



# Research Integrity and Ethics

Values, Principles, Responsibilities,  
Practices

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What's next...





# Learning outcomes

- Awareness of what research integrity and human research ethics are and why they matter
- Awareness of the *Australian Code for the Responsible Conduct of Research* and governance of human research ethics
- Awareness the values, principles, and responsibilities of research integrity and human research ethics
- Awareness of how to apply these integrity and ethics principles to your own research



**What is research?**



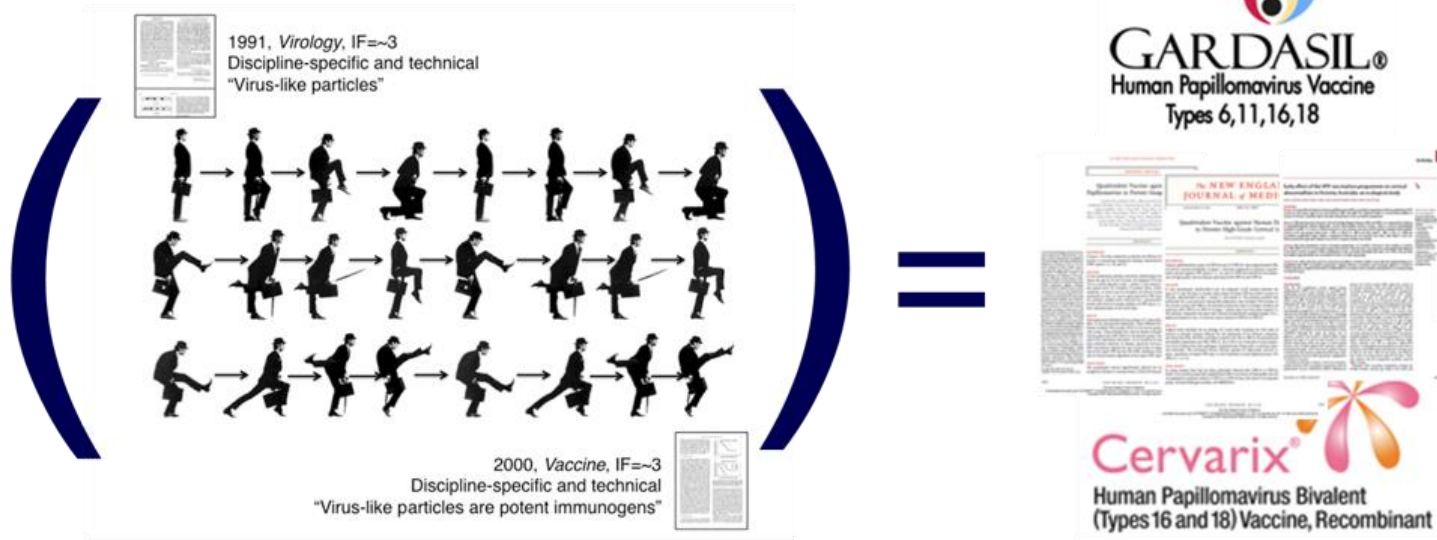


# What is research?

*‘The concept of research is broad and includes the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies, inventions and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.’*

