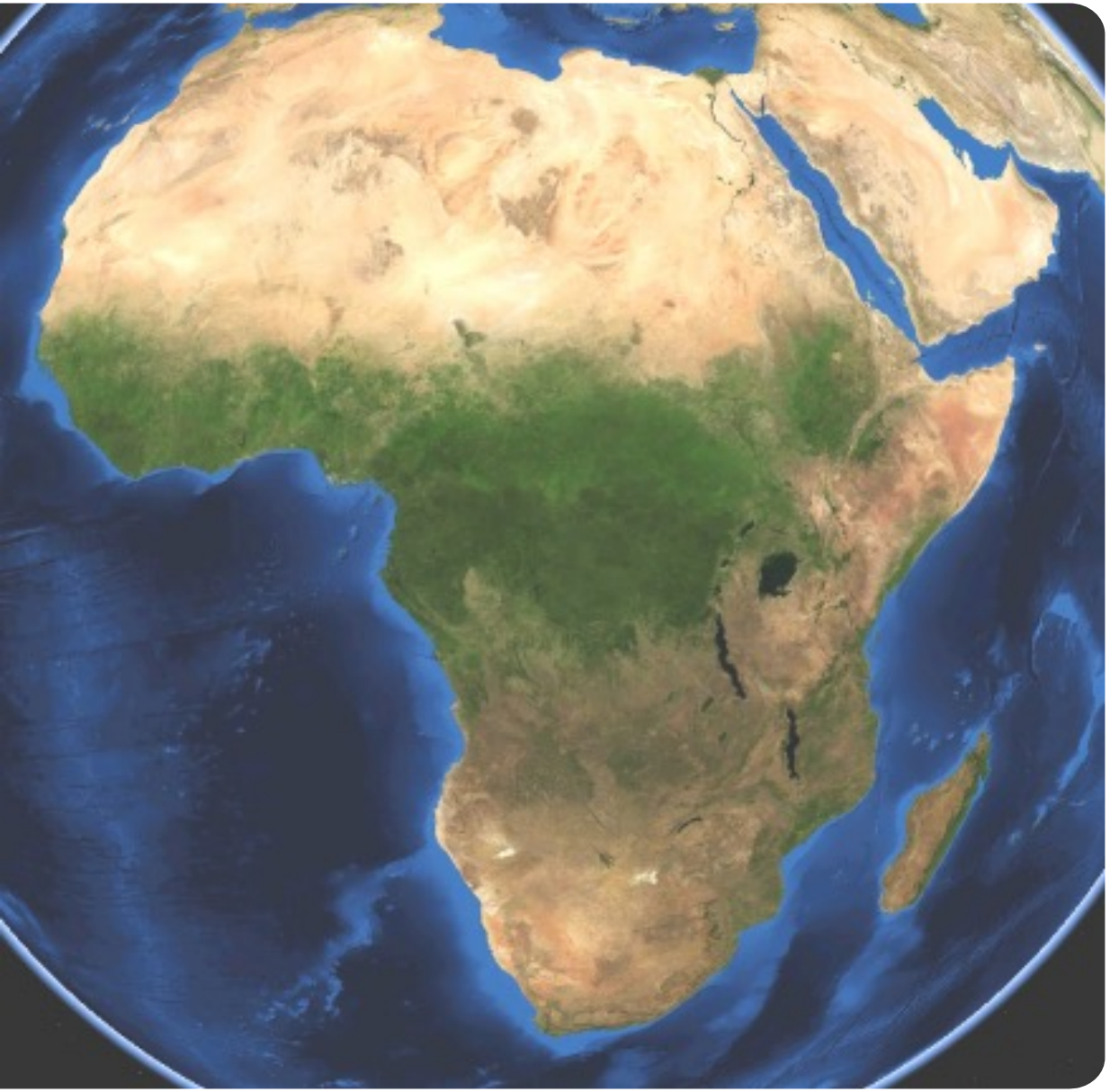


Research Integrity: Experiences and lessons in the last 10 years in the region

Dr Lyn Horn [MD], MPhil, PhD bioethics.

Or RE and RI journey and what I have learned along the way!

Overview of talk

- What's at stake?- stories from a 'Research Integrity Officer'
- Unpacking the concepts and relationships between research ethics and integrity, undesirable research practices
- RI in Africa
- Promoting RI at an institutional level: policy, RI promotion plans, RCR training, culture change
- 7 WCRI in Africa- opportunities to join the conversation

What's at stake? True story

- 5 colleagues working together in one department; different levels of seniority, one 'bad egg' A
- 'A' wants to write up and publish case studies, involves the others to some degree in initial drafts
- 'A' acts as corresponding author
- It does not seem as if co-authors sign off on the articles; one co-author denies knowledge of an article once it is published
- Once articles published the authors are accused by the Journal Editor, of faking peer review. Further investigation reveals images have been plagiarised and falsified (passing an image off as one thing when it turned out to have been both plagiarised and represented something quite different to what was claimed.)
- For the other 4 accused (who all deny involvement or knowledge) this has turned into a career-threatening night-mare
- The corresponding author has left the country after being found guilty, but with limited sanction, and got employed at a university in Australia who probably have no knowledge of this story.
- The others are still trying to clear their names.

An author was accused of faking peer reviews. Turns out he also falsified two images.

In [redacted] the journal Cureus published two [redacted] from the same corresponding author, one month apart.

Soon after, the journal uncovered "potential irregularities" with two reviews during a routine editorial audit, editor John R. Adler Jr. told Retraction Watch:

