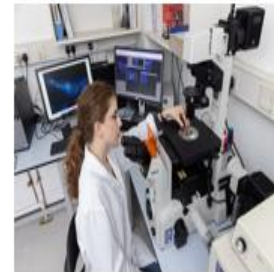# Research Integrity for Research Staff (& Research Postgraduates)

**Dr Irene Kavanagh**

*Research Officer, UCC Research*

*Office of the Vice President for Research & Innovation*

# Topics

- **Overview: Research Integrity and Research Misconduct**

- **High Profile Cases**

- **Questionable Research Practices**

- **Scenarios**

- **Enhancing Responsible Conduct of Research & your responsibilities**

- **Research Integrity@UCC other training**

- **Additional Resources including**

  - **UCC Code of Research Conduct**

  - **CHECKLIST FOR RESEARCHERS**

**What do we mean by Research Integrity?**

*Your thoughts…*

*https://www.mentimeter.com/* **Code 65 28 33**

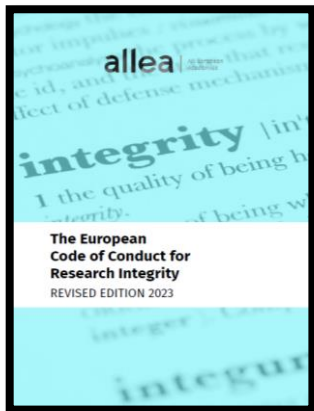## What is Research Integrity?

Waiting for answers

# Research Integrity & Research Misconduct – Overview

**Research Integrity** relates to the performance of research to the highest standards of professionalism and rigour, and to the accuracy and integrity of the research record in publications and elsewhere.

**European Code of Conduct for Research Integrity**

**National Policy- Ensuring Research Integrity in Ireland**

**UCC Code of Research Conduct**

# Research Integrity is not...

*The principles of Research Integrity are*

*not separate to your research*

# Research Integrity is a fundamental part of research

*Research Integrity is an integral part of excellence and proper standards in the research process and outputs*

# Why Care about Research Integrity?

## SCIENCE EUROPE
### SEVEN REASONS
## TO CARE ABOUT INTEGRITY IN RESEARCH

1. Safeguards the foundations of Science and Scholarship
2. Maintains public confidence in researchers and research evidence
3. Underpins continued public investment in research
4. Protects the reputation and careers of researchers
5. Prevents adverse impacts on patients and the public
6. Promotes economic advancement
7. Prevents avoidable waste of resources

## Consequences of Research Misconduct

- Negatively Impacts Research Excellence

- Negative impact on patients & study participants

- Negative impact on the wider population

- Collateral damage to colleagues and the field of study associated with the guilty researcher(s)

- Financial Cost

Hiney, M. (2015). Briefing Paper on Research Integrity. What it Means, Why it is important and How we Might Protect it. Available at: Briefing Paper on Research Integrity: What it Means, Why it is important and How we Might Protect it, 2015

Training & Best Practice in Research Integrity is a requirement for funding from various Irish funding bodies:

- SFI
- HRB
- IRC
- EPA

Certification in Epigeum RI is recognised & required by these funding bodies

OXFORD    epigeum

sfi · Fondúireacht Eolaíochta Éireann · Science Foundation Ireland · For what's next

HRB Health Research Board

IRISH RESEARCH COUNCIL · An Chomhairle um Thaighde in Éirinn

epa · Environmental Protection Agency

UCC · Coláiste na hOllscoile Corcaigh · University College Cork, Ireland · Research Taighde

# The four basic principles of good practice in research



European Code of Conduct for Research Integrity

Reliability

EU RI Code

Respect

Honesty
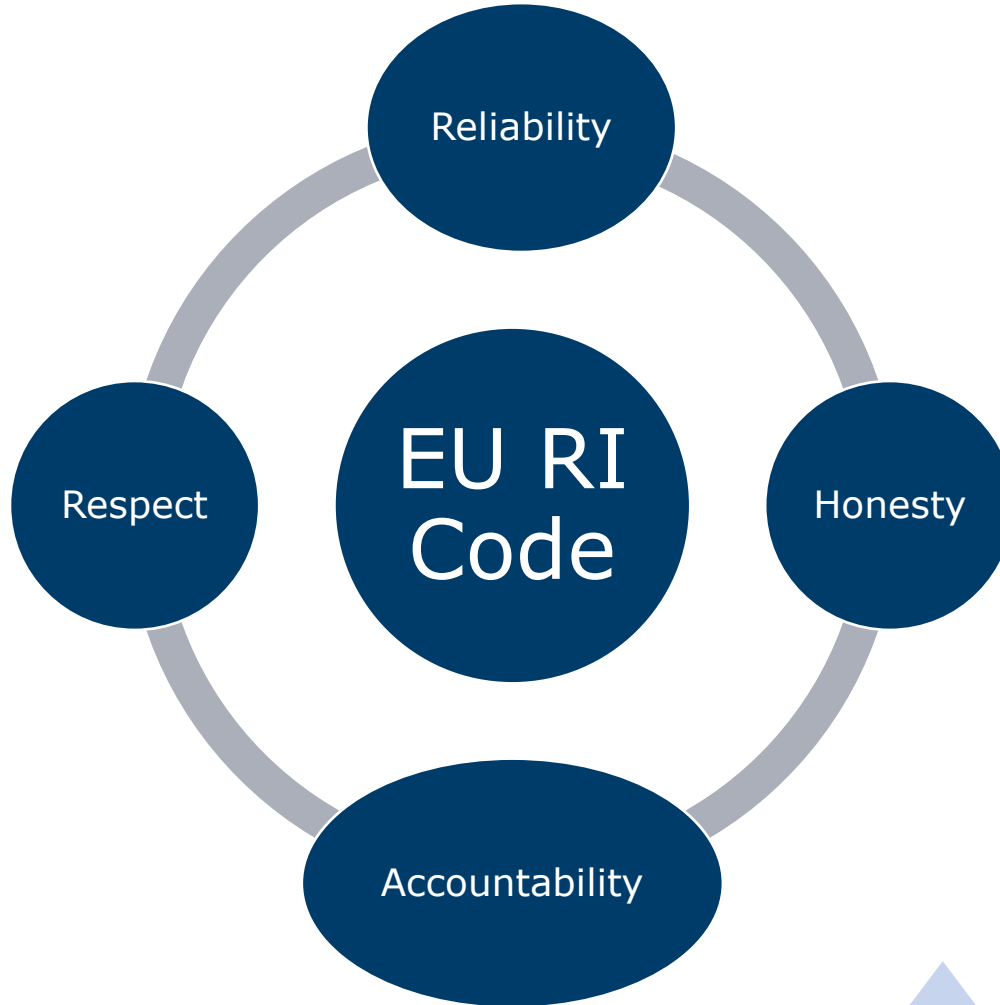
Accountability

# Good Research Practice & the *UCC Code of Research Conduct*

Research Ethics, Civic engagement/Public Patient involvement, Citizen Science



**Compliance**

with standards and procedures

**Supervision & Mentoring**

Leadership, role-model, active engagement between PI and research students/early career researchers