The Australian Code for Responsible Conduct of Research, p. 5

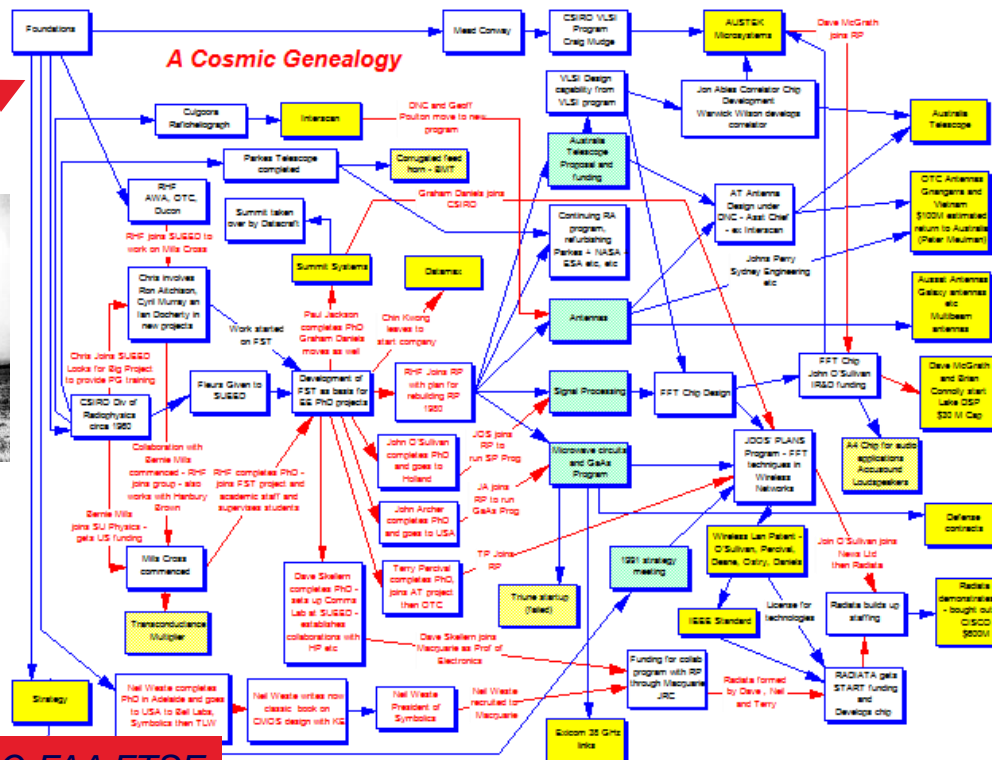
# Research always has impact



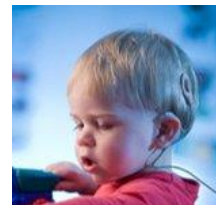
- Accumulation of non-linear steps
- A complex equation of research impact

- Safe and ~100% effective vaccine
- Reduction of precancer within 3 years of introduction

# The impact of research is unpredictable



Radio astronomy



Cochlear implant

Memes!



Credit: Dr Bob Frater AO FAA FTSE



# What is research integrity?





# What is research integrity?

- Research generates knowledge and always has impact
- The impact of research appears broad and unpredictable
- Because of this we must be able to trust research

*Research integrity is the coherent and consistent adherence to a set of principles that underpin the trustworthiness of research.*

# Research impact and trust

Article	Year of retraction	Citing Articles before retraction	Citing Articles after retraction	Total cites (journals indexed by Web of Science)
<b>1. Primary Prevention of Cardiovascular Disease with a Mediterranean Diet.</b> N ENGL J MED; APR 2013. <i>Estruch R, Ros E, Salas-Salvado J, Covas MI, Corella D, Aros F, Gomez-Gracia E, Ruiz-Gutiérrez V, Fiol M, Lapetra J, Lamuela-Raventos RM, Serra-Majem L, Pinto X, Basora J, Munoz MA, Sorli JV, Martinez JA, Martinez-Gonzalez MA, et al., for the PREDIMED Study Investigators</i>	2018	1910	627	2537
<b>2. Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children.</b> LANCET; FEB 28 1998. <i>Wakefield AJ, Murch SH, Anthony A, Linnell J, Casson DM, Malik M, Berelowitz M, Dhillon AP, Thomson MA, Harvey P, Valentine A, Davies SE, Walker-Smith JA</i>	2010	642	780	1422
<b>3. Visfatin: A protein secreted by visceral fat that mimics the effects of insulin.</b> SCIENCE; JAN 2005. <i>Fukuhara A, Matsuda M, Nishizawa M, Segawa K, Tanaka M, Kishimoto K, Matsuki Y, Murakami M, Ichisaka T, Murakami H, Watanabe E, Takagi T, Akiyoshi M, Ohtsubo T, Kihara S, Yamashita S, Makishima M, Funahashi T, Yamanaka S, Hiramatsu R, Matsuzawa Y, Shimomura I.</i>	2007	232	1146	1378

Wakefield, "Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children," *The Lancet*, February 1998.