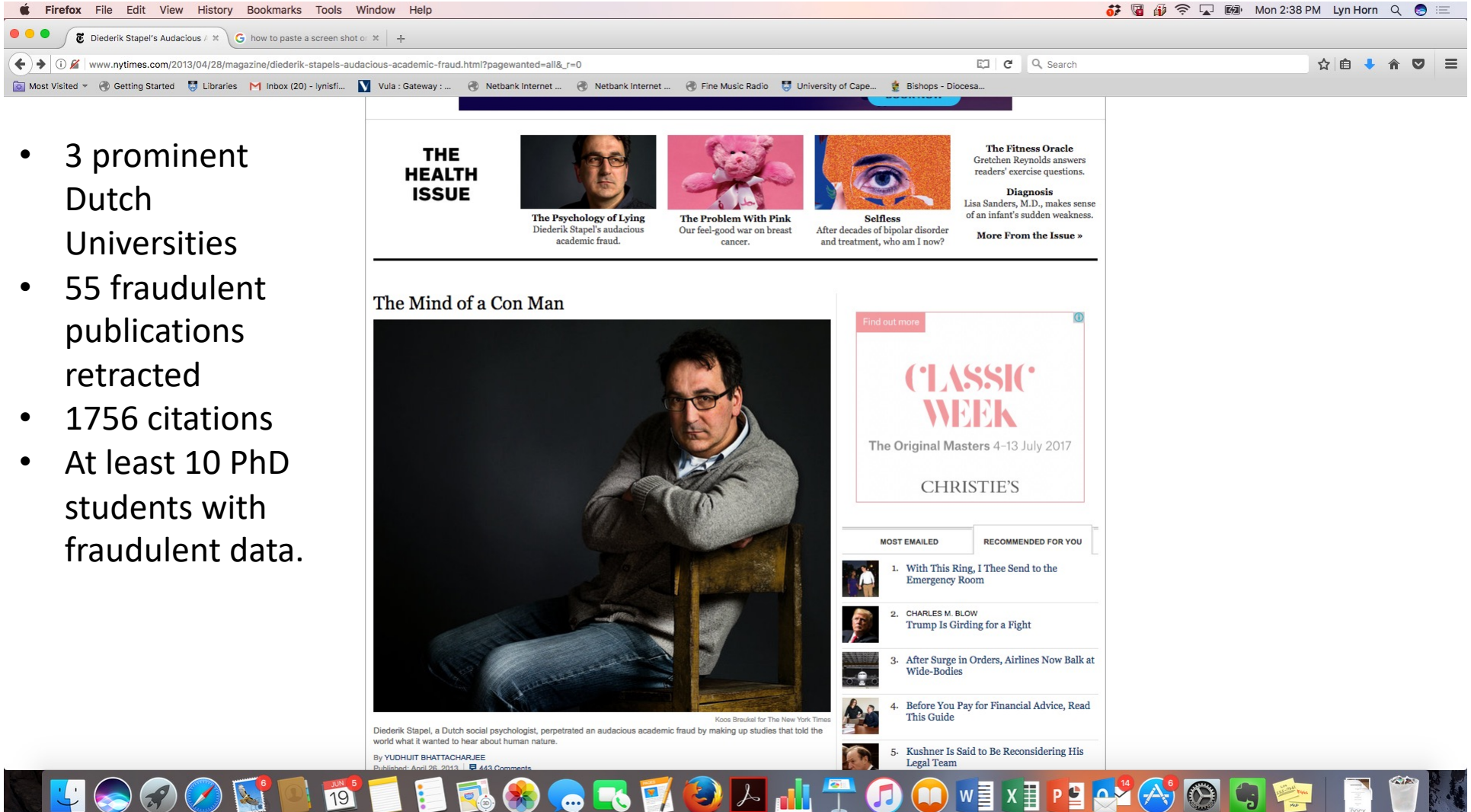
> *Two faked reviewer accounts (co-*

Some more true stories from a RIO

- Allegations by an ex-PhD student that a senior professor stole his work and then patented it and made a huge amount of money
- Large scale data fabrication by field workers in a big public health study
- Student losing a PhD degree because of plagiarism (using the structure of the Table of contents of another student's Masters thesis)
- Participants were used in research without consent, in one instance research done on stored embryo's of couples undergoing fertility treatment.
- Accusations of plagiarism by academics working in the same Dept
- Allegation from one student in a research group against another, that the latter had stolen data from a M thesis and used it without consent in a publication etc etc…..
- Data fabrication by M student, picked up when work presented at a conference, now HoD and supervisor who were co-authors in hot water too.

2011- Diederik Stapels- Dean at Tilburg University- Netherlands

- 3 prominent Dutch Universities
- 55 fraudulent publications retracted
- 1756 citations
- At least 10 PhD students with fraudulent data.



Where do things go wrong?

Conflict of interest and commitment: Failure to recognize and manage adequately…..not just about money!

Authorship and publication: Probably most common ‘space’ for QRPs and misconduct ranging from authorship disputes especially between students and supervisors, dubious publication practices to frank misconduct.

IP, patents and tech transfer: Copyright and patents (and data) ; who owns what? Who can use what?

Collaborations: Team science and multi-institutional, multi national collaborations the norm- differences in culture, language, resources etc . Fertile ground for serious problems if not managed carefully

Where do things go wrong?

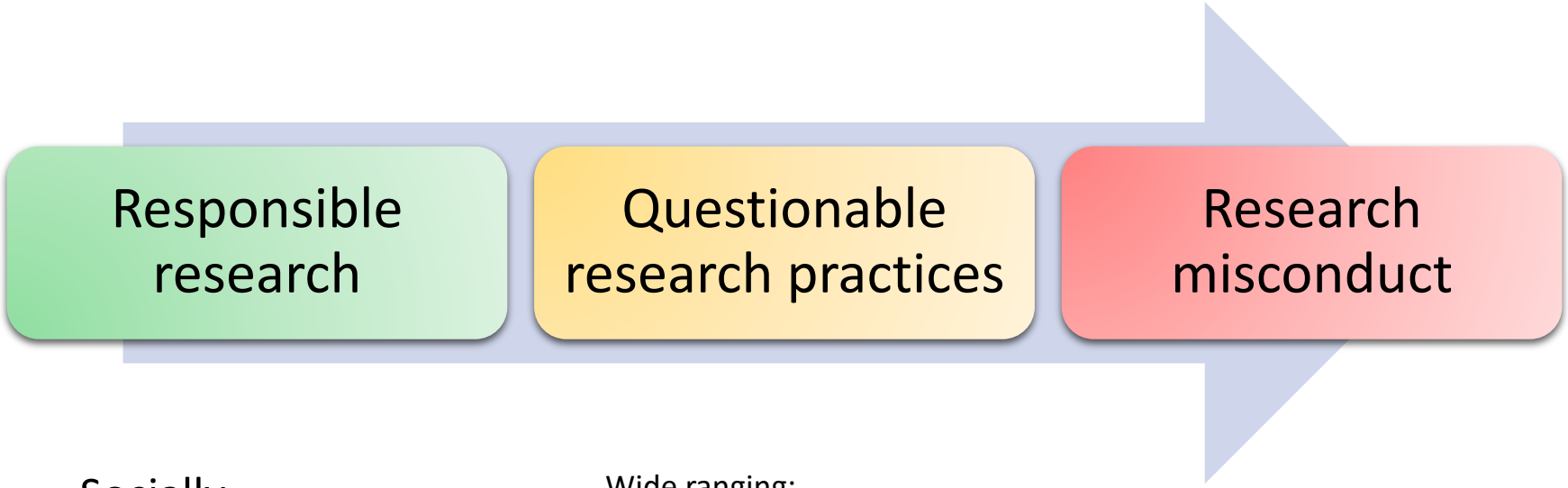
Research ethics: getting approval to late, making substantive changes to projects without approval, problems with informed consent, protecting privacy etc

Acknowledgement failure/ inadequate citation (ideas, data, text etc) …….. and at worst blatant, intentional plagiarism

Data: Collection, management (e.g. losing data-key to identifiers) , analyses, …….and at worst fabrication or falsification

Peer review: access to privileged information that influences; destructive peer review in a competitive context ……..and at worst falsifying peer reviewers and review

Pressure cooker RESEARCH context:



Socially responsive, fully compliant with RE/RI norms and standards

Wide ranging:

- Sloppy data recording, storage and management,
- Data manipulation
- Breaches in research ethics principles,
- Inappropriate authorship practices
- Inappropriate supervision and mentorship practices
- Not giving credit where due
- Mismanagement of research funds etc

FF&P

- Fabrication
- Falsification
- Plagiarism

Questionable Research Practices QRPs

Far more common then the FFP(Falsification, Fabrication, Plagiarism) of research Misconduct!