**Dissemination**

academic freedom and protection of intellectual property; publication practice, authorship, open access

**Honesty & Openness**

proactive problem solving; accuracy; objectivity; acknowledgement of contribution; declaring conflicts of interest; whistle-blowing, transparency – Open Research

**Respect**

Respect for the rights and dignity of research participants: research ethics/ethical approval; general respect; privacy and confidentiality/anonymity; informed consent; avoidance of harm

**Responsibility**

including creation of a positive research climate

**Competence**

participation only in work which the researcher is competent to perform

**Managing Research Projects**

Pertains to PI and includes proper management of people, timelines, budget etc

**Reproducibility**

the ability of an experiment or study to be duplicated, either by the same researcher or by someone else working independently

**Data Management**

research which generates outcomes which can be described as "data", ownership of data; record keeping; data storage

# RESEARCH MISCONDUCT

**Unacceptable Research Practices** relate to where an individual deliberately, dangerously or negligently deviates from accepted Responsible Conduct of Research practices that are expected to be followed

*European Code for Research Integrity (2017); Resnik et al. (2015); Science Europe (2015)*

Image credit to: University of California Museum of Paleontology's Understanding Science (http://www.understandingscience.org)

1.17    Research misconduct includes **but is not limited to**[5]:

- *fabrication* of data i.e. making up results and recording them as if they were real;
- *falsification* of data i.e. manipulating research materials, equipment or processes, or changing, omitting or supressing data or results without justification; and
- *plagiarism* i.e. using other people's work and ideas without giving proper credit to the original source, thus violating the rights of the original author(s) to their intellectual outputs.

The three major breaches of Responsible Conduct of Research are FFP:

*Fabrication* of data i.e. making up results and recording them as if they were real

*Falsification* of data i.e. manipulating research materials, equipment or processes, including changing, omitting or suppressing data or results without justification

*Plagiarism* i.e. using other people's work and ideas without giving proper credit to the original source, thus violating the rights of the original author(s) to their intellectual outputs

- But there are others...

# CONFLICTS OF INTEREST

- **Conflicts of interest** represent circumstances in which professional judgments or actions regarding a **primary interest**, such as the responsibilities of a researcher, may be at risk of being unduly influenced by a **secondary interest**, such as financial gain or career advancement

Embassy of Good Science (https://embassy.science/wiki/Theme:2f1668e3-c46b-44b0-bf6a-fc4698b671ca); Emanuel & Thompson (2008)

# ETHICAL MISCONDUCT

- Failures to follow accepted procedures or to *exercise* due care in carrying out responsibilities for avoiding unreasonable risk or harm to humans; animals used in research; and the environment

- Failures to follow procedures relating to the proper handling of privileged or private information on individuals collected during the research

# RESEARCH MISCONDUCT ENCOMPASSES A WIDE RANGE OF UNACCEPTABLE RESEARCH PRACTICES



Fabrication

Falsification

Plagiarism

Ignoring punative violations of RI

Conflict of Interest

Misusing Seniority

Research Misconduct

Research Ethics Breach

Hampering work of other researchers

Questionable Research Practices

False/ malicious accusation

# Prevalence of Research Misconduct



**Briefing Paper**
Research Integrity: What it Means, Why it Is
Important and How we Might Protect it
DECEMBER 2015

SCIENCE
EUROPE

*"An often-heard argument against implementing guidelines, frameworks or governance structures to ensure research integrity is that it is an over-reaction, since serious misconduct is so rare"*

*Hiney, M. (2015). Briefing Paper on Research Integrity. What it Means, Why it is important and How we Might Protect it. Available at: Briefing Paper on Research Integrity: What it Means, Why it Is Important and How we Might Protect it. 2015*

- Meta-analysis span: 1992 - 2020
- 42 articles
- 571 studies, spanning different disciplines
- 23,228 participants, consisting of researchers and PhD students from 18 countries.
- 2.9% of researchers had committed RM concerning at least 1 of FFP, 12.5% had committed QRPs concerning 1 or more QRPs.
- 15.5% of researchers witnessed certain behaviours of RM, of whom 39.7% had knowledge of various QRPs

*Xie, Y., Wang, K. & Kong, Y. Prevalence of Research Misconduct and Questionable Research Practices: A Systematic Review and Meta-Analysis. Sci Eng Ethics* **27,** *41 (2021). https://doi.org/10.1007/s11948-021-00314-9*

# How big a problem is research misconduct?

- Research Misconduct is an international issue

- Research Misconduct arises in all disciplines: Humanities, Arts, Social Sciences, Business & Law as well as Biomedical, Physical and Engineering Sciences

- The incidence of Research Misconduct is tracked by official statistics, survey results, and analysis of retractions

- **All of these indicators have shown that the incidence of Research Misconduct is increasing over time**

- For example, studies suggest that as many as one in every 100 researchers engages in serious misconduct over the course of a three to five year period (US ORI)

# High Profile Cases

**Coping with Chaos: How Disordered Contexts Promote Stereotyping and Discrimination**

Diederik A. Stapel[1,*], Siegwart Lindenberg[1,2,*]
+ See all authors and affiliations

Science 08 Apr 2011:
Vol. 332, Issue 6026, pp. 251-253
DOI: 10.1126/science.1201068

**Article**   Figures & Data   Info & Metrics   eLetters   PDF

This article has been retracted. Please see:
Is retracted by - December 02, 2011

One of Diederik Stapel's now-retracted papers. From:
http://science.sciencemag.org/content/332/6026/251.abstract

aps | ASSOCIATION FOR PSYCHOLOGICAL SCIENCE

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Observer > 2013 > January > Derailed: The Rise and Fall of Diederik Stapel

