RCR - Responsible Conduct of Research

Research Ethics Webinar

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Office of Research and Sponsored Programs
RCR - Responsible Conduct of Research

Presenters:

Adrienne Klein  RIO, Graduate Center

Chelsea Timm  GC Coordinator, Human Research Protection Program

Travis McCarthy  Senior Research Compliance Administrator, CUNY Office of Research

Kristin Sommer  RIO, Professor, Psychology, Baruch College & GC

Angela Pilla  University Export Control Officer
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Discussants:

Sharon Lall-Ramnarine  RIO, Professor, Chemistry, QCC

William McClure  Dean of Faculty, Queens College

Keisha Peterson  Dir, Office of Research Compliance & Outreach, Baruch

Diane Simmons  RIO, Professor, English, BMCC

Rosemarie Wesson  Associate Provost for Research, CCNY
Thank you to the

CUNY Office of Research

Tamera Schneider
CUNY Associate Vice Chancellor & Vice Provost for Research

Joshua Brumberg
Graduate Center Dean for the Sciences
The National Science Foundation (NSF) and other federal funders require the universities they fund to provide training in research ethics.
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CUNY policy...

CUNY policy on training in responsible conduct of research
https://www.cuny.edu/research/research-compliance/research-integrity/responsible-conduct-of-research-rcr/

CUNY policy for disposition of allegations of research misconduct

Research Integrity Officers
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Our topics:

- Research Misconduct
- Protections
- Conflicts of Interest
- Mentoring
- Authorship credit
- Peer Review
- Data Management
- Collaborative Research
- Export Controls
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- Reporting requirements
- Institutional policies
- Your research community
- e.g. Federal regs
- State regs
- Read guidelines
- Be aware of expectations
- Sponsor requirements
- Transparency
- Full communication
- Transparency in interactions
- Rules
- Guideline
- Requirements
- Regulation
- Standard
- Laws
- Terms

fau.edu
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All researchers

Requirement 1:
Attend one workshop
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Biochemistry, Biology, Chemistry, Physics, Psychology, Social Welfare, Audiology, Speech/Hearing/Language

Requirement 2:
Take online RCR training through CITI.

CITI is an online service that provides universities with free online training programs, including Human Subjects and RCR training.
Responsible Conduct of Research (RCR) involves conducting research ethically and adopting best or commonly accepted practices in research.

The core values promoted in RCR including objectivity, honesty, openness/transparency, accountability, fairness, and stewardship (meeting obligations)
Responsible Conduct of Research (RCR) is your objective.

*Misconduct* is the worst possible behavior by a researcher.

Behavior that falls in between is referred to as *questionable research practices* (QRP)
Myths and misunderstandings

- The scientific method yields fixed, unambiguous “truths”
- Researchers are infallible and impervious to human biases

Realities

- Researchers have many “degrees of freedom” when crafting hypotheses, devising methods, and deciding how to analyze and report data.
- Researchers often work in isolation and they alone are privy to the decisions they make.
- Researchers are vulnerable to the same biases and rationalizations as lay people.
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Ideal Behavior

• sound research design and methodology
• reproducibility
• conscientious data management
• appropriate authorship
• appropriate mentorship
• appropriate use of funds
• disclosing conflicts of interest
• managing conflicts of commitment.
Detrimental Behavior

- Unethical peer review
- Misappropriation of research funds
- Delaying or impeding work of collaborators
- Non-compliance with human subjects and/or animal requirements
- Citing selectively or expanding your bibliography unnecessarily
- Misusing authority
Detrimental Behavior

- Non-compliance with reporting/or registry requirements
- Inadequate record keeping
- Selective transparency of hypotheses
- Conflicts of interest mismanagement (financial and/or commitment)
- HARKing (hypothesis after results are known)
Detrimental Behavior

- unethical authorship
- unethical publication practices
- noncompliance with university policies
- violating privacy and/or confidentiality rules and/or agreements
- non-compliance with sponsor-related requirements
- excluding data and failing to report exclusions
- p-hacking (re-analyzing data in different ways to yield a target result) QRP
P-hacking - a QRP (questionable research practice)

- Re-analyze your data enough times and you are eventually bound to get a ‘statistically significant’ result!