Some surveys indicate up to 60% of researchers admitting to have engaged in QRPs at some point.

QRPs Some examples

- Making unsubstantiated claims about potential results
- Study design that lacks rigour or that cannot meet stated objectives
- Not declaring Conflict of interest
- Cherry picking literature to support your hypothesis/results and ignoring studies that are do not support your hypothesis/results
- Allowing non scholarly influences (personal, commercial, political) to influence data analysis and presentation of results
- Using information gained in peer review for your own research advantage
- Stalling or taking a long time over peer review so you can get your own similar paper out first
- Allowing your own students access to a thesis that you are examining in the capacity as external examiner that are relevant to their field of research.
- HARking Hypothesising after results
- **P-Hacking** https://www.wired.com/story/were-all-p-hacking-now/
-

What outcomes?

Some are found guilty, others are exonerated to some degree……

BUT in almost all cases there is wrong-doing often on both sides where values such as:

- Fairhandedness
- Mutual Respect
- Collegiality
- Transparency

……. Have become undermined or ignored.

End result: Huge amount of time wasted and negative impact on reputations and relationships.

Unpacking the concepts and relationships between research ethics and integrity, undesirable/questionable research practices

Research Ethics vs Research Integrity

Research Integrity:

The use of honest and verifiable methods in proposing, developing, performing, evaluating, reporting, translating research

Research Ethics:

Ethical principles that govern research involving humans, animals and the environment

Research Integrity affects all parts of the research life cycle.
It should be 'ever present' !

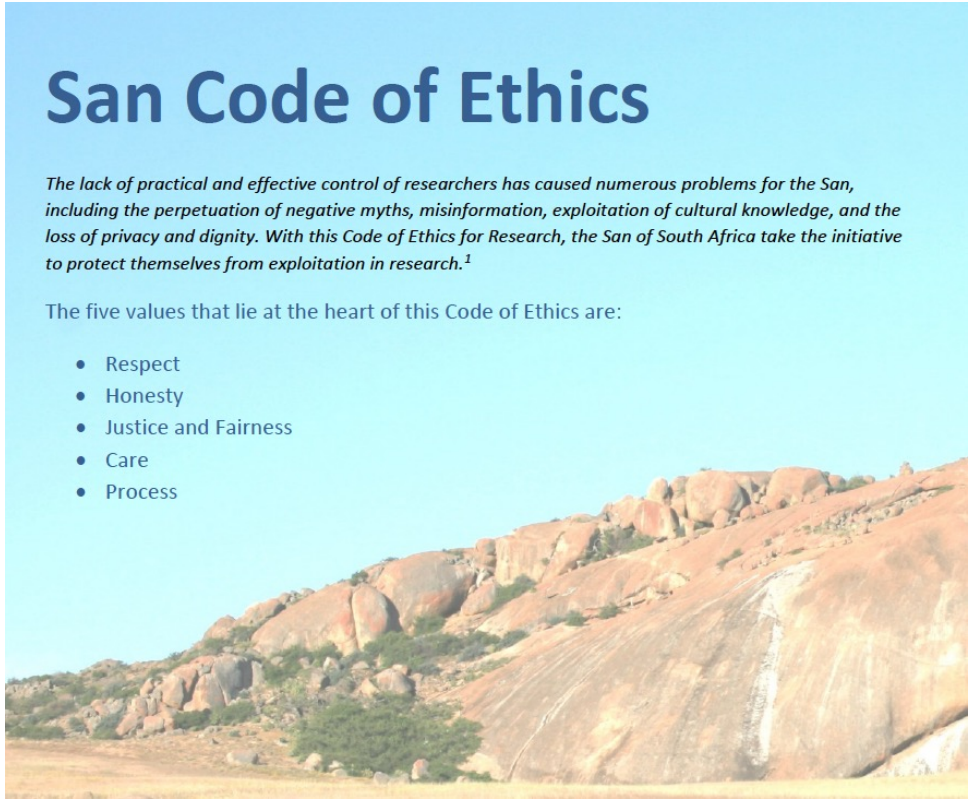
Important Values to cultivate in the context of research integrity

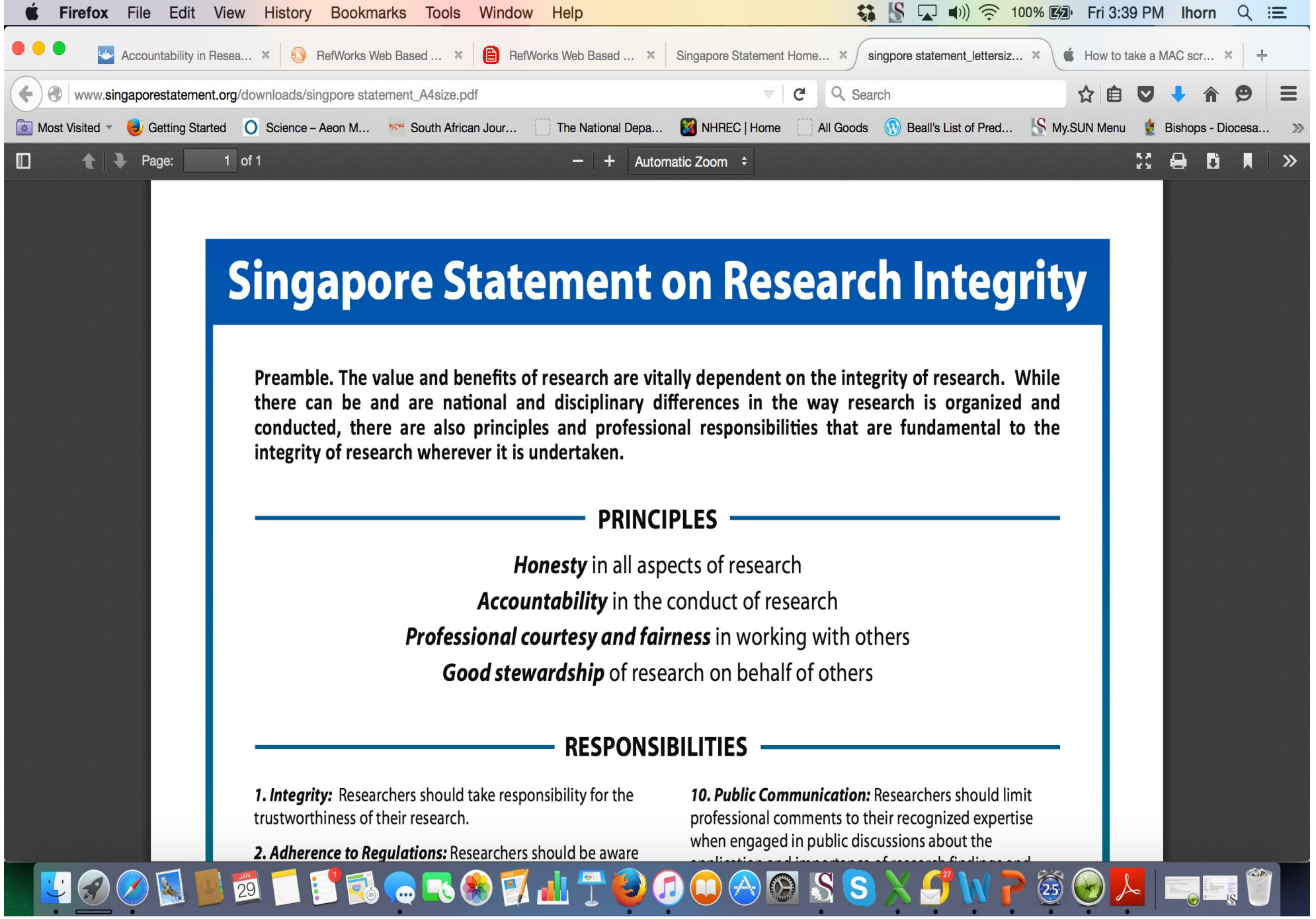
- Integrity
- Trustworthiness
- A sense of Justice
- Courage
- Discernment
- Respect or Respectfulness

