TEXAS A&M UNIVERSITY
SAN ANTONIO

Introduction to the Responsible Conduct of Research (RCR)

A Summary for Undergraduate Students

Welcome to exciting and innovative research at Texas A&M University- San Antonio! A&M-SA is an upcoming university offering research opportunities in many fields of traditional and interdisciplinary research. As an undergraduate student you have an opportunity to contribute to the creation, communication, and curation of new knowledge. As someone for whom research is a relatively new experience, it is important to realize that you are expected to follow the highest standards of integrity in proposing, conducting, and reporting research. To help you understand these expectations, this handout introduces some of the basic concepts for ensuring the Responsible Conduct of Research (RCR). Additional resources on RCR are provided in the reference section of this document.

The information your mentor(s) will provide you with on research ethics is a cornerstone of scientific training. We encourage you to ask questions regarding your research and your responsibilities with your research mentor(s) and others with whom you conduct research to gain a deeper understanding of the ethics and the protections in place to ensure the integrity of research at A&M-SA.

All researchers have the responsibility to conduct ethical research and to present their results accurately and objectively, avoiding the potential for conflicts of interest (COIs). These conflicts may be personal, professional, financial, or intellectual, and may interfere with your personal judgment and your ability to be objective about the research you are undertaking and the results you obtain. It is important to be able to distinguish when the potential for a COI exists.

The communication of results through peer--reviewed publications is a central activity in research. Authorship practices can differ across scholarly disciplines, so it is essential to learn what constitutes appropriate norms within the discipline in which you are conducting research.

Disagreements on attribution of credit and responsibility for work in collaborative research are some of the most common complaints among researchers. An understanding of the Principal Investigator's (PI's) role and that of other researchers, graduate and undergraduate students, and postdoctoral scholars is important to establish at the beginning of a project.

Questions often arise about the ownership, retention, and sharing of data. Federal regulations and guidelines require that recipients of federal funding protect the research record and share the results of research with the public and other researchers. Data generated by A&M-SA employees, including those paid from grants, is the property of the university. Researchers are stewards of that data and retain the original research record on behalf of the institution. If a student or other member of a research team leaves the university, all original data must be left with the PI. Copies may be provided, but a student or other researcher may not independently publish data without the written agreement of the PI.

The integrity of data obtained in research is vital. Accurate and appropriately recorded data ensure that results are reported in a manner that advances new knowledge. Experimental design should strive to create meaningful and unbiased data that can be validated by others. In many areas of science today, human subjects and animal subjects are valuable resources used in research. Experimental designs should consider both the protection of the human and animal subjects, as well as minimize the sample size needed to obtain statistically valid results. Human and animal subjects are partners in science for the public good and must be treated with dignity and respect.

The foremost requirement for conducting research that is of the highest integrity is to do the right thing, to be aware of your own conduct, and to become familiar with policies and procedures so that you know what to do should you see behavior that could be research misconduct. The university does not condone lying, cheating, fabrication, falsifying or stealing during academic research or other activities. If you become aware of activities that may constitute forms of research misconduct, or other unethical or inappropriate research practices, you are encouraged to discuss your concerns with your supervisor(s) or the head of the academic unit in which you are conducting your research. Texas A&M University-San Antonio supports an independently operated University-wide Whistleblower Hotline at **1-888-501-3850** or online at www.ethicspoint.com if you are not able to discuss your concerns with your mentor(s).

The scientific community and the public expect ethical behavior from researchers. We encourage you to learn more about the RCR through readings, courses, workshops, and discussions with your mentor(s) and others.

Training courses to complete:

1. **INTRODUCTION TO RCR FOR A&M-SAN ANTONIO (CITI Course ID: 378203)**

2. **Gateway Course # 2113357 (Responsible Conduct of Research)**

Go to the External TrainTraq Gateway:
https://apps7.system.tamus.edu/TrainTraq/web/External/ExternalGatewayLogon.aspx

Contact Dr. Rani Muthukrishnan rani.muthukrishnan@tamusa.edu for your password.

Additional Resources

Texas A&M-SA Conflict of Interest Committee

https://www.tamusa.edu/academics/research-and-graduate-studies/research-compliance/financial-conflict-of-interest-in-research/index.html

National Academy of Sciences Publication ***On Being A Scientist***

https://nap.nationalacademies.org/catalog/12192/on-being-a-scientist-a-guide-to-responsible-conduct-in

Texas A&M- SA Research Misconduct Policy

https://catalog.tamusa.edu/undergraduate/academic-policies-procedures/dishonesty/

Student handbook

http://bit.ly/TAMUSAStudentHandbook

Responsible Conduct of Research Consortium

http://ccnmtl.columbia.edu/projects/rcr/index.html