- Honest science demands that scientists design their studies with a clear, motivated hypothesis. P-hacking may lead to study findings that cannot be replicated by other researchers (Open Science Framework, Science, 2015)

- To avoid p-hacking and promote transparency, preregister your detailed research plan with an online registry such as OSF. For further information, discuss with your EO or mentor.

https://www.methodspace.com
Research Misconduct - 1

**Fabrication**

Making up data or results, and recording or reporting them

**Falsification**

Manipulating research materials, equipment or processes, or changing or omitting data or results, such that the research is not accurately represented in the research record

**Plagiarism**

Appropriation of another person’s ideas, processes, results or words without giving appropriate credit
A finding of research misconduct requires that:

- There be a significant departure from accepted practices of the relevant research community (i.e. the humanities, social sciences, or scientific research community);
- the misconduct be committed intentionally, or knowingly, or recklessly; and
- the allegation be proven by a preponderance of evidence.
Some temptations to commit misconduct

- “Publish or perish” pressures
- Need to obtain research funding
- Seeking promotion
- Reputational motivations
The federal Office of Research Integrity (ORI) may impose a variety of penalties when a finding of research misconduct is upheld. These penalties may include:

- Correction of the research record.
- Letters of reprimand.
- Suspension or termination of a research grant.
- Suspension or debarment from receiving federal funds.

Researchers who commit research misconduct may face significant professional stigma as well as corrective actions from employers.
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Its not worth it!
Making an Error
A role-play

2 + 2 = 5

https://blogs.transparent.com
Making an Error

Professor Perfect talks with her student, Steven ...
Making an Error

Can a researcher ignore an error they have noticed?

Can a researcher ask a journal to print a correction?

How does requesting a correction affect an author’s reputation?
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Making an Error
A role-play

How to avoid this problem?
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Ideal Behavior

• sound research design and methodology
• reproducibility
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Plagiarism

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How to avoid this problem?

1. Acknowledge the contributions of others
Plagiarism
How to avoid this problem?

1 Acknowledge the contributions of others
2 Verbatim text: use quotation marks & a citation
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2 Verbatim text: use quotation marks & a citation
3 Summarizing or paraphrasing?: cite sources
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**Plagiarism**

How to avoid this problem?

1. Acknowledge the contributions of others
2. Verbatim text: use quotation marks & a citation
3. Summarizing or paraphrasing?: cite sources
4. Cite when in doubt about facts or common knowledge
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Self-Plagiarism

A role-play
Jess is writing her thesis after 6 grueling years of study with Professor Winter. Due to excellent mentoring, Jess has published three first-author papers that she co-wrote with Professor Winter. As she begins writing the literature study of her thesis, she copies and pastes some of the introductory materials from the papers she wrote. As Professor Winter begins reading early drafts of the thesis, he becomes suspicious.
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Self-Plagiarism
A role-play

How to avoid this problem?
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Self-Plagiarism
A role-play

How to avoid this problem?

Cite where you have used the text before.

Get assistance from the GC Writing Center
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Protections: Human Subjects

CUNY Human Research Protection Program (HRPP)

- HRPP Coordinators / IRB Administrators (Research Compliance Administrators) on each campus.

Rebecca Banchik, GC Dir, HRPP

Chelsea Timm, HRPP Coordinator

- University Integrated (UI) Institutional Review Boards (IRB)

https://www.cuny.edu/research/research-compliance/human-research-protection-program/
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Chelsea Timm
Human Research Protection Program
Human Subjects Research
HRPP | IRB
Chelsea Timm, MS | HRPP Coordinator
CUNY Graduate Center
Human Subjects Research

Human Subjects*:
- Living individual(s)
- Identifiable private information accessed
  - Through archives AND/OR
  - Through intervention (physical or behavioral) or interaction (communication exchange or interpersonal contact)
*Both must be true of the subjects involved.

Research*:
- Systematic investigation - a plan to include project development, testing procedures and/or evaluation methods
- Designed to enhance generalizable knowledge
*Both must be true to be considered research.
Human Research Protection Program

The **CUNY Human Research Protection Program (HRPP)** is responsible for the protection of the rights and welfare of human subjects in research projects conducted at CUNY or by CUNY faculty, staff, and students.