- ***"Research is based on the same ethical values that apply in everyday life, including honesty, fairness, objectivity, openness, trustworthiness, and respect for others"***. (*On Being a Scientist. 3rd Ed. NAP. 2009)*

Value-based codes of ethics so important for ethical reflection that promotes RI

- VALUE BASED CODE
- 4 VALUES: (23 Articles)
  - FAIRNESSS
  - RESPECT
  - CARE
  - HONESTY





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

RESPONSIBILITIES

1. Integrity: Researchers should take responsibility for the trustworthiness of their research.

2. Adherence to Regulations: Researchers should be aware

10. Public Communication: Researchers should limit professional comments to their recognized expertise when engaged in public discussions about the

Research Integrity in Africa

With thanks to ARIN (African Research Integrity Network) and Dr Christa Van Zyl (steering committee) for letting me use a few of her slides from a recent presentation at the UKRIO 2021 conference. See CvZ on slide.

63% of articles in a random selection from African Journals online had evidence of plagiarism: 17% (83) had at least four linked copied or more than six individual copied sentences; 19% (96) had three to six copied sentences; and the remainder had one or two copied sentences.

NEWS | 16 November 2018

Widespread plagiarism detected in many medical journals based in Africa

Around 63% of articles from 100 sampled journals contained some text copied without attribution.

Linda Nordling

BMJ Open

Plagiarism in research: a survey of African medical journals

Anke Rohwer,[1] Elizabeth Wager,[2,3] Taryn Young,[1] Paul Garner[4]

To cite: Rohwer A, Wager E, Young T, *et al*. Plagiarism in research: a survey of African medical journals. *BMJ Open* 2018;**8**:e024777. doi:10.1136/bmjopen-2018-024777

► Prepublication history and additional material for this paper are available online. To view these files, please visit the journal online (http://dx.doi.org/10.1136/bmjopen-2018-024777).

Received 13 June 2018
Revised 4 September 2018
Accepted 20 September 2018

ABSTRACT

Objectives To examine whether regional biomedical journals in Africa had policies on plagiarism and procedures to detect it; and to measure the extent of plagiarism in their original research articles and reviews.

Design Cross sectional survey.

Setting and participants We selected journals with an editor-in-chief in Africa, a publisher based in a low or middle income country and with author guidelines in English, and systematically searched the African Journals Online database. From each of the 100 journals identified, we randomly selected five original research articles or reviews published in 2016.

Outcomes For included journals, we examined the presence of plagiarism policies and whether they referred to text matching software. We submitted articles to Turnitin and measured the extent of plagiarism (copying of someone else's work) or redundancy (copying of one's own work) against a set of criteria we had developed and piloted.

Results Of the 100 journals, 26 had a policy on plagiarism and 16 referred to text matching software. Of 495 articles, 313 (63%; 95% CI 58 to 68) had evidence of plagiarism: 17% (83) had at least four linked copied or more than six individual copied sentences; 19% (96) had three to six copied sentences; and the remainder had one or two

Strengths and limitations of this study

- This study is the first to systematically research plagiarism in African biomedical journals.
- We developed a method for reporting the extent of plagiarism beyond the overall similarity index.
- Our analysis was limited to text and excluded images and data.
- The high level of plagiarism we identified could easily be solved by screening all articles with text matching software and automatic rejection of articles showing plagiarism.
- We used an online source, the African Journals Online database, as the sampling frame for our study.

(text recycling), to publishing parts of the same study in more than one paper (salami slicing) and republishing entire papers (duplicate publication), and is also considered poor practice.[5 6]

The availability of material on the internet facilitates mosaic writing and plagiarism, but the widespread availability of text matching

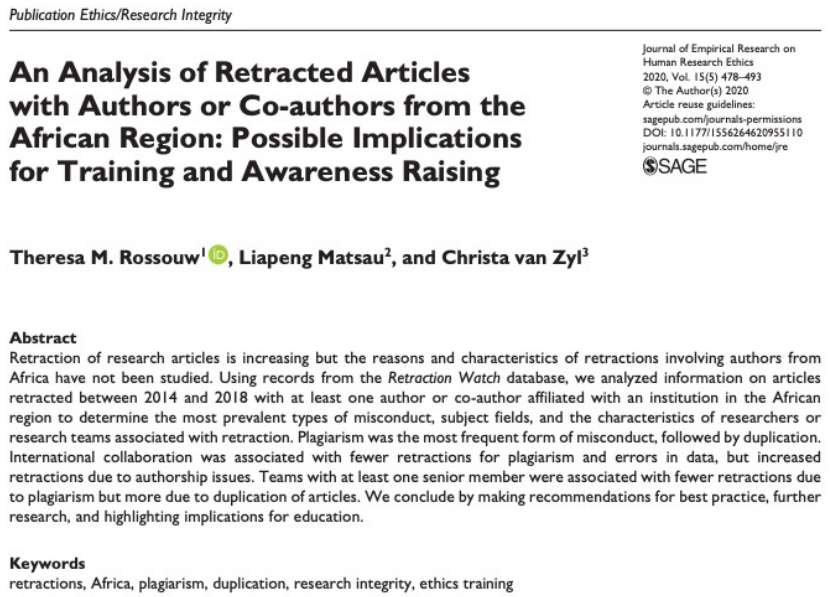
CvZ

Research integrity in Africa – emerging perspectives

Prevalence and types of misconduct?

