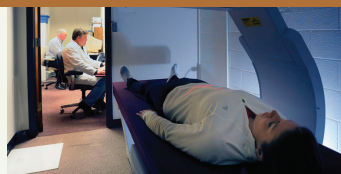


# RESEARCH MISCONDUCT — WHAT IT IS AND HOW TO AVOID IT

Research misconduct is a component of Responsible Conduct of Research. Faculty members, staff, and students are potentially susceptible to carrying out research misconduct, and therefore need to be aware of it and how to avoid it. While the Public Health Service (PHS) is the agency that has been most visible in promoting responsible conduct of research, each federal agency has an Office of Research Integrity (ORI) or similar office. The ORI at Virginia Tech complies with federal regulations on research misconduct.



## Why are there federal laws on research misconduct?

Public concern over research misconduct initially arose in the early 1980's. At that time, research institutions sometimes ignored or covered up potential misconduct problems rather than investigate them. In December 2000, the Office of Science and Technology Policy adopted a federal policy on research misconduct.

## What is the purpose of research misconduct policies?

Research misconduct policies have been established to define what research misconduct is, outline procedures for reporting and investigating misconduct, and provide protection for whistleblowers and persons accused of misconduct.

## Why does Virginia Tech have a policy on research misconduct?

Every institution that receives federal funding, particularly PHS funding, must have procedures in place for receiving and investigating reports of research misconduct. These procedures must include: The designation of an individual authorized to receive and investigate allegations of misconduct (Research

Integrity Officer [RIO]); provisions for an initial inquiry to determine if the allegations have merit; provisions for a formal investigation to determine the truth of the allegations; the designation of an individual authorized to adjudicate the conclusions of the investigation and impose administrative actions to redress the misconduct or to vindicate the person charged (deciding official); and provisions for reporting findings to the PHS ORI.

## What is required of Virginia Tech to be in compliance with federal policies?

Virginia Tech must establish policies and procedures for investigating and reporting instances of alleged research misconduct, and respond to any allegations that are made. The ORI must promote the responsible conduct of research through education and training, provide assurances necessary to permit Virginia Tech to participate in federally-supported research, and provide an annual report to the ORI of the PHS.

## What is research misconduct?

The Office of Science and Technology Policy defines research misconduct as “fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.” Fabrication is making up data or results and recording or reporting them. Falsification is manipulation of research materials, equipment, or processes, or changing or omitting results such that the research is not accurately represented in the record. Plagiarism is the appropriation of another's ideas, processes, results, or words without giving proper credit, and without their consent or knowledge.

## What are the criteria for research misconduct?

Research misconduct may occur if the conduct represents a significant departure from accepted practices; has been committed intentionally, knowingly, or recklessly; and can be proven by a preponderance of evidence.

## What is **not** research misconduct?

Research misconduct does not include differences of opinion; honest, unintentional error; authorship disputes; personal disputes; or violations of grant management policies.

## What are the recommendations of the ORI in reporting alleged misconduct?

The ORI recommends that institutions adopt a policy of zero tolerance for conduct that falls within the definition of research misconduct. Furthermore, whistleblowers (complainants) must be protected to the extent possible. The institution should provide training in how to report potential cases of research misconduct and train mentors in proper ethical behavior.

## Why does research misconduct happen?

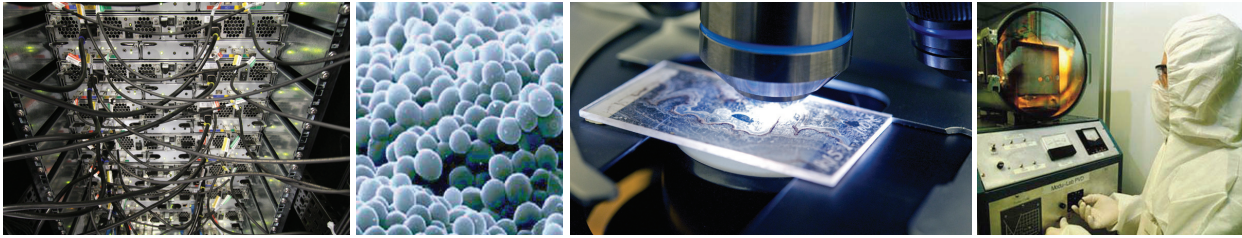
Research misconduct may result from the pressure to “publish or perish,” the desire to “get ahead,” personal issues or character issues, and other reasons.

