeping and electronic data collection and storage in scientific research. Includes defining what constitutes data; keeping data notebooks or electronic files; data privacy and confidentiality; data selection, retention, sharing, ownership, and analysis; data as legal documents and intellectual property, including copyright laws.¹
- **Conflicts of Interest and Commitment:** The definition of conflicts of interest and how to handle conflicts of interest. Types of conflicts encountered by researchers and institutions. Includes topics such as conflicts associated with collaborators, publication, financial conflicts, obligations to other constituencies, and other types of conflicts.
- **Human Subjects:** Issues important in conducting research involving human subjects. Includes topics such as the definition of human subjects research, ethical principles for conducting human subjects research, informed consent, confidentiality and privacy of data and patient records, risks and benefits, preparation of a research protocol, institutional review boards, adherence to study protocol, proper conduct of the study, and special protections for targeted populations, e.g., children, minorities, and the elderly.

- **Animal Welfare:** Issues important to conducting research involving animals. Includes topics such as definition of research involving animals, ethical principles for conducting research on animals, Federal regulations governing animal research, institutional animal care and use committees, and treatment of animals.
- **Research Misconduct** (fabrication or falsification of data including image manipulation, plagiarism). The meaning of research misconduct and the regulations, policies, and guidelines that govern research misconduct in PHS-funded institutions. Includes topics such as fabrication, falsification, and plagiarism; error vs. intentional misconduct; institutional misconduct policies; identifying misconduct; procedures for reporting misconduct; protection of whistleblowers; and outcomes of investigations, including institutional and Federal actions.
- **Publication Practices and Responsible Authorship:** the purpose and importance of scientific publication, and the responsibilities of the authors. Includes topics such as collaborative work and assigning appropriate credit, acknowledgments, appropriate citations, repetitive publications, fragmentary publication, sufficient description of methods, corrections and retractions, conventions for deciding upon authors, author responsibilities, and the pressure to publish.
- **Mentor / Trainee Responsibilities:** the responsibilities of mentors and trainees in predoctoral and postdoctoral research programs. Includes the role of a mentor, responsibilities of a mentor, conflicts between mentor and trainee, collaboration and competition, selection of a mentor, and abusing the mentor/trainee relationship.
- **Peer Review:** The purpose of peer review in determining merit for research funding and publications. Includes topics such as, the definition of peer review, impartiality, how peer review works, editorial boards and ad hoc reviewers, responsibilities of the reviewers, privileged information and confidentiality.
- **Collaborative Science:** Research collaborations and issues that may arise from such collaborations. Includes topics such as setting ground rules early in the collaboration, avoiding authorship disputes, and the sharing of materials and information with internal and external collaborating scientists.

Only those instructional areas applicable to the grant funded research project are required to be covered. For example, a chemistry project might not involve the use of human subjects; the human subjects module would therefore not be required as part of the training.

Administration:

Dissemination and administration of these regulations will be the responsibility of the Associate Academic Vice President. The Office of Sponsored Research will provide support in developing and offering training and resources to Principal Investigators; track who has been trained; monitor the regulations; assess the program and make recommendations as appropriate; and keep current on federal regulations pertaining to this policy.

Approved by the Academic Vice President January 2010

ⁱ See “PHS Policy on Instruction in the Responsible Conduct of Research” <http://ori.dhhs.gov/policies/RCR_Policy.shtml>