MBER ARTICLE
**Derailed: The Rise and Fall of Diederik Stapel**

ny Borsboom and Eric-Jan Wagenmakers

December 27, 2012
TAGS: DATA | GENERAL | REPLICATION

Diederik Stapel fabricated data for over 50 peer-reviewed articles, many of which were published in leading journals, including Science. He has now published Ontsporing (Derailed), a 315-page autobiography that provides a fascinating tale of the events leading up to and following the discovery of his large-scale academic fraud. [1]

DIEDERIK STAPEL
ONTSPORING

**False positives: fraud and misconduct are threatening scientific research**
High-profile cases and modern technology are putting scientific deceit under the microscope

Alok Jha, science correspondent
The Guardian, Thursday 13 September 2012 18.12 BST

The Dutch psychologist Diederik Stapel was found to have published fabricated data in 30 peer-reviewed papers. Photograph: Hollandse Hoogte/Boxem

Smeesters had spent several years of his career as a social hologist at Erasmus University in Rotterdam studying how consumers aved in different situations. Did colour have an effect on what they ght? How did death-related stories in the media affect how people ked products? And was it better to use supermodels in cosmetics dverts than average-looking women?

Mag   SCIE

The New York Times

WORLD   U.S.   N.Y. / REGION   BUSINESS   TECHNOLOGY   SCIE

THE HEALTH ISSUE

**The Psychology of Lying**
Diederik Stapel's audacious academic fraud.

Falsification

Fabrication

https://www.youtube.com/watch?v=c-bemNZ-IqA
 (to 2.46min)

# THE LANCET

RETRACTED: Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children

Dr AJ Wakefield, FRCS, SH Murch, MB, A Anthony, MB, J Linnell, PhD, DM Casson, MRCP, M Malik, MRCP, M Berelowitz, FRCPsych, AP Dhillon, MRCPath, MA Thomson, FRCP, P Harvey, FRCP, A Valentine, FRCR, SE Davies, MRCPath, JA Walker-Smith, FRCP

Altmetric 1,471

http://dx.doi.org/10.1016/S0140-6736(97)11096-0

**RETRACTED**

## Editorials

Wakefield's article linking MMR vaccine and autism was fraudulent

*BMJ* 2011 ; 342  doi: http://dx.doi.org/10.1136/bmj.c7452 (Published 06 January 2011)
Cite this as: *BMJ* 2011;342:c7452

# nature immunology

*Nature Immunology* **9**, 1317 (2008)
doi:10.1038/ni1208-1317

## A case of junk science, conflict and hype

Many studies have refuted Wakefield's claims. Furthermore, Wakefield had a serious conflict of interest, as his research was secretly funded by personal-injury lawyers whose clients were suing MMR vaccine makers. The paper was retracted and Wakefield is being tried for professional misconduct. Despite this, the rumors that the MMR vaccine causes autism persists. But vaccine scares are hardly new.

Andrew Wakefield's discredited theory linking vaccination and autism stirred public fears.
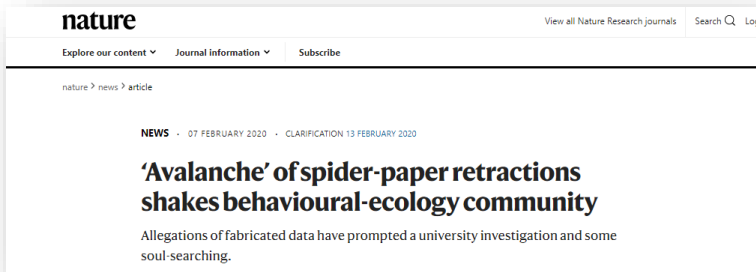*L. MACGREGOR/REUTERS*

theguardian

thebmj

Jonathan Pruitt, a behavioural ecologist and rising star in the field of spider behaviour. His research looked at how different personalities form within communities of social spider species that live in groups – emerging ideas on how animal behaviours evolve in the context of their environment.



nature

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nature > news > article

NEWS  ·  07 FEBRUARY 2020  ·  CLARIFICATION 13 FEBRUARY 2020

'Avalanche' of spider-paper retractions shakes behavioural-ecology community

Allegations of fabricated data have prompted a university investigation and some soul-searching.

Data irregularities – fabricated and falsified data

After >2 years of allegations, at least 13 of Pruitt's papers have been retracted, and 6 others have been labelled with expressions of concern. He resigned from McMaster in July 2022 after receiving confidential settlement terms



When colleague & co-author Laskowski dug into data sets that Pruitt had provided for the study, she was shocked to find stretches of data that seemed to have been duplicated, to represent findings for multiple spiders.

# DutchNews.nl

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«« previous                                        next »»»

## Professor faked 61 pieces of research: Volkskrant

Monday 23 September 2013

A former professor at Amsterdam's VU university published at least 61 pieces of faked research over a 15-year period, the Volkskrant reports on Monday.

Mart Bax, who retired in 2002, was involved in fraud for at least 15 years, publishing invented research, recycling his work under other names and lying about awards and other work, the Volkskrant says.

The university is not taking any legal steps against Bax, a political anthropologist, because he stopped working 11 years ago. The results of a formal investigation into Bax will be published later on Monday.

In 2011, Tilburg professor Diederik Stapel was sacked after it emerged he had faked research data in at least 30 scientific papers.

- **Prof Mart Bax**, Dutch emeritus, endowed professor in Political Anthropology Vrije Universiteit (VU University), Amsterdam, the Netherlands.
- Of the 161 publications claimed by Bax, 64 are non-existent. He signed off his yearly publication list, so this makes it a crime of written misrepresentation.

## Explosive book of bribes and bombs in Cork is blown out of the water

Justine McCarthy

Sunday January 20 2019, 12.01am GMT, The Sunday Times

'Patricksville' is now believed to refer to Buttevant
ALAMY

...sh doubt has been cast over whether incidents of intimidation, bribery and a ...in Cork, which were chronicled in a 1976 book by a Dutch academic, ...ned.

...krant, a daily newspaper in the Netherlands, reported on Thursday that ...ere numerous unverified events in Harpstrings and Confessions: ...ine Style Politics in the Irish Republic, written by Mart Bax, who went on to ...ome professor of anthropology at the Free University of Amsterdam.