## How is research misconduct identified?

Most cases of research misconduct are suspected and reported by a colleague (students, postdoctoral fellows, staff, or other members within or outside of the research group), by random screening of proposals by federal agencies or manuscripts by editors, or the failure to confirm research results within one's own research group or by others outside the group.

## What is the process for reporting, reviewing, and investigating research misconduct at Virginia Tech?

Allegations (made in good faith) of potential research misconduct are reported to and assessed by the Research Integrity Officer (RIO). The RIO reviews the allegations and, if warranted, sequesters relevant



research records. If the allegations appear credible, the information is forwarded to an inquiry committee. An inquiry report is made and, if an allegation is substantiated, the records are forwarded to an investigation committee.

An initial draft of the investigation report is reviewed by the RIO and the deciding official (provost), and the final report is sent to all parties (respondent, complainant, RIO, provost). A written decision by the provost is made and administrative action is taken.

If the respondent is found innocent of research misconduct, reasonable efforts to restore the respondent's reputation are made by the university ORI and all parties concerned.

A respondent who has been found guilty of research misconduct has 10 days after receipt of the final decision to file an appeal. The university president will review the subject matter of the appeal and provide a written decision to the respondent regarding the appeal and actions to be taken. The president's decision is final.

### What are the consequences of research misconduct if substantiated?

The consequences of research misconduct are variable and may include: Withdrawal or correction of all pending and published papers and abstracts affected by the misconduct, restitution of funds to the granting agency, and monitoring of grant applications or ineligibility to apply for federal grants/contracts or serve on review panels for a number of years or permanently.

At the institutional level, research misconduct may result in reprimand, removal from the project, rank and salary reduction, or dismissal from the institution.

### Who is investigated and who is held accountable for research misconduct?

All authors who are involved in the specific data or content of the material in question may be held

accountable. This most often includes the primary author (usually the person who primarily wrote the grant or manuscript), all other authors whose results are found culpable, and the principal investigator.

### Additional sources of information:

Department of Health and Human Services Office of Research Integrity (ORI): <http://ori.dhhs.gov>.

Website for a Virginia Tech PowerPoint file on research misconduct: [www.research.vt.edu/reports/Research\\_Misconduct.ppt](http://www.research.vt.edu/reports/Research_Misconduct.ppt).

Department of Health and Human Services, Federal Register, Vol. 70, No. 94, Tuesday, May 17, 2005, Rules and Regulations.

"Fraud and the Role of Intentions," *On Being A Scientist*, Committee on the Conduct of Science, National Academy of Sciences. National Academy Press, Washington, D.C., 1989, page 15, ISBN 0-309-04091-4.

Steneck, Nicholas H., *ORI Introduction to the Responsible Conduct of Research*, PHS, 2004.

Goodstein, D., *On Fact and Fraud: Cautionary Tales from the Front Lines of Science*, Princeton University Press, Princeton, 2010.

### For research misconduct questions and training

Contact **Thomas Inzana**, Virginia Tech Research Integrity Officer, [tinzana@vt.edu](mailto:tinzana@vt.edu).

Also see [www.research.vt.edu/announcement/misconduct.html](http://www.research.vt.edu/announcement/misconduct.html).

Information and training on research misconduct is provided at regular intervals through the Faculty Development Institute. See [https://www.fdi.vt.edu/public/modules/selfenroll/\\_viewevent.php?eventPk1=5885](https://www.fdi.vt.edu/public/modules/selfenroll/_viewevent.php?eventPk1=5885).

Guidance from the **Office of the Vice President for Research** ([www.research.vt.edu](http://www.research.vt.edu))



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