Responsible Conduct of Research

RCR

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Rm 3300.04
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Thank you to the

CUNY Office of Research

Tamera Schneider
Associate Vice Chancellor & Vice Provost for Research

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Director, Sponsored Research and Programs Compliance

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Research Compliance Manager
The National Science Foundation (NSF) and other federal funders require the universities they fund to provide training in research ethics.
CUNY policy...

CUNY policy on training in responsible conduct of research

CUNY policy for disposition of allegations of research misconduct

Research Integrity Officers

http://www.cuny.edu/research/compliance/Responsible-Conduct-of-Research.html
RCR - Responsible Conduct of Research

Our topics:

- Research Misconduct
- Protections
- Conflicts of Interest
- Mentoring
- Authorship credit
- Peer Review
- Data Management
- Collaborative Research
- Export Controls
RCR - Responsible Conduct of Research

Compliance

Requirement
Regulation
Standard
Laws
Terms
Guideline
Rules
Transparency
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e.g. Federal regs

Compliance

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Transparency

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e.g. Federal regs

State regs

Compliance

Requirement

Rule

Regulation

Standard

Guideline

Terms

Transparency

Laws
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Institutional policies

e.g. Federal regs

State regs

Sponsor requirements

Compliance

Regulation → Requirement → Standard

Rules

Guideline

Laws

Terms

Transparency
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Institutional policies

Reporting requirements

State regs

Sponsor requirements

e.g. Federal regs

Requirements:
- Regulation
- Standard
- Laws
- Terms

Compliance:
- Guidelines

Transparency
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- Reporting requirements
- Institutional policies
  - e.g. Federal regs
- Requirement
- Regulation
- Standard
- Laws
- Compliance
- Rules
- Guideline
- Transparency
- Terms
- Sponsor requirements
- Your research community
- State regs
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Institutional policies
- e.g. Federal regs

Reporting requirements

Your research community
- State regs

Requirement
- Regulation
- Standard
- Laws
- Terms
- Guidelines
- Rules

Compliance

Transparency

Read guidelines
Be aware of expectations

Sponsor requirements
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Institutional policies

e.g. Federal regs

Read guidelines
Be aware of expectations

Reporting requirements

Requirement

Regulation

Rules

Guideline

Transparency

State regs

Your research community

Sponsor requirements

Full communication
Transparency in interactions

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GC CUNY’s compliance policy
All researchers

Requirement 1:
Attend one workshop
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GC CUNY’s compliance policy
Biochemistry, Biology, Chemistry, Physics

Requirement 2:
Take online RCR training through CITI.

CITI is an online service that provides universities with online training programs, including Human Subjects and RCR training.
Researchers and research institutions must conduct research in a way that is honest, trustworthy, reliable and accountable. That’s ideal.

Misconduct is the worst possible behavior by a researcher.

Behavior that falls in between is referred to as questionable research practices (QRP)
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BAD

p-hacking (re-analyzing data in different ways to yield a target result)
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
P-hacking example:  
https://scienceinthenewsroom.org

Do men who eat only M&Ms go bald younger? Do young men who eat both Twix and M&Ms go bald on top more often than the front? Do older unmarried men who don’t exercise and eat no chocolate candy have a lower incidence of baldness?

Run enough of these tests and you are eventually bound to get a result that is ‘statistically significant’!

Honest science demands that scientists go into their research with a clear, motivated hypothesis. For this reason, p-hacking is considered to be highly unethical.
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Unethical peer review
BAD

Misappropriation of research funds

Delaying or impeding work of collaborators

Non-compliance with human subjects and/or animal requirements

Citing selectively or expanding bibliography unnecessarily

Misusing authority
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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)

BAD
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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
Ideal Behavior

RCR also requires that researchers behave in an ethical manner, i.e. use sound ethical judgement that promotes trust, and that research is conducted with integrity, i.e. consistently doing the right thing.
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
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It's not worth it!
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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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?
Making an Error
A role-play

How to avoid this problem?
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Ideal Behavior GOOD

- 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
Plagiarism

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
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
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 primary sources
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 primary sources
5. Cite when in doubt about facts or common knowledge
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Self-Plagiarism
A role-play

wedowebcontent.com
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.
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
  
  [http://www.cuny.edu/about/administration/offices/ehsrmm.html](http://www.cuny.edu/about/administration/offices/ehsrmm.html)

On each campus: Institutional Biosafety Committees (IBC)

- Recombinant DNA & gene therapy research
- Risk group 2 or higher infectious agent use
- Use of transgenic animals
Protections: Human Subjects – 1

HRPP = Human Research Protection Program

IRB = Institutional Review Board

Review of your protocol is required when:

• Activity involves research (systematic investigation for generalizable knowledge); and

• Activity involves human subjects (living individual about whom data is collected through intervention or interaction; or private identifiable information is collected); and

• CUNY is engaged
Protections: Human Subjects - 2

CUNY Human Research Protection Program (HRPP)

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

Rebecca Banchik, GC Dir, HRPP

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

- [http://www.cuny.edu/research/compliance/human-subjects-research-1.html](http://www.cuny.edu/research/compliance/human-subjects-research-1.html)
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Conflicts of Interest

Financial Conflict of Interest

• CUNY policy, procedures and disclosure forms at http://www.cuny.edu/research/compliance/conflictofinterestpolicy.html

Conflict of Commitment

• Relationships with individuals or entities
• Use of resources / funds
• Honor time commitments made

On each campus: College Conflicts Officers
CUNY Conflicts Committee
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Mentor / Trainee Responsibilities

• Proactively set expectations
• Clarify evaluation criteria
• Clear distribution of responsibilities
• Standard operating procedures
• Criteria for establishing authorship & ownership
• Awareness of and compliance with institutional requirements
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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.

Several months pass...
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
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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

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

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?
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Data Management

Data Ownership

• Funding source – grants vs. contracts
• Institutional policy

• CUNY Intellectual Property Policy:
  http://www.cuny.edu/about/administration/offices/la/intellectual_property_9.20.11.pdf

• Data Source

Data Collection

• Data recorded such that it can be validated
• Appropriate authorization
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:
  http://www.cuny.edu/about/administration/offices/CIS/policies/ComputerUsePolicy.pdf

Data Sharing

- We may enter into various types of data sharing agreements (data use, data transfer, etc.)
  http://www.cuny.edu/research/compliance/Research-Agreements.html
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

- Contact research compliance staff prior to signing these
- Ensure that your collaboration is documented in a formal Agreement
- Examples include: Memorandum of Understanding; Memorandum of Agreement; Material Transfer Agreement; Data Transfer Agreement
- Signatory authority defined by policy: [http://www.cuny.edu/research/research-policies/Signatory-Authority.html](http://www.cuny.edu/research/research-policies/Signatory-Authority.html)
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

http://www.cuny.edu/research/compliance/Export-Control.html

On each campus: Export Control Administrators

Requirements

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

- Research Misconduct
- Protections
- Conflicts of Interest
- Mentoring
- Authorship credit
- Peer Review
- Data Management
- Collaborative Research
- Export Controls
Resources:

- Professor
- Mentor
- Executive Officer
- Conflict of Interest Administrator
- Export Control Administrator
- Human Subjects: HRPP Director
- Plagiarism: Academic Affairs
- Ombudsman
- RCR
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Thanks to:
U.S. Office of Research Integrity – Health & Human Services
CUNY Office of Research
National Science Foundation
Online Ethics Center / U of Virginia

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Louis Bradbury
Meghan Hughes
Tricia Mayhew-Noel
Lynda Mules
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