

# Governing Principles for the Responsible Conduct of Research

## 1.0 INTRODUCTION

Arkansas State University is committed to ethical conduct and provides training to its investigators in the responsible conduct of research.

## 2.0 PURPOSE

The purpose of these governing principles is to provide training in the responsible conduct of research to University employees and students who participate in University or externally-funded research programs.. It is also designed to ensure compliance with Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science (America COMPETES) Act which requires that undergraduates, graduate students, and postdoctoral researchers who participate in National Science Foundation (NSF) projects receive training in the responsible and ethical conduct of research.

## 3.0 DEFINITIONS

**Co-Principal Investigator.** The co-principal investigator is a faculty member or administrator who has secondary responsibility for directing work on sponsored program projects.

**Principal Investigator.** The principal investigator is a faculty member or administrator responsible for directing work on sponsored program projects.

**Responsible Conduct of Research (RCR).** Responsible conduct in research, at minimum, is research that is built on commitment to:

- Acquiring and managing data using accepted practices;
- conveying information truthfully and honoring commitments;

- reporting findings precisely and taking care to avoid errors;
- appropriately crediting research colleagues for their participation in research projects and any publications or presentations that emanate from such research projects;
- using resources wisely and avoiding waste;
- letting the facts speak for themselves and avoiding improper bias;
- treating human subjects with respect and minimizing risk to their participation in University-sponsored research programs;
- caring for animals appropriately and minimizing their pain and suffering;
- providing students, post-doctoral fellows, and junior faculty members with mentoring and training opportunities; and
- aggressively pursuing alleged cases of research misconduct.

## 4.0 REGULATIONS

Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science (America COMPETES).

## 5.0 APPLICABILITY

These governing principles apply to all undergraduates, graduate students, and postdoctoral fellows, to principal, and co-principal investigators who apply for or participate in externally-funded sponsored programs.

## 6.0 GOVERNING PRINCIPLES

All individuals who apply for or participate in externally-funded research programs at Arkansas State University after July 1, 2010 are required to enroll in Responsible Conduct of Research (RCR) training before the onset of work. Core instructional areas (modules) of the Responsible Conduct of Research as indicated by the U.S. Office of Research Integrity include:

- 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.

- **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, thus the human subjects module would not be required as part of the training.

## 7.0 RESPONSIBILITIES

### **Principal and Co-Principal Investigators**

Principal and Co-Principal Investigators who are conducting externally-funded research projects are responsible for assuring that undergraduates, graduate students, and post doctoral fellows participate in appropriate Responsible Conduct in Research training (depending upon discipline) offered by the CITI Program. Faculty investigators who have received, or are about to receive external funding are also required to complete the CITI Program Responsible Conduct in Research Program before a grant account will be activated.

### **Undergraduates, Graduates Students, and Postdoctoral Fellows**

Undergraduates, Graduates Students, and Postdoctoral Fellows are responsible for successfully completing appropriate CITI Program training.

### **Associate Vice Chancellor for Research**

Dissemination and administration of these regulations will be the responsibility of the Associate Vice Chancellor for Research.