- Very little information – no formal reporting systems or structures
- Exploratory study on retracted articles involving authors from Africa
  - Retraction ≠ misconduct, but can provide some insight
  - Levels of retraction seem to be on par with other countries and regions
  - Reasons for retraction similar to other countries and regions
  - Most prevalent – plagiarism, duplicate publication
  - Implications for training, awareness raising and access to resources
  - Questions around communication, due process, power relations
  - Recommendations for national governments, funding agencies, academic publishers, research and academic training institutions, individual researchers

Rossouw, Matsau & Van Zyl (2020)



Publication Ethics/Research Integrity

An Analysis of Retracted Articles with Authors or Co-authors from the African Region: Possible Implications for Training and Awareness Raising

Journal of Empirical Research on Human Research Ethics
2020, Vol. 15(5) 478–493

DOI: 10.1177/1556264620955110
journals.sagepub.com/home/jre
SAGE

Theresa M. Rossouw[1], Liapeng Matsau[2], and Christa van Zyl[3]

Abstract
Retraction of research articles is increasing but the reasons and characteristics of retractions involving authors from Africa have not been studied. Using records from the *Retraction Watch* database, we analyzed information on articles retracted between 2014 and 2018 with at least one author or co-author affiliated with an institution in the African region to determine the most prevalent types of misconduct, subject fields, and the characteristics of researchers or research teams associated with retraction. Plagiarism was the most frequent form of misconduct, followed by duplication. International collaboration was associated with fewer retractions for plagiarism and errors in data, but increased retractions due to authorship issues. Teams with at least one senior member were associated with fewer retractions due to plagiarism but more due to duplication of articles. We conclude by making recommendations for best practice, further research, and highlighting implications for education.

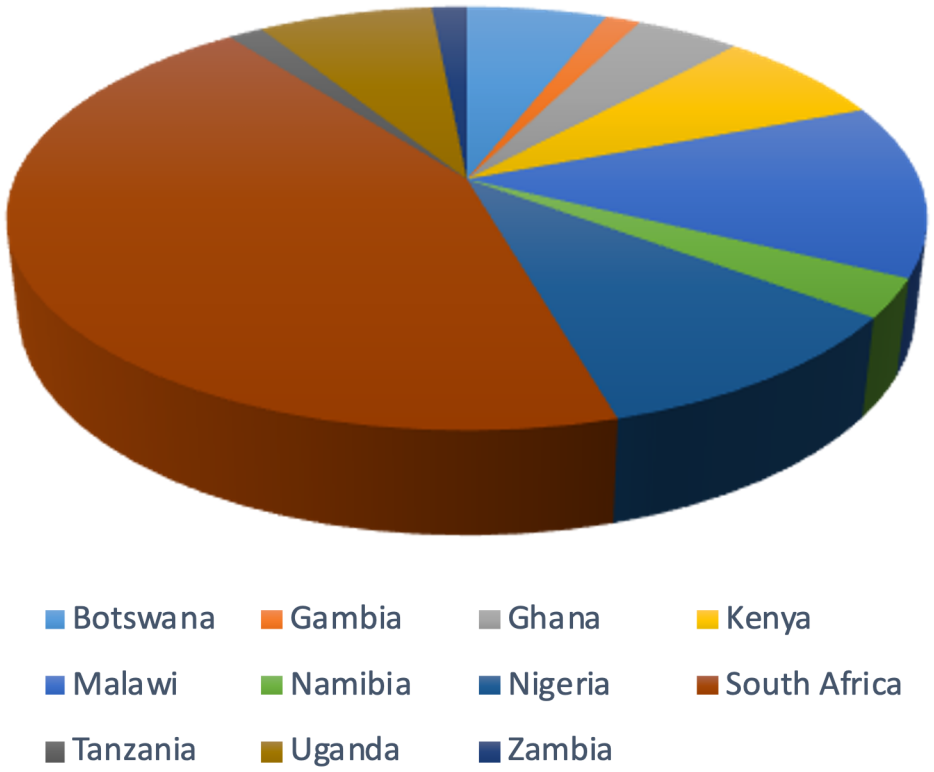
Keywords
retractions, Africa, plagiarism, duplication, research integrity, ethics training

The African Research Integrity Network (ARIN)

- Conceived during 4th WCRI in Rio De Janeiro, Brazil, in 2015
  - Very few delegates from Africa, did not know each other
  - Apparent lack of data and initiatives on RI in Africa
- Still informal, entirely voluntary and unfunded
- Bringing together individuals
  - Different parts of the continent, different roles
  - Shared interest in research integrity
  - Learning from and about each other
- Growing to communicate, coordinate, promote, activate
  - Newsletters, webinars
  - Working towards constitution and formal launch in 2022

The African Research Integrity Network (ARIN)

Membership as at May 2021



- 68 member from 11 African countries
- 9 “Friends of ARIN” from USA & Europe

ARIN
African Research Integrity Network

CvZ

The African Research Integrity Network (ARIN)

Slogan:

Promoting research integrity in Africa and for Africa

Proposed Goal:

To nurture a culture of integrity for African researchers, institutions, and decision makers, guided by African perspectives and focused on groups and inclusive thinking

The African Research Integrity Network (ARIN)

Proposed Objectives:

- To sustain dialogue, engagement and networking among African role-players and stakeholders of Research Integrity (RI)
- To develop a better understanding of – and sensitise people about – the conditions for RI in African scholarship
- To share relevant information and resources on RI
- To create and nurture capacity building and leadership in RI

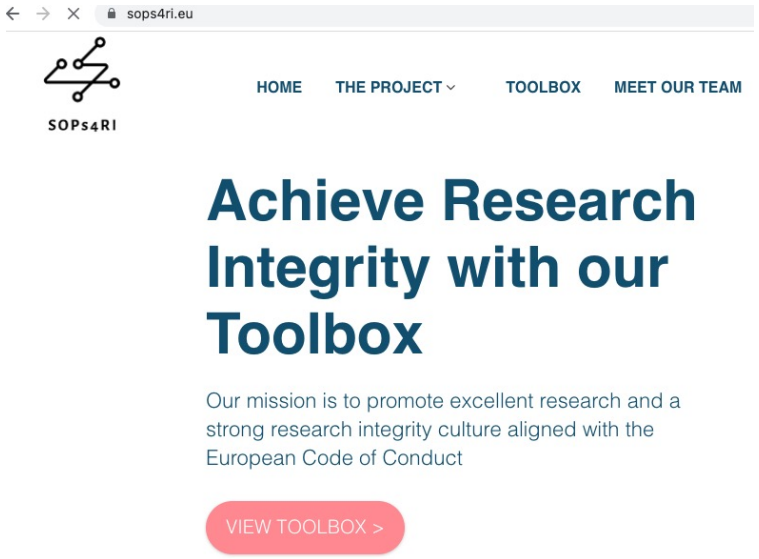
ARIN
African Research Integrity Network

Promoting RI at an institutional level: The pillars

RI promotion plans, Policy, RCR training, culture change, Incentives (the right ones!) and others