- *Publications on events that allegedly took place in Medjugorje during the Bosnian War were proved to be false*
- *His account of the town of "Patricksville" (presumably Buttevant) as having extensive corruption, bribery, and clientelism is considered controversial among experts.*

Fabrication

The Guardian — International edition

**French professor faces disciplinary case over hydroxychloroquine claims**

Didier Raoult stands accused of touting drug as a coronavirus treatment without evidence

At the beginning of the pandemic Rault claimed that hydroxychloroquine, a derivative of the antimalarial drug chloroquine, could cure covid-19

Elizabeth Bik raised concern wrt methodolology, the way the data was handled, the peer review process and ethical issues…

Methodology: *researchers had failed to control for confounding factors. For instance treatment and placebo groups in Raoult's study differed in important ways that could have affected the results.*

Missing data: *Six patients enrolled in the treatment group at the beginning of the study were not accounted for by the end, missing from the data.*

Peer review: *the paper was submitted and accepted within 24 hours*

**Ethical Misconduct**

Ethical issues:
2022, France's Agency for the Safety of Health Products (ANSM) is filing criminal charges against the institute led by Didier Raoult: "…*serious breaches and (cases of) non-compliance with the rules on research involving humans, notably as regards ethics…[S]hortcomings involved patient consent and information, as well as the collection and use of patient samples*"

**Unacceptable and questionable practices**

nature

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nature > news > article

NEWS | 27 May 2021

**Scientific image sleuth faces legal action for criticizing research papers**

Researchers say the complaint filed against Elisabeth Bik could have a 'chilling effect' on scholarly criticism.

SCIENCEINSIDER | SCIENTIFIC COMMUNITY

**Scientists rally around misconduct consultant facing legal threat after challenging COVID-19 drug researcher**

Lawyer for microbiologist Didier Raoult has accused Elisabeth Bik, who analyzes scientific papers for image manipulation, of harassment, blackmail

NEWS

Check for updates

as: *BMJ* 2022;377:o1117
.doi.org/10.1136/bmj.o1117
d: 04 May 2022

**French research institute faces criminal charges over "serious breaches"**
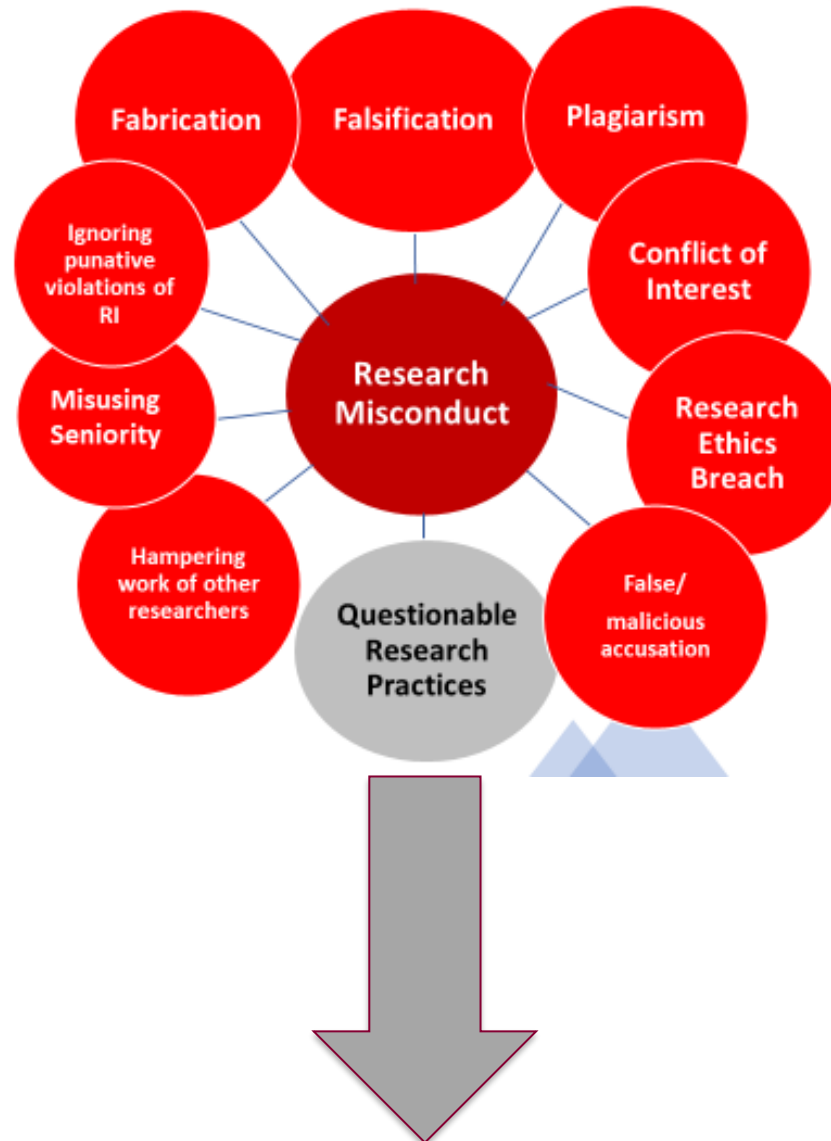
Barbara Casassus

BMJ: first published

*Unité de Recherche sur les Maladies Infectieuses et Tropicales Emergentes, (Infectious and Tropical Emergent Diseases Research Unit*
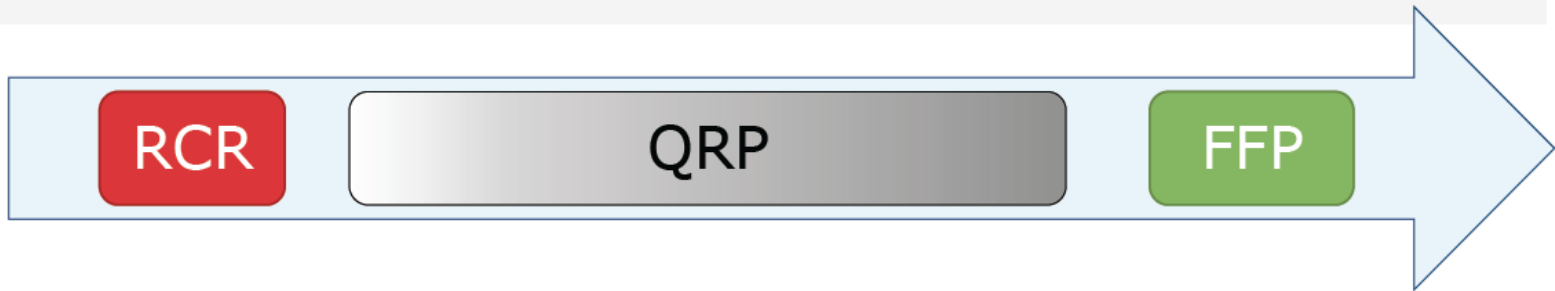
**Questionable Research Practices**