# The Australian Code for the Responsible Conduct of Research





**Values, principles,  
responsibilities, practices**





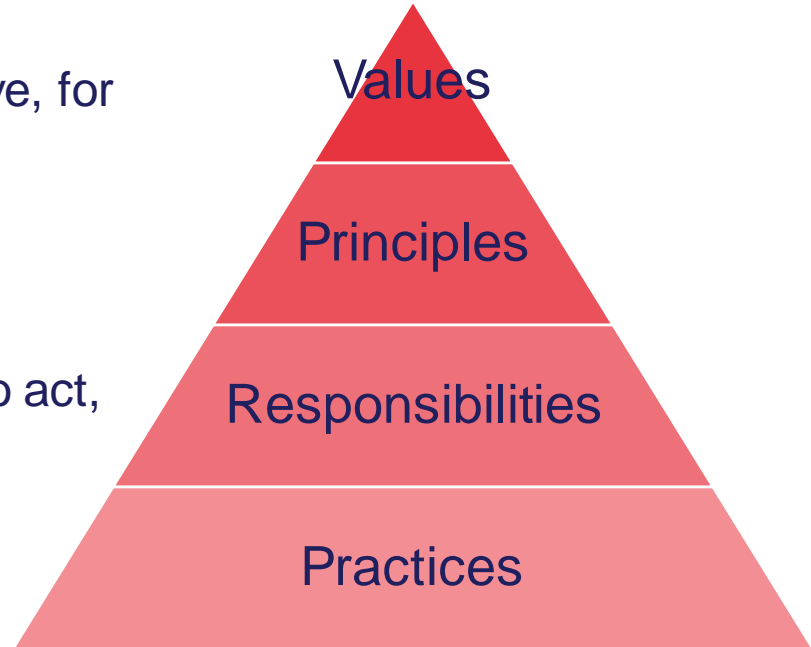
# Values, principles, responsibilities, practices

**Values** are what's important, what we believe, for what we strive

**Principles** are how we translate values into responsibilities, how we achieve values

**Responsibilities** are expectations of how to act, informed by values and principles

**Practices** are the things we do to meet responsibilities





# Values

*'[The Code] establishes a framework for responsible research conduct that provides a foundation for **high-quality research, credibility and community trust in the research endeavour.**'*

The Australian Code for Responsible Conduct of Research, p. 1

Trustworthy research is the **value.**



# Principles

## Principles of responsible research conduct

*The principles (P1–P8) that are the hallmarks of responsible research conduct are:*

**P1 Honesty** in the development, undertaking and reporting of research

- Present information truthfully and accurately in proposing, conducting and reporting research.

**P2 Rigour** in the development, undertaking and reporting of research

- Underpin research by attention to detail and robust methodology, avoiding or acknowledging biases.

**P3 Transparency** in declaring interests and reporting research methodology, data and findings

- Share and communicate research methodology, data and findings openly, responsibly and accurately.
- Disclose and manage conflicts of interest.

**P4 Fairness** in the treatment of others

- Treat fellow researchers and others involved in the research fairly and with respect.
- Appropriately reference and cite the work of others.
- Give credit, including authorship where appropriate, to those who have contributed to the research.

**P5 Respect** for research participants, the wider community, animals and the environment

- Treat human participants and communities that are affected by the research with care and respect, giving appropriate consideration to the needs of minority groups or vulnerable people
- Ensure that respect underpins all decisions and actions related to the care and use of animals in research.
- Minimise adverse effects of the research on the environment.