SOPS4RI = Institutional RI Promotion Plan : EU Horizon2020 project. 2019-2022

https://sops4ri.eu/



The 'Standard Operating Procedures for Research Integrity' (SOPs4RI) project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 824481

Nine Suggested Topics

1. Research environment
2. RI training
3. RE structures
4. Supervision and Mentoring
5. Data Practices and management
6. Declaration of interests
7. Research Collaboration
8. Dealing with breaches of RI
9. Publication and Communication

Policy

- Institutions need a Collection of good policy documents to act as a foundation and a ‘fall back’
- This must be easily Findable and Accessible
- They should be properly implemented (which is much more than placing on a website, or sending out a communication)
  - Identify team responsible for implementation
  - Assess policy impact on other policies, processes, people
  - Monitor effectiveness of implementation.
- Revision cycles, responsibility for this

Some examples of RI/RCR policy that needs to be in place and visible

- Overarching Responsible conduct of research
- Investigation of allegations of Research Misconduct, breach of norms and standards
- Codes for research on humans, animals, biohazards etc
- Open science
- Data ownership, management, protection, access
- Conflict of Interest
- Staff and students as research participants
- Intellectual Property
- Fairness in Research Collaborations and practice
- Safeguarding
- Etc

RCR training

- Online self-paced
- Webinars- bespoke
- Workshops- regular/repeated or once off
- Part of traing programmes such as Early career Researcher Programme at UCT

Training and Education

Background

In June 2020, Senate approved updates to the Responsible Conduct of Research (RCR) Policy. This policy, which is applicable to all staff and students based at or affiliated to UCT, now includes provision for training and education in RCR. Section 4.1 states:

> *"Ethical and responsible conduct of research is critical for excellence, as well as public trust, in research. Consequently, education in the responsible and ethical conduct of research is considered essential in the preparation of academic, research staff, research ethics committee members and post-graduate students."*

The Office of Research Integrity (ORI) is tasked with developing and delivering appropriate RCR training activities to the UCT research community across a variety of platforms including face-to-face workshops, written communication, online training initiatives and webinars. We have spent the past few years carefully developing a series of online training modules. ***These modules are currently available only to staff members (T1, T2 and permanent)*** but, we are working with stakeholders to make the modules available to post-graduate students, post-doctoral fellows and other 'categories' of staff who do not currently have access.

Research Integrity: Introduction to Research Integrity (Module 1) [–]

In this module you will be introduced to the concepts and background of Research Integrity and Research Ethics. You will also be introduced to the broad range of topics covered by Research Integrity, and some of the international and institutional standards and policies which guide and govern practices. We hope you will leave this module with an understanding of why fostering research integrity is beneficial to you personally and to the research enterprise in general.

Research Integrity: Misconduct and Questionable Research Practices (Module 2) [+]

Research Integrity: Authorship and Publication Practices (Module 3) [+]

Research Integrity: Research Involving Human Participants (Module 4) [+]

Research Integrity: Managing and Sharing Human Research Data (Module 5) [+]

Fostering a Culture of Research Integrity at Universities

Universities should:

1. empower sound research
2. educate researchers in research integrity at all academic career levels
3. ensure that institutional guidelines and support structures are put in place
4. should be transparent and accountable
5. should foster a research integrity culture

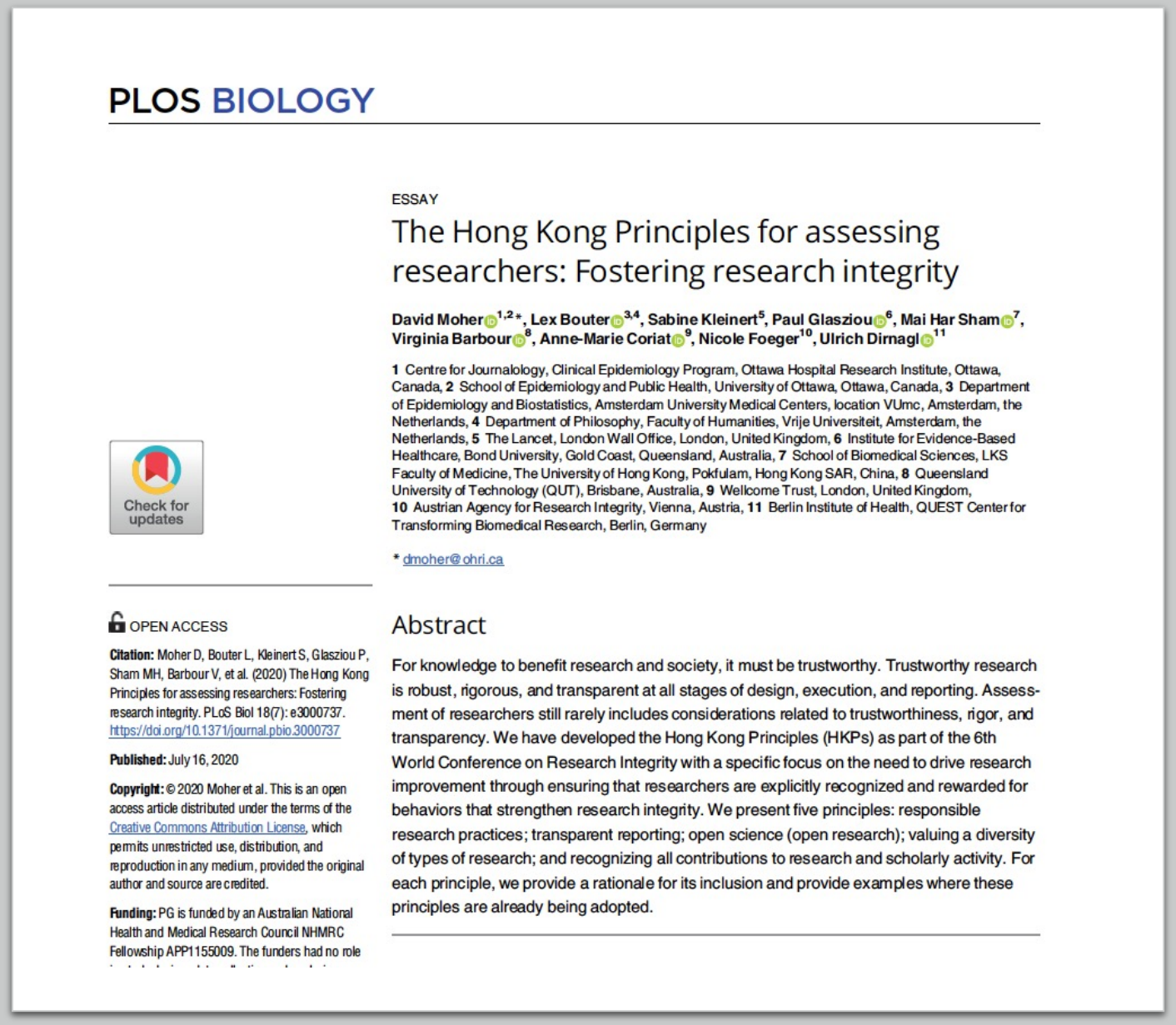
https://www.leru.org/publications/towards-a-research-integrity-culture-at-universities-from-recommendations-to-implementation