# RESEARCH MISCONDUCT ENCOMPASSES A WIDE RANGE OF UNACCEPTABLE RESEARCH PRACTICES

# Questionable Research Practices (QRP) "50 Shades of Grey"



## Responsible Conduct of Research (RCR)
- Represents the ideal standard individuals & institutions strive to meet
- "The practice of research investigation with integrity." *(NIH – Office of Research Integrity)*

## Falsification Fabrication Plagiarism (FFP)
- Represents practices everyone agrees should be avoided

## Questionable Research Practices (QRP)
- In between - "The 50 Shades of Grey"

*John LK, Loewenstein G, Prelec D. (2012) Psychol Sci. 23(5):524-32.*

# QRPS – poor research practices

- Actions that concern trespassing methodological principles that threaten the relevance, validity, trustworthiness, or efficiency of the study at issue
- **QRPs** sit on the continuum between what is truly correct and truly deceptive.
- Whether a QRP qualifies as research misconduct is often determined by the seriousness of the incident and the culpability and intent of the researcher

# QRPS



Data Analysis

Selective Citation

Poor data Management

Not disclosing flaws in study design or execution

Authorship issues

QRPs

Not acknowledging others' work

Not submitting valid negative results for publication

Lack of transparency – reproducibility issues

Lack of proper controls
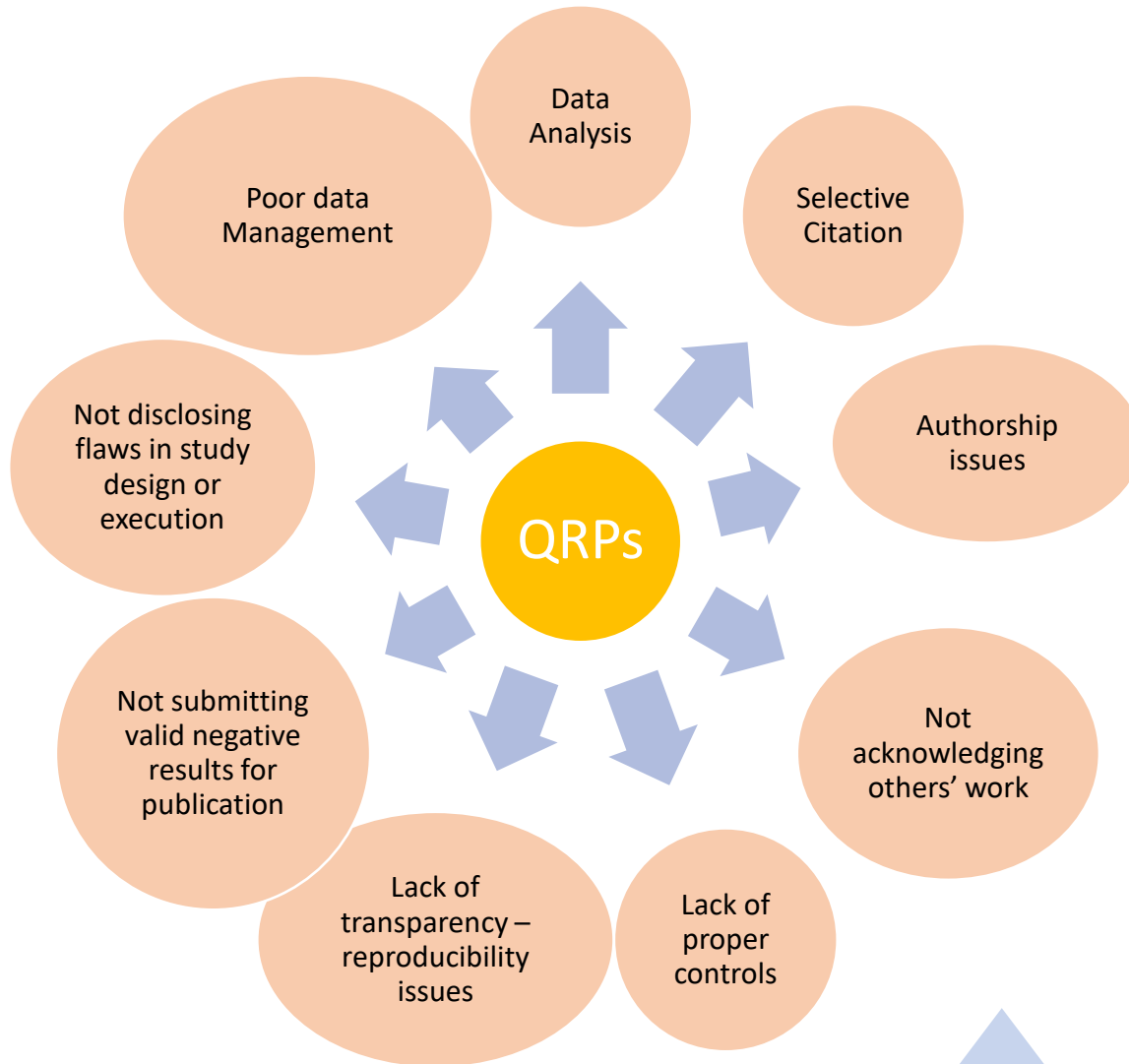
# QRPs = "Sloppy science/research" – is it a problem?



**PLOS ONE**

RESEARCH ARTICLE

Prevalence of questionable research practices, research misconduct and their potential explanatory factors: A survey among academic researchers in The Netherlands

Gowri Gopalakrishna[1]*, Gerben ter Riet[2]*, Gerko Vink[3], Ineke Stoop[4], Jelte M. Wicherts[5]*, Lex M. Bouter[1,6]*

*Collectively, lesser forms of research misconduct, or QRPs, may have more impact owing to their prevalence*

- National Survey on Research Integrity 6,813 academic researchers in The Netherlands

  ➢ Prevalence of fabrication and falsification were 4.3% and 4.2%, respectively

  ➢ 51.3% of respondents engaged frequently in at least one QRPs

G. Gopalakrishna, G. ter Riet, M. Cruyff, G. Vink, I. Stoop, J.M. Wicherts, L.M. Bouter (2021) Prevalence of questionable research practices, research misconduct and their potential explanatory factors: a survey among academic researchers in The Netherlands. Preprint https://www.researchgate.net/publication/353051736

