Research Integrity Workshop:
Shades of grey or black and white?

URONZ Conference 2019
Friday 6th September
Dr Matt Hall, Associate Director Research Services
Dr Elizabeth Visser, Ethics and Integrity Manager
Responsible conduct of research (RCR)

Singapore Statement on Research Integrity

Preamble. The value and benefits of research are vitally dependent on the integrity of research. While there can be and are national and disciplinary differences in the way research is organized and conducted, there are also principles and professional responsibilities that are fundamental to the integrity of research wherever it is undertaken.

**PRINCIPLES**

*Honesty* in all aspects of research
*Accountability* in the conduct of research
*Professional courtesy and fairness* in working with others
*Good stewardship* of research on behalf of others
Developing a National Research Charter for Aotearoa New Zealand

A charter to set out the principles underpinning sound research practice in Aotearoa New Zealand is being developed.
Reputational risk

Harvard investigation finds fraudulent data in papers by heart researcher

Cornell Announces “Phase Two” Of Investigation
Brian Wansink Misconduct

Cornell is looking at whether its star professor’s misconduct affected research funded by the federal government.

FEATURE
Fallout for co-authors

When a scientist has papers retracted for scientific misconduct, collaborators can suffer career damage.

Third Retraction for Harvard Cancer Biologist

The move follows two major corrections to a 2011 Nature paper, in which researchers demonstrated that a natural compound selectively kills cancer cells.

When Government-Backed 'Nudgers' Go Bad

Meet the people busting scientists who fake images in research papers

by VISHWANATH SAKhrAPAN -- 5 days ago in SCIENCE
An Australian university cleared a cancer researcher of misconduct. He’s now retracted six papers.

The story of Levon Khachigian’s research is a long and winding tale.

One place to start would be in October 2009, when a paper co-authored by Khachigian —
### Retraction Watch Database

**The Retraction Watch Database**

Please see this [user guide](#) before you get started.

<table>
<thead>
<tr>
<th>Reason(s) for Retraction</th>
<th>Title</th>
<th>Author(s)</th>
<th>Country(s)</th>
<th>Affiliation(s)</th>
<th>Journal</th>
<th>Subject(s)</th>
<th>Notes</th>
<th>URL</th>
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<tbody>
<tr>
<td>Error in Methods</td>
<td>Safety and feasibility of transcranial magnetic stimulation as an exploratory assessment of corticospinal connectivity in infants after perinatal brain injury: an observational study</td>
<td>Neil E. Whitbread, Dolores Hallegraeff</td>
<td>New Zealand</td>
<td>Whitbread Associates, Lower Hutt, Wellington, New Zealand</td>
<td>(HUM) Rehabilitation/Therapy; Physical Therapy — Oxford Academic</td>
<td>(HUM) Rehabilitation Sciences, Hong Kong Polytechnic University, Kowloon, Hong Kong</td>
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<tr>
<td>Notice - Limited or No Information</td>
<td>Inequities in coverage of smokefree space policies within the United States</td>
<td>Muhammad Kaledaoui, Amir Ali, Alan of Dan Bekht</td>
<td>New Zealand</td>
<td>Department of Applied Science, University of Otago, Dunedin 9054, New Zealand</td>
<td>Environ</td>
<td>doi:10.1016/j.saa.2018.08.016</td>
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<td>Temporary Removal</td>
<td>Error in Data</td>
<td>Christopher Lowrie, Amber L. Pearson, George Thomson</td>
<td>New Zealand</td>
<td>Department of Geography, Environment, and Spatial Sciences, Michigan State University, East Lansing, MI 48824, USA</td>
<td>(HUM) Public Health and Safety; BMC Public Health — Biomedical Central (BMC)</td>
<td>doi:10.1186/s12889-017-4385-6</td>
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<td>Error and/or Retraction</td>
<td>Error in Results and/or Conclusions</td>
<td>Christopher Lowrie, Amber L. Pearson, George Thomson</td>
<td>New Zealand</td>
<td>Department of Geography, Environment, and Spatial Sciences, Michigan State University, East Lansing, MI 48824, USA</td>
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<td>doi:10.1186/s12889-018-5716-y</td>
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**From Date**