The program provides oversight, administrative support, and educational training to ensure CUNY research complies with federal and state regulations, university policy, and the highest ethical standards.
Human Research Protection Program Coordinators

• Provides educational opportunities for students, staff, and faculty to learn about Human Subjects Research, the Human Research Protection Program, and the Institutional Review Board
• Provides administrative support for studies involving human subjects.
• Provides initial review(s) of applications for studies involving human subjects to ensure they comply with federal and state regulations, university policy, and the highest ethical standards.
• Communicates with Institutional Review Board member(s) regarding study applications and studies up for annual review.
Institutional Review Board

The CUNY Institutional Review Boards (IRB) are groups of research experts within the HRPP who must ensure that subjects are not exposed to risks, however minimal, without scientific justification, and that the risks are reasonable in relation to benefits. The IRB members accomplish this by evaluating whether the proposed research involves sound experimental design and has the potential to yield valid results. The IRBs are made up of research experts in several fields (community health, law, biology, psychology, etc.) and include CUNY faculty and/or professionals in the community. When necessary, the IRBs may seek expert consultants to assist in the review of research that requires expertise beyond or in addition to that available on the IRBs.
Chelsea Timm | HRPP Coordinator
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Questions?
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Protections: Animal Welfare

Humane treatment of animals used in research and educational activities

- Institutional Animal Care and Use Committees (IACUC)
- Veterinarians, animal facilities staff, & IACUC administrators
Protections: Biosafety

Environmental Health, Safety & Risk Management

• Policies and procedures regarding laboratory safety, hazardous materials, health safety & radiation safety

On each campus: Institutional Biosafety Committees (IBC)

• Recombinant DNA & gene therapy research
• Risk group 2 or higher infectious agent use
• Use of transgenic animals
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Travis McCarthy
Conflicts of Interest
What is a Conflict of Interest?

From the CUNY COI Policy:
An actual or potential conflict between the personal interest of a Covered Individual* or an Investigator and the interests of the University

OR

The *reasonable appearance* of such a conflict
Types of Conflicts of Interest

- Financial
- Institutional
- Commitment
Why do we care?

• Ethical

• Objective results (eliminate bias)

• Reputation
  • Individual
  • University
What do I need to know?

- You as an investigator and/or your faculty advisor need to disclose any Significant Financial Interests as defined in the policy
  - [https://www.cuny.edu/research/research-compliance/conflict-of-interest/](https://www.cuny.edu/research/research-compliance/conflict-of-interest/)

- All forms and processes are detailed on the CUNY website

- Your college and your faculty advisor’s college will have a contact person – the College Conflict Officer
  - [https://www.cuny.edu/research/research-compliance/conflict-of-interest/college-conflict-officers/](https://www.cuny.edu/research/research-compliance/conflict-of-interest/college-conflict-officers/)
What do I need to know? cont’d.

• If you or your advisor have a conflict of interest:
  • Management plan
  • Conflict overseer
  • Student overseer
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Kristin Sommer

Mentoring  (Adapted from RCR module created by Columbia University)
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• Who serves as a mentor and trainee or protégé?
  • Mentors can be faculty advisors, lab directors, fellow students, or anyone with more experience
  • Mentors serve as advisers, teachers, role models, friends and advocates
  • Trainees can be undergraduate or graduate students, postdocs, new faculty members, or anyone in a junior or apprenticeship position
What needs are addressed by the mentor?

- Develop trainees into capable, ethically responsible researchers
- Foster understanding of the political climate and how to interact with others
- Help trainees to promote their work and create professional networks
- Teach trainees to be leaders and mentors to others
- Facilitate preparation for the job market
- Advocate for trainees who are being treated unfairly or subjected to unreasonable demands
What are the responsibilities of the mentor?

- Being available and listening carefully
- Allowing or even encouraging protégés to have multiple mentors
- Allowing for differences in personality and adjusting to the needs of the trainee
- Allowing the trainee some autonomy
- Recognizing and responding to signs of struggle
- Teaching by example
What are the responsibilities of the trainee/protégé?

- Deciding on one's career goals and plans
- Seeking a mentor with whom one is compatible, as determined by:
  - Relevant personal and career interests
  - Personality and work habits
  - Resources to commit to the relationship
- Being clear about own needs and expectations
- Proactively maintaining communication and meeting agreed-upon goals
What are examples of problematic behaviors by mentors?

