

## Research integrity: guidelines for the Clinical School

To achieve the pursuit of excellent research and the fulfilment of our responsibilities to participants in research, the activities of research users and the wider community require the maintenance of the highest standards of integrity.

The University has put together a wide-ranging suite of Research Integrity materials, which can be found here: <https://www.research-integrity.admin.cam.ac.uk/research-integrity>.

The University is also committed to the Universities UK 'Concordat to Support Research Integrity' (<https://www.universitiesuk.ac.uk/policy-and-analysis/reports/Documents/2012/the-concordat-to-support-research-integrity.pdf>).

In accordance with this Concordat, the University expects all researchers - be they staff, students or visitors to the University - to abide by national, European and international standards of research integrity.<sup>1</sup>

This comprises:

- Honesty in all aspects of research, including:
  - presentation of research goals, intentions and findings
  - reporting on research methods and procedures
  - gathering data
  - using and acknowledging the work of other researchers
  - conveying valid interpretations and making justifiable claims based on research findings
- Scrupulous care, thoroughness and excellence in research practice:
  - in performing research and using appropriate methods
  - in adhering to an agreed protocol where appropriate
  - in drawing interpretations and conclusions from the research
  - in communicating the results
- Transparency and open communication:
  - in declaring conflicts of interest
  - in the reporting of research data collection methods
  - in the analysis and interpretation of data
  - in making research findings widely available, including sharing negative results as appropriate
  - in presenting the work to other researchers and to the general public
- Care and respect for:
  - all participants in and subjects of research, including humans, animals, the environment and cultural objects
  - the stewardship of research and scholarship for future generations.

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<sup>1</sup> For guidance provided at the European and global level see: European Science Foundation, [The European Code of Conduct for Research Integrity](#) (March, 2011); 2nd World Conference on Research Integrity, [Singapore Statement on Research Integrity](#) (July, 2010)

- Research should be conducted according to appropriate ethical, legal and professional frameworks, obligations and standards.

Thus 'Research Integrity' includes elements of practice (including data generation, data management, authorship, and reproducibility), ethics, governance, communication, training and interpersonal behaviours.

This relies on effective research group leadership, elements of which include:

- Ensuring raw data are annotated and stored appropriately, are 'FAIR' and can be recovered when required<sup>2</sup>
- Comprehensive records of methods, results and problems encountered are kept
- Experimental results are discussed and questioned openly in group meetings
- Appropriate use and interpretation of statistical tests
- Animal and human research ethics adhered to
- All authors' contributions justifiable<sup>3</sup>
- Appropriate acknowledgements of others in written work
- Financial probity in grant management
- Fair peer review of others' work
- Regulatory compliance (eg chemicals, biohazards, MHRA, GDPR)
- Considerate interpersonal behaviour
- Care for physical and mental health of all staff

Ideally, the above should be obvious to, and enacted by, all our staff and students. However until now, the topic of Research Integrity has not been routinely included either in induction materials<sup>4</sup> or in regular staff training (apart from ethical considerations of human and animal research). In contrast, new graduate students routinely hear about this topic in their induction symposia – this is delivered by Rhys Morgan (ROO) and is well received. Rhys has indicated his willingness to extend this material to staff on a pilot basis.

In addition, the University's Office for Scholarly Communications runs an extensive array of training courses<sup>5</sup> but these do not seem to have as wide a circulation as might be hoped for.

Of note, this year Professor Tony Green organised two events on 13<sup>th</sup> March: firstly an informal workshop for senior academics on "Research Reproducibility – Putting Our House in Order", to be led by Glenn Begley, who was one of the first to highlight the reproducibility problem in correspondence to Nature in 2012; and secondly a talk to the whole campus on the same day at 1 pm in the William Harvey lecture theatre. These events are a good springboard for the Clinical School to improve awareness of the issues and consider better uptake of available information, and introduce appropriate training.

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<sup>2</sup> FAIR data are those that are Findable, Accessible, Interoperable and Reusable.

<sup>3</sup> For the School's code of practice on Authorship, see [http://www.medschl.cam.ac.uk/wp-content/uploads/2014/02/CoS14\\_68-Authorship\\_Code\\_of\\_Practice-FINAL.pdf?04c0fc](http://www.medschl.cam.ac.uk/wp-content/uploads/2014/02/CoS14_68-Authorship_Code_of_Practice-FINAL.pdf?04c0fc)

<sup>4</sup> Neither local nor University-based academic induction, the latter currently being reviewed by Professor Jeremy Sanders

<sup>5</sup> <https://www.training.cam.ac.uk/osc/search>

## Recommendations

Action	By whom	By when
Include links to Research Integrity and OSC webpages in induction packs	HR recruitment team	Immediate
Pilot Research integrity workshop for group leader-level staff	Rhys Morgan	23 <sup>rd</sup> May and twice-yearly/termly if successful
Workshop for HoDs	TBC	HoDs meeting TBC
Development of online training course	Being considered by PPD	N/a
HoDs to feature this material at departmental meetings	HoDs	Within next six months

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