How do we foster a research integrity culture?

1. Incentives- the right ones!!!!

Avoiding perverse research incentives (e.g publication incentives based on numbers, too much focus on metrics etc.) and assessing and rewarding researchers for actions that foster research integrity

See also DORA San Francisco Declaration on Research Assessment.



PLOS BIOLOGY

ESSAY

The Hong Kong Principles for assessing researchers: Fostering research integrity

David Moher[1,2]*, Lex Bouter[3,4], Sabine Kleinert[5], Paul Glasziou[6], Mai Har Sham[7], Virginia Barbour[8], Anne-Marie Coriat[9], Nicole Foeger[10], Ulrich Dirnagl[11]

1 Centre for Journalology, Clinical Epidemiology Program, Ottawa Hospital Research Institute, Ottawa, Canada, 2 School of Epidemiology and Public Health, University of Ottawa, Ottawa, Canada, 3 Department of Epidemiology and Biostatistics, Amsterdam University Medical Centers, location VUmc, Amsterdam, the Netherlands, 4 Department of Philosophy, Faculty of Humanities, Vrije Universiteit, Amsterdam, the Netherlands, 5 The Lancet, London Wall Office, London, United Kingdom, 6 Institute for Evidence-Based Healthcare, Bond University, Gold Coast, Queensland, Australia, 7 School of Biomedical Sciences, LKS Faculty of Medicine, The University of Hong Kong, Pokfulam, Hong Kong SAR, China, 8 Queensland University of Technology (QUT), Brisbane, Australia, 9 Wellcome Trust, London, United Kingdom, 10 Austrian Agency for Research Integrity, Vienna, Austria, 11 Berlin Institute of Health, QUEST Center for Transforming Biomedical Research, Berlin, Germany

* dmoher@ohri.ca

OPEN ACCESS

Citation: Moher D, Bouter L, Kleinert S, Glasziou P, Sham MH, Barbour V, et al. (2020) The Hong Kong Principles for assessing researchers: Fostering research integrity. PLoS Biol 18(7): e3000737. https://doi.org/10.1371/journal.pbio.3000737

Published: July 16, 2020

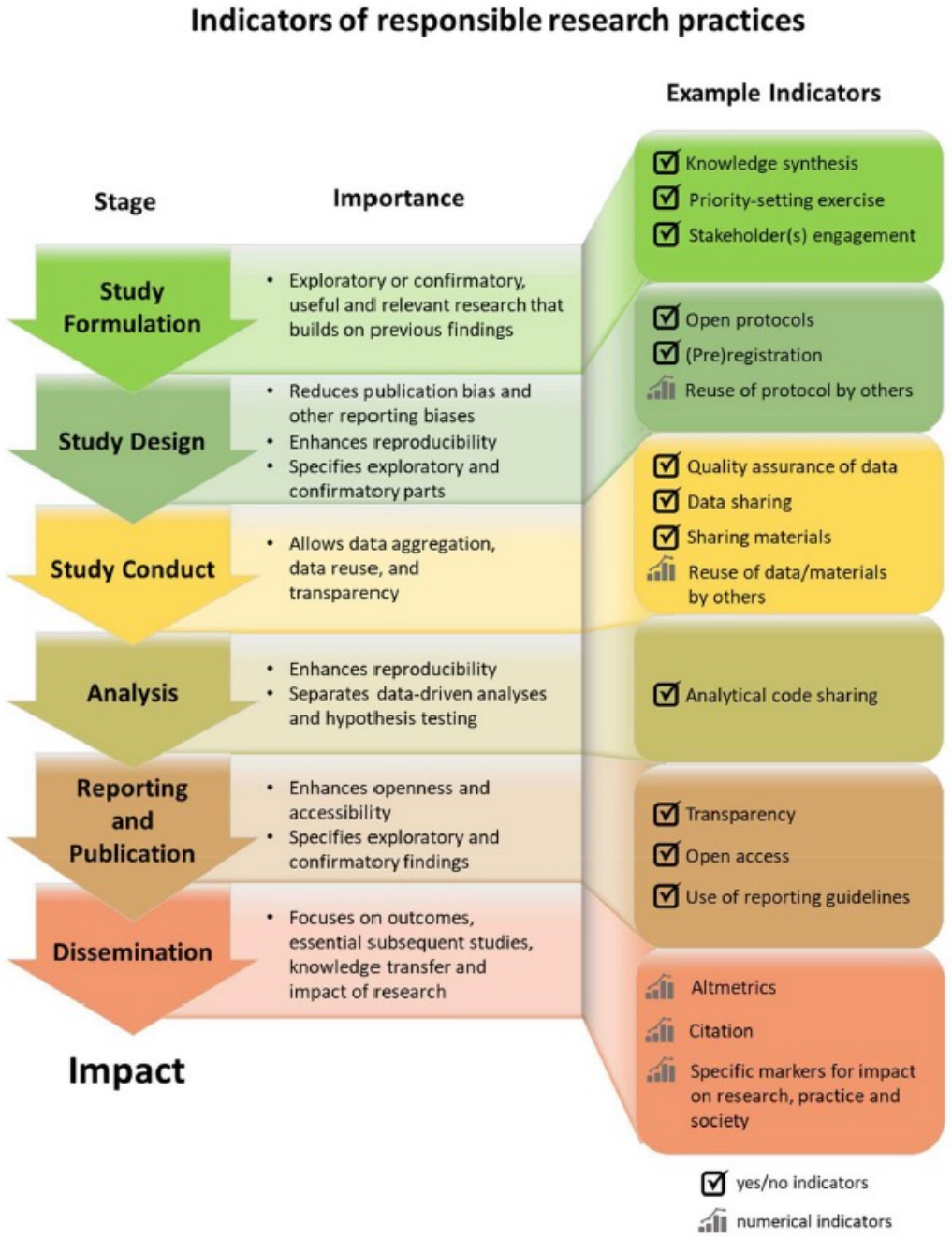
Funding: PG is funded by an Australian National Health and Medical Research Council NHMRC Fellowship APP1155009. The funders had no role