# Reproducibility Crisis
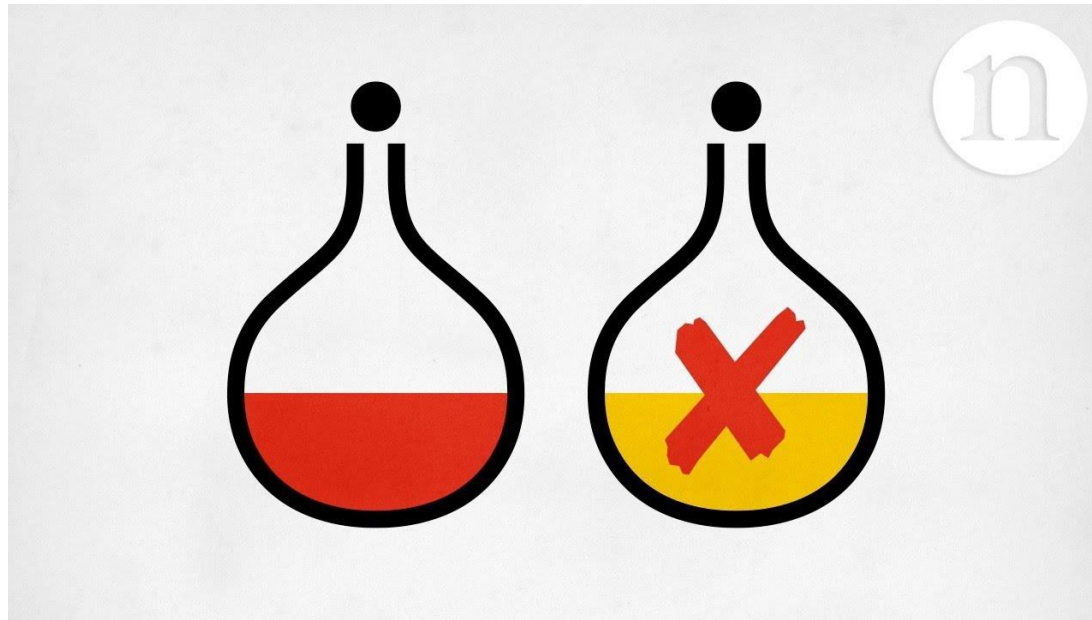


Out of 1,576 scientists, most agree that there is a crisis and over 70% said they'd tried and failed to reproduce another group's experiments.

Baker, M. (2016). 1,500 scientists lift the lid on reproducibility. Nature533, 452–454 (2016). https://doi.org/10.1038/533452a

# Scenarios

# What would you do…?

## Scenario 1: image manipulation

# Scenario 1–Discussion Questions

Go to [www.menti.com](http://www.menti.com) and use the code **6994 5465**

- **Why do you think the postdoc chose to falsify his data?**

- **What would you do in his place?**

# *A word about images...*

## Spot the difference



Authentic          Forged

*H. Kasban, Sabry Nassar,. An efficient approach for forgery detection in digital images using Hilbert–Huang transform, Applied Soft Computing, Volume 97, Part A, 2020, 106728, https://doi.org/10.1016/j.asoc.2020.106728.*

- **An image used for research/research output <u>is DATA</u>**

- Undocumented alterations to research images, ie image manipulation, may represent a case of research misconduct.

- *S. R. Jordan. Research integrity, image manipulation, and anonymizing photographs in visual social science research. International journal of social research methodology, 07/2014, Volume 17, Issue 4*

# Images – General Guidance

- Digital manipulation of images – increasingly problematic

- Images are data

- Difficult to develop universal set of rules – discipline specific

**Tips**

- Follow subject-specific best practice  and journal guidelines in which you intend to publish

- Avoid complex or inconsistent manipulations:
  - cutting and pasting (copying one part of an image into a different image or a different part of the same image)
  - cloning (replacing one part of an image with material from another part of the same image)
  - burning (darkening specific parts of an image);
  - improper cropping; colour/contrast/brightness manipulation;
  - inconsistent image use

- Explain how you processed/manipulated the image you are presenting

- Keep and time stamp the original image; you could be asked to provide this information if the validity of your published image is ever questioned

# Scenario 2: data analysis

You are about to finish the experimental work of your research project. When analysing the data, some data-points appear to be outliers.

The outliers don't match with your dominant interpretation of the other data and including them in your dataset may lead to not so conclusive results. It would probably be difficult to get it published in a good journal.

You could not find a logical reason why the data-points are so far off, and you would feel better if you could just exclude them

**What would you do?**

## For discussion:

### Chose an option and justify your answer.

1)      I adapt my statistical model to see whether the results make sense in a new light.

2)      Outliers are a normal part of research. I exclude them and report them in a sidenote.

3)      I consult my colleagues and try to find the reason for the outliers.

4)      Is there another option?

# Data Analysis – acceptable

**Should any information be excluded from interpretation?**

| | |
|---|---|
| Unexpected conditions and events ✓ | After 30 days of using a piece of equipment to collect data, you discover that the equipment was not calibrated properly on two of those days |
| Unreliable data/information ✓ | A painting used in the study of an artistic tradition could not be authenticated |
| Protocol did not run as planned ✓ | A number of participants in a clinical trial did not follow instructions |
| Technical oversight ✓ | The behaviour of a group of animals studied in the wild could have been disturbed by an outside influence. |
| Researcher error ✓ | Some consent forms for a survey research project were not signed |

# Data Analysis – acceptable

There may be acceptable good reasons for excluding information

•Ensure that the reasons behind your selections (and especially your omissions) are explained when you report your findings.