**P6 Recognition** of the right of Aboriginal and Torres Strait Islander peoples to be engaged in research that affects or is of particular significance to them

- Recognise, value and respect the diversity, heritage, knowledge, cultural property and connection to land of Aboriginal and Torres Strait Islander peoples.
- Engage with Aboriginal and Torres Strait Islander peoples prior to research being undertaken, so that they freely make decisions about their involvement.
- Report to Aboriginal and Torres Strait Islander peoples the outcomes of research in which they have engaged.

**P7 Accountability** for the development, undertaking and reporting of research

- Comply with relevant legislation, policies and guidelines.
- Ensure good stewardship of public resources used to conduct research.
- Consider the consequences and outcomes of research prior to its communication.

**P8 Promotion** of responsible research practices

- Promote and foster a research culture and environment that supports the responsible conduct of research.



# Responsibilities (I)

Support a culture of responsible research

Provide guidance, mentorship and supervision

Undertake and promote education in responsible research

Adhere to laws, regulations, standards and conditions that apply to research

Apply ethics principles to human research

Engage with and respect indigenous peoples

Minimise impact on and support the welfare and wellbeing of research animals

Adopt methods appropriate to the aims of research and ensure conclusions are justified by the obtained results





## Responsibilities (II)

Retain clear, accurate, secure and complete records of research including data

Allow access and reference to research data and records

Disseminate research findings responsibly, accurately and broadly

Take action to correct disseminated research findings

Disclose and manage conflicts of interest

Ensure appropriate assignment of authorship and acknowledge contributions to research

Cite other relevant work appropriately and accurately

Participate in peer review responsibly

Report suspected breaches of research integrity



# Practices

Authorship

Management of research data

Peer review

Conflicts of interest

Supervision

Collaborative research

Publication and dissemination

# Responsible research on a spectrum

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What's next...

Questionable  
Research Practices

Honesty  
Rigour  
Transparency  
Fairness  
Respect  
Recognition  
Accountability  
Promotion

Breach of  
research integrity

Serious Breach of  
research integrity

Excellent

Responsible

Questionable

Irresponsible

Poor



Variation in translation of the principles of research integrity into research practice



# Human research ethics

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What's next...

# What is 'human research' and nexus with Research Integrity

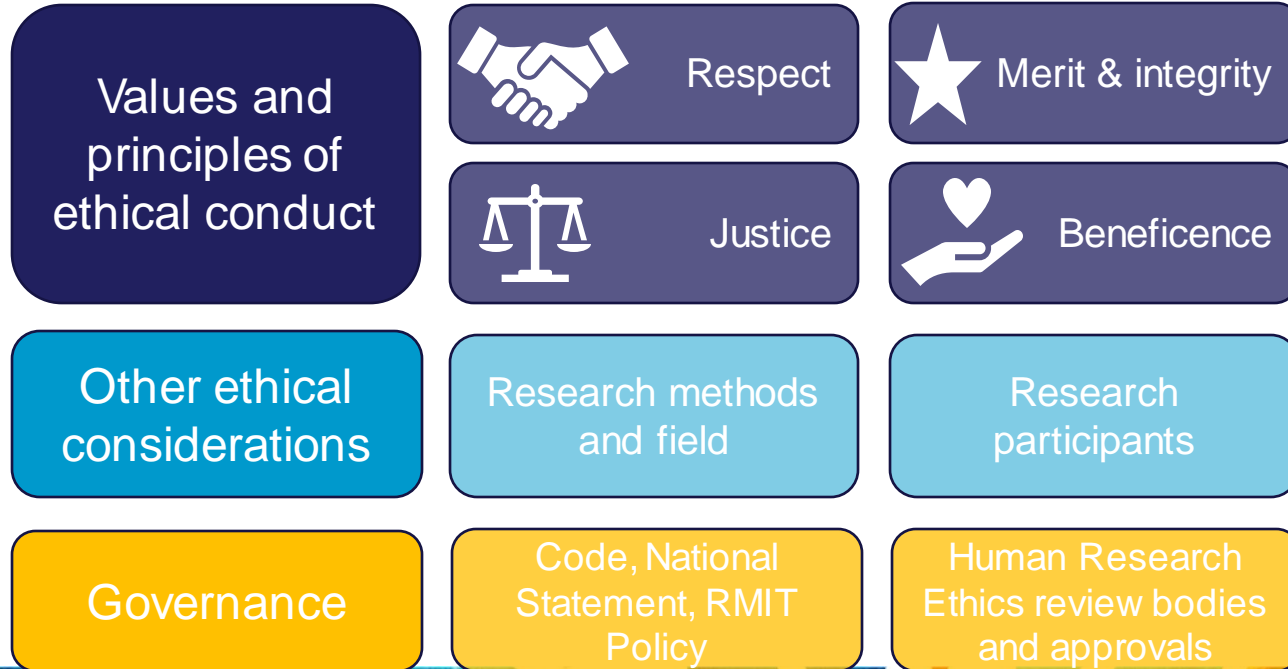
*'Human research is research conducted with or about people, or their data or tissue.'*