Abstract

For knowledge to benefit research and society, it must be trustworthy. Trustworthy research is robust, rigorous, and transparent at all stages of design, execution, and reporting. Assessment of researchers still rarely includes considerations related to trustworthiness, rigor, and transparency. We have developed the Hong Kong Principles (HKPs) as part of the 6th World Conference on Research Integrity with a specific focus on the need to drive research improvement through ensuring that researchers are explicitly recognized and rewarded for behaviors that strengthen research integrity. We present five principles: responsible research practices; transparent reporting; open science (open research); valuing a diversity of types of research; and recognizing all contributions to research and scholarly activity. For each principle, we provide a rationale for its inclusion and provide examples where these principles are already being adopted.

Hong Kong principles (See full Ref previous slide)
Moher et al.
PLOS Biology | https://doi.org/10.1371/journal.pbio.3000737 July 16, 2020
Diagram from Page 3 of above article.

Principle 1: Assess researchers on responsible practices from conception to delivery, including the development of the research idea, research design, methodology, execution, and effective dissemination
Principle 2: Value the accurate and transparent reporting of all research, regardless of the results
Principle 3: Value the practices of open science (open research)—such as open methods, materials, and data
Principle 4: Value a broad range of research and scholarship, such as replication, innovation, translation, synthesis, and meta-research
Principle 5: Value a range of other contributions to responsible research and scholarly activity, such as peer review for grants and publications, mentoring, outreach, and knowledge exchange



How do we foster a research integrity culture?

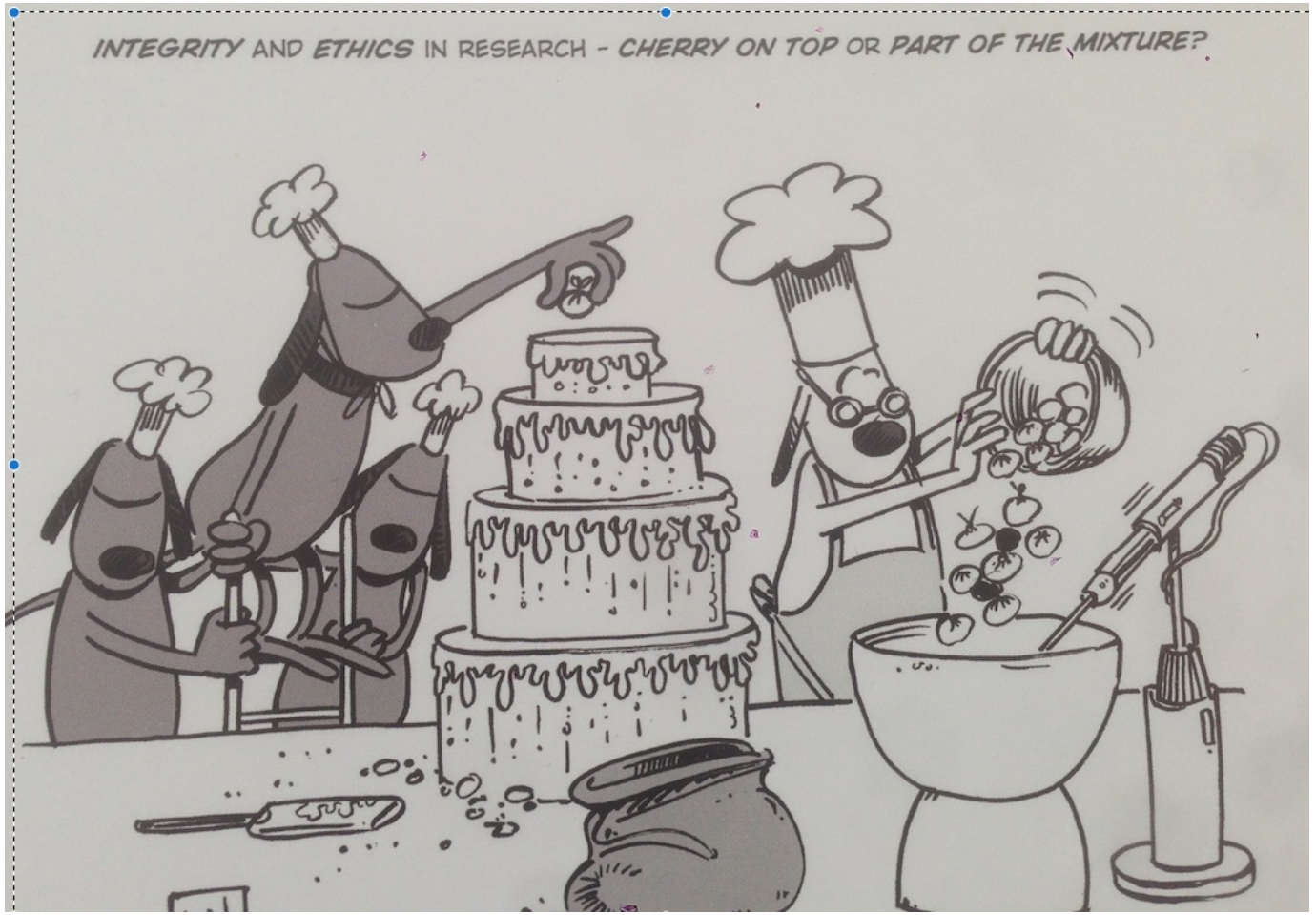
2. Top-down leadership critical (and try not to make it all about 'compliance'!

3. Bottom up too! i.e Research units/ projects teams need to make training their own teams on RCR, ethical data management, authorship and publication best practice, safeguarding etc

4. Institutional resources and support e.g establishing an Office of Research Integrity that has sufficient human capacity to advocate and assist with all aspects of RI- research consultations and advice, policy development and implementation, RCR training etc.

Integrity and ethics in Research?

Cherry on the top or part of the mixture?



Come to the 7th World Conference on Research Integrity in Cape Town 29 May -1 June 2022!

Abstract Submission and Registration are Open!

Due to the Covid-19 pandemic we had to postpone the conference by 12 months but now the registration, abstract submission and travel grant application are open.

The 7th World Conference on Research Integrity will take place using a hybrid model from 29 May – 1 June 2022. We will monitor the developments closely and will follow all recommendations of WHO and the South African health authorities.

Come to the 7th World Conference on Research Integrity in Cape Town 29 May -1 June 2022!

- Generous travel scholarships for African delegates on condition of Abstract submission
- Abstract submissions close 15 October!

- https://wcri2022.org/