•Know the best practices for your field

•Discuss your data selection plans with colleagues, peers and mentors to gain their advice and expertise

•Are completely clear about what you have done, and the decisions you have made, when you present or discuss your data

•Are aware of and take steps to avoid **confirmation bias**

👉 **Check out BMJ article [Bias in Research](#)**

# Data Analysis

**What is unacceptable?**

Pick and choose evidence

Selective use of time periods

Delete unwanted data   Fabricate data

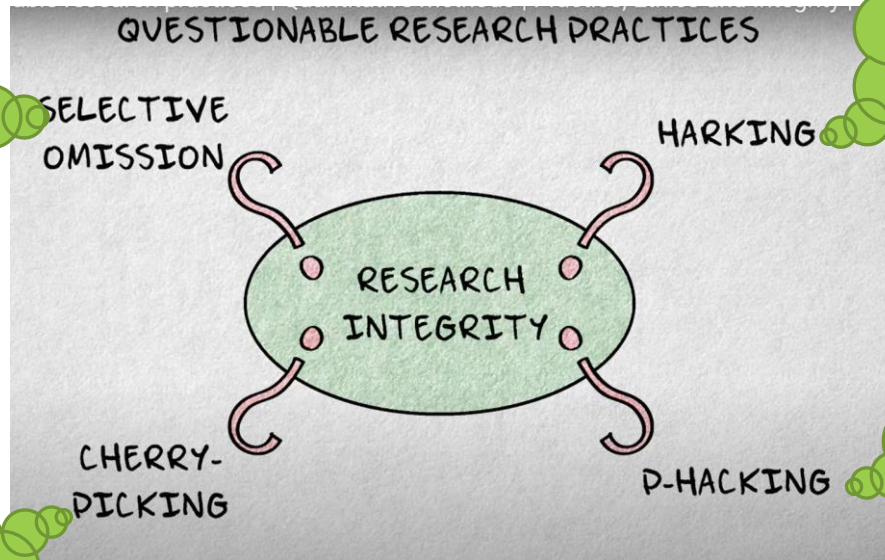Ignore conflicting evidence

Improper controls

Ignore protocol requirements

Terminate study prematurely

# QRPs – Data Analysis

**Opposite of Cherry Picking:** omitting data/results which are not favourable to your hypothesis and/or impact negatively on the statistical significance of your findings

**Hypothesising after results are known**

QUESTIONABLE RESEARCH PRACTICES

SELECTIVE OMISSION

HARKING

RESEARCH INTEGRITY

CHERRY-PICKING

P-HACKING

**Selecting data which makes the significance (P value) more statistically favourable**

**Related to P-hacking:** selecting only results which are significant or favourable to your hypothesis

UNIVERSITY OF AMSTERDAM

https://www.youtube.com/watch?v=tufAPd1NlTQ

## Scenario 3: authorship



Research Integrity: Case Study
When Authorship Gets Personal

ori.hhs.gov | @hhs_ori | askORI@hhs.gov

https://ori.hhs.gov/images/ddblock/SCRIPT-08-hi-res.mp4

## Scenario 3-Discussion Questions

What could the PI have done to help prevent this situation from occurring?

What considerations should be taken into account when determining authorship?

# Authorship & Acknowledgement

**Authorship**

- Assuming accountability for all aspects of the work, ensuring that questions related to the

- accuracy or integrity of any part of the work are appropriately investigated and resolved.

- Giving final approval of the version to be published.

- Drafting the work or revising it critically to incorporate important intellectual content.

- Making a substantial contribution to the conception or design of the work (or the acquisition, analysis or interpretation of data for the work).

**Acknowledgement**

- Acting as a mentor or supervisor.

- Conducting routine work (e.g. scheduling interviews or collecting routine data)

- Providing the funding for work done by others.

- Providing special equipment, materials, reagents or skills.

**Resources:**
**COPE** (Committee on Publication Ethics)
https://publicationethics.org
**CRediT** (Contributor Roles Taxonomy)
https://credit.niso.org/

**Enhancing Responsible Conduct of Research**

# Who is responsible for Responsible Conduct of Research?

Research Integrity applies to all research disciplines and RI training is required across the entire range of research community and personnel

**Collective Responsibility**

*"The primary responsibility for ensuring this lies with individual researchers and institutions. However, the entire research community, which also encompasses academic publishers, funders and regulators, has responsibilities to fulfil in order to maintain high standards of research integrity".*

*Epigeum Online Research Integrity Training (v2.0), Oxford University Press (2021)*

# Enhancing Research Integrity: Changing the research culture

- Enhancing Research Integrity therefore means fostering and developing a cultural mind-set whereby all researchers should strive to improve the quality, relevance and reliability of their work.

TIME FOR A **CULTURAL** **SHIFT...** WE SHOULD VALUE REPRODUCIBILITY AS MUCH AS # OF PAPERS PUBLISHED

Scriberia

# Research Integrity – Your role

- **Comply with and uphold** the Principles set out in the **UCC Code of Research Conduct:**

  - Conducting Research responsibly and with integrity

  - reporting misconduct

  - Training requirements

- Be familiar with and uphold **other UCC policies relating to Research Integrity:** Research Ethics, Data Management, Conflict of Interest policy, Open Access etc

- Undertake training in Research Integrity

  - ➤**Epigeum online training** in Research Integrity (**Mandatory)**

  - ➤**UCC 'in house' training in Research Integrity**

University College Cork, Ireland
Coláiste na hOllscoile Corcaigh

# Research Integrity @UCC
## *Training*

# Epigeum online RI training – **MANDATORY** for all research staff and students



**Link: [Epigeum Registration & Further Information | University College Cork (ucc.ie)](ucc.ie)**

| Core Modules 1-8 👍 |
| --- |
| 1.Good Research Conduct |
| 2.Irresponsible Research Practices |
| 3.Planning Your Research |
| 4.Managing and Recording Your Research |
| 5.Data Selection, Analysis and Presentation |
| 6.Scholarly Publication |
| 7.Professional Responsibilities |
| 8.Communication, Social Responsibility and Impact |

| Specialist Modules 9-13 👍 |
| --- |
| Conflicts of Interest |
| Responsible Conduct of Research with Humans Participants |
| The Care and Use of Animals in Research |
| Intellectual Property |
| Export Controls |

👍 **Modules 1-8:** Early-mid career researchers (students/postdocs)
**Modules 1&2:** Mid-advanced career researchers

👍 **Modules 9-13:** All researchers, as relevant/necessary

## UCC CPD COURSES
# Research Skills Training Programme

**Research Skills Training Programme 2023**
**Delivered via Teams** via this link. Registration is not required

**UCC Research Skills Training Programme**,
## Contact: imma.zoppi@ucc.ie

**The UCC Research Skills Training Programme** is targeted at researchers across all disciplines and at all career levels. These workshops cover a variety of topics relating to the identification, capture and management of research funding, and also encompass sessions focused on research-relevant policies and the dissemination/exploitation of research.