- Refusing to give proper credit
- Requiring trainees to spend more time on the mentor's research than their own research
- Undermining the confidence or professional opportunities of trainees
- Failing to act as a sponsor or advocate for a trainee
- Neglecting a trainee with whom one has entered a mentoring relationship
- Seeking personal or sexual favors
Mentor and protégé strategies for resolving conflict

• Attempt to resolve problems directly through enhanced communication
• Seek guidance from another trusted person/neutral member of the community
• Dissolve the mentoring relationship
• File a formal complaint if a person's behavior violates clear laws or codes of conduct
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Competing Interests
A role-play

georgedelahenty.wordpress.com
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Competing Interests
A role-play

Steven, a graduate student, is looking forward to starting his thesis work in the lab of a well-known professor on campus, Prof. Brown. The research project he will be working on is supported partly by the university but mainly by Huge Enterprise, a company of which Prof. Brown is a co-owner.
Competing Interests
A role-play

Steven, a graduate student, is looking forward to starting his thesis work in the lab of a well-known professor on campus, Prof. Brown. The research project he will be working on is supported partly by the university but mainly by Huge Enterprise, a company of which Prof. Brown is a co-owner.

Several months pass...
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Competing Interests
A role-play

How to avoid this problem?
Ideal Behavior

- sound research design and methodology
- reproducibility
- conscientious data management
- appropriate authorship
- appropriate mentorship
- appropriate use of funds
- disclosing conflicts of interest
- managing conflicts of commitment
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Responsible Authorship

Who should be listed as an author?

• Made significant contributions to the research
• Assumed responsibility for data collection & analysis
• Participated in drafting the publication
• Approved the final publication

Improper practice

• Honorary authorship
• Duplicate publication
Peer Review

The reviewer’s responsibility

• Assess project for quality
• Make judgment regarding importance of research

Doing it with responsible conduct

• Timely review
• Constructive feedback
• Free from personal bias
• Maintain confidentiality
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Authorship
A role-play

Rwldesign.com
A grad student, Jess, approaches her faculty mentor regarding credit for some writing she did.
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Authorship
A role-play

How to avoid this problem?
Responsible Authorship

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Data Management

Data Ownership

- Funding source – grants vs. contracts
- Institutional policy
- CUNY Intellectual Property Policy: https://www.cuny.edu/about/administration/offices/legal-affairs/policies-resources/intellectual-property/

- Data Source

Data Collection

- Data recorded such that it can be validated
- Appropriate authorization
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Data Protection

• Proper storage to avoid accidental damage, loss or theft
• Confidentiality & privacy agreements honored
• Data retention according to contract &/or institutional practice
• CUNY use of computer resources policy:
  https://www.cuny.edu/about/administration/offices/cis/it-policies/

Data Sharing

• We may enter into various types of data sharing agreements (data use, data transfer, etc.)
  https://www.cuny.edu/research/research-compliance/research-agreements/
Collaborative research - 1

Roles & Relationships

- Define each collaborator’s role in the project in a written agreement
- Ensure common understanding of the research goals
- Be familiar with each institution’s intellectual property & ownership policies

Management Plan

- Financial Management
- Training & Supervision
- Compliance
Collaborative Research - 2

Formal Agreements

- Examples include: Memorandum of Understanding; Memorandum of Agreement; Material Transfer Agreement; Data Transfer Agreement

- Contact research compliance staff prior to signing these

- Ensure that your collaboration is documented in a formal agreement

- Signatory authority defined by policy:

https://www.cuny.edu/research/research-compliance/research-agreements/
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Angela Pilla
Export Control
Export Control – 1

Controls

State, Commerce & Treasury Controls

- Hardware, software, materials, equipment, technology & technological data that have civilian and inherent military or defense application

- Defense articles designed or modified for defense or military application without civil equivalent and defense services.

- Restricted transactions; for example, those with Cuba, Iran, Syria or Sudan
Export Control – 2

CUNY policy, procedures, guidance & forms

https://www.cuny.edu/research/research-compliance/export-control/

On each campus: Export Control Administrators

Requirements

• Exceptions for fundamental research activities
• Prior authorization or license may be required
• Screening of all parties involved
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Review:

• Research Misconduct
• Protections
• Conflicts of Interest
• Mentoring
• Authorship credit
• Peer Review
• Data Management
• Collaborative Research
• Export Controls
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https://www.youtube.com/watch?v=x_MsPvgetxw

Research Integrity
Video
Produced by the University of Amsterdam, 2016
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Resources:

• Professor
• Mentor
• Executive Officer
• Conflict of Interest Administrator
• Export Control Officer
• Human Subjects: HRPP Staff
• Plagiarism: Academic Affairs
• Ombudsman
• Research Integrity Officer
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Ideal Behavior

RCR requires that researchers behave in an ethical manner

• use sound ethical judgement that promotes trust
• conduct research with integrity

Do the right thing.
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Thanks to:

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Columbia University
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