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**To Date**

- PubMedID: mm/dd/yyyy
- DO: 

**Retraction or Other Notices**

- Nature of Notice:
- Paywalled: 

**Original Paper**

- Date
- PubMedID
- DOI
Research Integrity / Responsible Conduct of Research

- In NZ, the largest portion of research funding comes from Government funders, and thus from tax payers
- Funders and public must be able to trust research and researchers
- Research studies do not always deliver the expected results
- Research Governance is important to ensure institutional integrity
  - Embracing standards of excellence, trustworthiness and lawfulness
  - Demonstrate commitment to creating an environment that promotes responsible conduct of research
  - Codes of conduct assist in maintaining research integrity
Principles of Responsible Conduct of Research (RCR)

1. **Honesty** in all aspects of research cycle
2. **Rigour** in all aspects of research cycle
3. **Transparency** in declaring interests and reporting research
4. **Fairness** in the treatment of others
5. **Respect** for participants and wider community
6. **Recognition** of the rights of Indigenous people
7. **Accountability** for all aspects of research cycle
8. **Promotion** of responsible research practices

Paraphrased from the Australian Code for the Responsible Conduct of Research
Task 1: Rate the Principles – 5 mins

• Groups of three
• Discuss the principles
• Indicate what these principles mean to you

Use Slido: www.slido.com
Meeting no: # URONZ
Task 1: Rate the Principles – 5 mins

• Groups of three
• Discuss the principles
• Indicate which of these principles are most important
Responsibilities of researchers

• Support research integrity culture
• Provide guidance and mentorship
• Comply with the relevant laws and regulations
• Ensure the ethical principles are applied to human research.
• Engage with Indigenous peoples and respect their legal rights, customs and protocols
• Adopt appropriate methods and ensure that conclusions are justified
• Retain clear, accurate, secure and complete records
• Disseminate research findings responsibly, accurately and broadly.
• Disclose and manage conflicts of interest.
• Ensure correct authorship.
• Cite and acknowledge other relevant work appropriately and accurately.
• Participate in peer review in a fair and rigorous way.
Task 2: What are the responsibilities of institutions? – 5 mins

• Groups of three
• Discuss the specific responsibilities of institutions
• Add as many responsibilities as you can think of

Use Slido: [www.slido.com](http://www.slido.com)

Meeting no: # URONZ
Task 2: What are the responsibilities of institutions? – 5 mins

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When things go wrong - Research Misconduct

Research Misconduct:
• Falsification
• Fabrication
• Plagiarism
• Other forms of misconduct:
  • Conducting research without ethics approval
  • Failure to declare and manage a serious conflict of interest
  • Falsification or misrepresentation to obtain funding
  • Wilful concealment or falsification of research misconduct by others

Questionable Research Practices (QRPs):
Behaviour that does not live up to the standards for responsible conduct but is not considered serious enough to be research misconduct
Categories of issues managed by GO8 Research Integrity Offices in Australia: 2014-2017

- Plagiarism: 19%
- Authorship: 18%
- Falsification and fabrication: 12%
- Breach of protocol: 15%
- Research without necessary approvals: 8%
- Grant-related: 9%
- Other: 19%

R Halligan, University of Sydney, Presentation at 6th World Conference on Research Integrity, 4 June 2019
## QRPs: Ethical Shades of Gray

<table>
<thead>
<tr>
<th>Research practice</th>
<th>Data-related</th>
<th>Publication-related</th>
<th>Personal behaviour</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor research design</td>
<td>Not preserving primary data</td>
<td>Claiming undeserved authorship</td>
<td>Inadequate leadership/mentoring of next generation of researchers and scholars</td>
<td>Peer review abuse</td>
</tr>
<tr>
<td>Using inappropriate (harmful or dangerous) research methods</td>
<td>Data dredging</td>
<td>Biased reviewing</td>
<td>Inappropriate personal behavior</td>
<td>Non-disclosure of a conflict of interest</td>
</tr>
<tr>
<td>Experimental, analytical or computational errors</td>
<td>Poor data management and/or storage</td>
<td>Denying authorship to contributors</td>
<td>Harassment</td>
<td>Misrepresentation of credentials</td>
</tr>
<tr>
<td></td>
<td>P-Hacking</td>
<td>Artificially proliferating publications</td>
<td>Insensitivity to social or cultural norms</td>
<td>Misuse of research funds for unauthorised purchase or for personal gain</td>
</tr>
<tr>
<td></td>
<td>Withholding data from the research community</td>
<td>Failure to correct the publication record</td>
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</tbody>
</table>