The National Statement on Ethical Conduct of Human Research, p.7

The ethical development, undertaking and reporting of human research interconnects with responsible conduct of research (research integrity).



# Human research ethics: values, principles and governance





# Practices—research ethics

- Informed, voluntary consent
- Assessing risk
- Confidentiality and privacy



# Common issues

- Understanding of 'human research' and need to gain and maintain appropriate ethics approvals.
- Recruitment of students, colleagues and/or relatives and friends to research.
- Use of social media platforms for recruitment and/or collection of data.
- Collection and/or use of digital information.
- Understanding and awareness of privacy laws and protections for personal, health and sensitive information.



# Activities

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What's next...



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## Activity 1 – Code building

What does a Code for the Responsible Conduct of AI and Big Data Research look like?

What are the principles or rules?

Are some principles or rules more important than others?

What are the practices that we need to see for trust?



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## Activity 2 – Ethics required?

You have access to, and plans for, several large databases to conduct your Masters research. Some of these databases appear to contain information about humans. When you ask your supervisor if you need to do an ethics application they say, ‘they don’t think so...?’

What do you do next?

What are the consequences if you don’t get an approval?

Are there any other integrity or ethics issues here?



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## Activity 3 – Double data?

You and a successful postdoc are working together. The results have been awesome! You have a co-authored manuscript ready to be submitted for peer review! The manuscript includes results of new experiments that the postdoc conducted. To you, the data looks identical to another set of data the postdoc published two years ago in a different paper.

What do you do next?

Are there any other integrity or ethics issues here?





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## Activity 4 – More data please

With everything in place, you start your research interviews with participants. During your first interview, you realize you'd have much richer data if you had more personal info from the participants - things like additional demographics, relationship status, political views, etc. These weren't in the ethics approval or described in the consent form... A few interviews later, your supervisor lets you know that there were two complaints about your interviews...

Are there any ethics or integrity issues here?

What could you have done differently?

# QANDA

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What's next...

# Resources

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What's next...



Resources and guidance for responsible and ethical research can be accessed via the [Researcher Portal](#) and [Library Research Services](#)

Education and training resources can also be found via [Research Capability Development](#), [Bridge](#) and the [RITE Community in Canvas](#)

[Research Integrity Advisors](#) provide advice about the responsible conduct of research to anyone at the University  
[Research Portal Link – RIA Network](#)

[Research Integrity Team](#) at R&I  
Group email [researchintegrity@rmit.edu.au](mailto:researchintegrity@rmit.edu.au)

[Human Research Ethics Team](#) at R&I  
Group email [humanethics@rmit.edu.au](mailto:humanethics@rmit.edu.au)

**Thank you!**

**Good luck!**

**Stay safe!**

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**What's next...**