**Listed as a CPD course.** Attending 5 of the sessions below will entitle researchers to a certificate of completion. **Please note that you must join the Teams call with your UCC account in order to ensure your attendance is recorded.**

| Title | Date | Speaker |
|---|---|---|
| F.A.I.R. Data Management | October 19th | Aoife Coffey |
| **Research Integrity & Ethics** | **November 16th*** | **Irene Kavanagh, Kevin Murphy/Ciara Heavin, Christian Waeber & David Kerins** |
| Maximising Impact through Commercial Exploitation | November 30th | David Corkery |
| Engaged Research | December 14th | John Barimo |

UCC Coláiste na hOllscoile Corcaigh
University College Cork, Ireland
Research Taighde

**UCC Digital Badge in Responsible Conduct of Research–For Research teams (including collaborative groups) and/or groups of researchers from a specific discipline/Colleges.**

## Digital Badge in the Responsible Conduct of Research

Digital Badge in Responsible Conduct of Research

Embedding Research Integrity awareness within the research community in UCC

**Link: Digital Badge in the Responsible Conduct of Research | University College Cork (ucc.ie)**

| Topics |
|---|
| 1.Research Integrity |
| 2.Data Management & FAIR Principles |
| 3.Reproducible Research |

**Delivered by**
UCC Library (Aoife Coffey),
UCC Research (Irene Kavanagh)
Clinical Research Facility – Cork (Brendan Palmer)

**Contact: aoife.coffey@ucc.ie**

| Course content & requirements | |
|---|---|
| Self-directed learning through Canvas | 👍 |
| Live session (day long workshop) | 👍 |
| Submission of a reflective exercise | 👍 |
| Complete online Epigeum Research Integrity course. | 👍 |

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University College Cork, Ireland
Research
Taighde

# Research Integrity Training Postgraduates



**PG7049**

PG7049 — The PhD Journey: Research Skills for Doctoral Researchers (online)

Subject Area: PG - Postgraduate Training

Credit Weighting: 10 — *The notional student workload for 5 credits is 125 hours*

**PG6015**

PG6015 — An Introduction to Research Integrity, Ethics and Open Science

Subject Area: PG - Postgraduate Training

Credit Weighting: 5 — *The notional student workload for 5 credits is 125 hours*

*Important additional Resources and helpful links*
*1. UCC-based guidance, research policies & resources*
*2. Other useful resources*

# 1. Important Resources & Guidance – UCC

**Research Integrity @UCC** UCC Research Integrity

**UCC Code of Research Conduct** UCC Code of Research Conduct v2.4_14th Sept 2021

**Mandatory Epigeum online Research Integrity training for UCC research staff (and students)**
Epigeum Registration & Further Information | University College Cork (ucc.ie)

**Other training for researchers at UCC (Research Integrity)**
- **Research Skills Training Programme CPD1678** *Research Integrity and Research Ethics workshop on 16th Nov 2023, contact **imma.zoppi@ucc.ie**
- Digital Badge in the Responsible Conduct of Research | University College Cork (ucc.ie)
- PG6015 Introduction to Research Ethics
- PG7049 The PhD Journey: Research Skills for Doctoral Researchers (online)
- Other Seminars workshops & talks | University College Cork (ucc.ie)

**Research Ethics @ UCC (getting ethical approval for your research)** Research Ethics | University College Cork (ucc.ie)

**UCC Research Data Management Planning supports & Policy**
UCC Research Data Services (Data Management Planning)
Research Data Management Policy

**UCC Open Access**
Home - Open Access @ UCC - UCC Library at University College Cork
OpenAccessPublicationsPolicy.docx (live.com)

**UCC Conflict of Interest Policy** Conflict of Interest Policy | University College Cork (ucc.ie)

# 2. Other Resources & Links

**COPE (Committee on Publication Ethics)**

**CRediT** (Contributor Roles Taxonomy) https://credit.niso.org/

**UKRIO (UK Research Integrity Office)-Recommended-Checklist-for-Researchers-Research Integrity**

**Useful additional guidance & tips from UKRIO on all things related to Responsible Conduct of Research Research Integrity Resources - UK Research Integrity Office (ukrio.org)**

# UKRIO Recommended Checklist for Researchers

This Checklist by the UK Research Integrity Office lists the key points of good practice for a research project and is applicable to all subject areas. More detailed guidance is available in our *Code of Practice for Research*.

**Before conducting your research, and bearing in mind that, subject to legal and ethical requirements, roles and contributions may change during the time span of the research:**

1  Does the proposed research address pertinent question(s) and is it designed either to add to existing knowledge about the subject in question or to develop methods for research into it?

2  Is your research design appropriate for the question(s) being asked?

3  Will you have access to all necessary skills and resources to conduct the research?

4  Have you conducted a risk assessment to determine:

   a  whether there are any ethical issues and whether ethics review is required;

   b  the potential for risks to the organisation, the research, or the health, safety and well-being of researchers and research participants; and

   c  what legal requirements govern the research?

5  Will your research comply with all legal and ethical requirements and other applicable guidelines, including those from other organisations and/or countries if relevant?

6  Will your research comply with all requirements of legislation and good practice relating to health and safety?

7  Has your research undergone any necessary ethics review (see 4(a) above), especially if it involves animals, human participants, human material or personal data?

8  Will your research comply with any monitoring and audit requirements?

9  Are you in compliance with any contracts and financial guidelines relating to the project?

10  Have you reached an agreement relating to intellectual property, publication and authorship?

11  Have you reached an agreement relating to collaborative working, if applicable?

12  Have you agreed the roles of researchers and responsibilities for management and supervision?

13  Have all conflicts of interest relating to your research been identified, declared and addressed?

14  Are you aware of the guidance from all applicable organisations on misconduct in research?

### When conducting your research:

1 Are you following the agreed research design for the project?

2 Have any changes to the agreed research design been reviewed and approved if applicable?

3 Are you following best practice for the collection, storage and management of data?

4 Are agreed roles and responsibilities for management and supervision being fulfilled?

5 Is your research complying with any monitoring and audit requirements?

### When finishing your research:

1 Will your research and its findings be reported accurately, honestly and within a reasonable time frame?

2 Will all contributions to the research be acknowledged?

3 Are agreements relating to intellectual property, publication and authorship being complied with?

4 Will research data be retained in a secure and accessible form and for the required duration?

5 Will your research comply with all legal, ethical and contractual requirements?

**Recommended Checklist for Researchers**

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# Thank you!

Dr Irene Kavanagh | Research Officer | UCC Research

*National Funding Programmes & Wellcome Trust | Research Integrity | Research Business Continuity Team (RBCT) Coordinator*

**UCC Research | Office of the Vice President for Research & Innovation |**

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**https://www.ucc.ie/en/research/support/integrity/**