From: Science Europe Briefing Paper “Research Integrity: What it means, why it is important and how we might protect it” 2015; and J Schneider, Aarhus University, Denmark, presentation at 6th WCRI, June 2019
Task 3: Which of these do you think are the most common QRPs? – 5 mins

• Groups of three
• Discuss the QRPs
• Rate the 3 most common via Slido: www.slido.com

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Task 3: Which of these do you think are the most common QRPs? – 5 mins

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• Rate the 3 most common via Slido:

![Slido screenshot](sli.do)
QRPs

Seven QRPs deemed most damaging for “trust” (dichotomized)

Aggregate prevalence for the seven QRPs deemed most damaging for “trust” ≈ 0.32 (Danish) and 0.36 (international).

(J Schneider, Aarhus University, Denmark, presentation at 6th WCRI, June 2019)
Current research environment

• Pressure to publish
• Pressure to obtain funding
• Open science (open access, open data)
• Predatory journals
• Predatory conferences
Dr S knows the best fluorescence images of her protein often have an unexplained bright blob of material that looks like junk and will be distracting to readers. She debates what to do ....
Providing support to researchers

• Principle vs action
  – Transparency – Open Science
  – Rigour – Electronic lab books
  – Honesty – Data reporting
  – Fairness – Authorship agreements
  – Respect – Human/animal ethics processes
  – Recognition – Engaging with Mātauranga Māori
  – Accountability – Financial management
  – Promoting RCR – Mentoring
Providing support to researchers

Resources

— Embassy of Good Science:

- to promote research integrity
- open to anyone willing to learn or support others in fostering understanding and awareness around Good Science.
- community of researchers can gather to discuss ‘hot topics’, share knowledge, and find guidance and support to perform science responsibly and with integrity
- collaboratively map the laws, policies and guidelines informing good practices and highlight relevant cases
- support educators to develop training on research integrity and ethics
Providing support to researchers

• Dr M says “I get so many invitations to attend conferences – which ones do I choose?”

• Predatory conferences:
  – Exist to make money from unsuspecting researchers
  – Money comes from registration fees and hotel accommodation kickbacks
  – Healthy profit by running a number of conferences at the same time (share hotel, registration desks, etc.)
  – No quality control
  – Give themselves grand names: “Global” and “International”
  – Pretend to be a scientific society: American Academy of Sciences (American Academy of Arts and Science is real)
Providing support for researchers: Predatory conferences

- [https://thinkcheckattend.org](https://thinkcheckattend.org)

Think. Check. Attend. is an international initiative that aims to guide and assist researchers and scholars when choosing trusted conferences to attend and to present their research at. The initiative has been introduced by Knowledge E.
Providing support for researchers

• Dr K says “There is an invitation in my Inbox to publish – it looks so easy to get in”
• Predatory publishers - Predatory publishers abuse the open access author-pays model for their own profit.
• Excessive publication fees, but may hide their fees or charges until after they received the manuscript
• Provide little or no peer review or editorial oversight
• Fake impact factors
• Publication process not made clear
Providing support for researchers: Predatory publications

If you can answer ‘yes’ to most or all of the questions on the list.

Complete the check list and submit your article only if you are happy you can answer ‘yes’ to most or all of the questions.

- You need to be confident your chosen journal will have a suitable profile among your peers to enhance your reputation and your chance of gaining citations.

- Publishing in the right journal for your research will raise your professional profile, and help you progress in your career.

- Your paper should be indexed or archived and be easily discoverable.

- You should expect a professional publishing experience where your work is reviewed and edited.

- Only then should you submit your article.

https://thinkchecksubmit.org – coalition of scholarly communications in response to discussions about deceptive publishing