Code of Good Research Conduct
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Introduction

The University of Manchester is committed to being a research-led institution that engages world class scholars and scientists in a pioneering research culture that values knowledge-creation for its own sake, for the potential benefits it promises humankind and for the ways it enriches higher learning. This Code defines the standards of research conduct that underpin this vision.

The University has a responsibility for ensuring that the research undertaken in its name is conducted in accordance with the law, in the public interest and is consistent with best practice. The University in turn expects the highest standards of research integrity from the researchers it supports. This includes staff, students, and other individuals working on University premises or using University facilities irrespective of the sources of their funding, their area of research, their experience as researchers or whether they are lone scholars or members of a research team. It is the responsibility of all researchers and staff supporting research to be aware of their commitments and the expectations of the University outlined in this Code.

This Code is linked to other research-related policies and regulations which can be found on the University’s Good Research Practice website (www.manchester.ac.uk/goodresearchpractice). In addition, a University of Manchester booklet Good Research Practice (available from the Central Research Office) provides practical advice from experienced academics on how to effectively perform research activities in accordance with best practice.
At the heart of all research, regardless of discipline, is the need for researchers to be honest in respect of their own actions and in their responses to the actions of others. This applies to the whole range of research activity including, but not limited to, applying for funding, experimental and protocol design, generating, recording, analysing and interpreting data, publishing and exploiting results, and acknowledging the direct and indirect contributions of colleagues, collaborators and others.

All those undertaking research should have a critical approach to their research findings, questioning the outcomes before presenting them for publication. If an error is discovered after a paper has been submitted or published all or part of the results should be retracted, usually by writing to the journal.

1.1 Declaration of conflicts of interest
All researchers should disclose and justify potential or real conflicts of interest. Conflicts of interest might be legal, ethical, moral, financial, personal, academic or of another nature. Any perceived conflict of interest must be disclosed to the appropriate head of school who will determine what further action should be taken. That action may involve consultation with the funding body, journal editors, publishers, University of Manchester Intellectual Property Ltd or other parties to ensure that the conflict of interest does not compromise the research, or the University’s interests.

1.2 Honesty and integrity in publishing research
Papers presented for publication must be the author’s own work, reflecting his/her own research and analysis in a truthful and complete manner, placing it appropriately within the context of prior and existing research. Any person, including research student, research assistant, research officer and technical staff, who has participated substantially in conceiving, executing or interpreting the research must be given the opportunity to be included as an author on all publications derived from that research. All those to be included as authors should be given a draft of the paper in good time for their comments to be taken into account. The contributions of formal collaborators, sponsors and all others who directly assisted or indirectly supported the research should be properly acknowledged.

The University expects anyone listed as author on a paper to accept personal responsibility for ensuring that they are familiar with the contents of the paper; be able to defend the research outlined in the paper; and be able to identify their contribution which should be substantial participation in the conceiving, executing or interpreting of the relevant research.

Researchers should refrain from redundant publication of their work (when two or more papers, without full cross reference, share the same hypothesis, data, discussion points, or conclusions). A researcher who submits substantially similar work to more than one publisher should disclose this fact to the publishers at the time of submission.
While recognising the need to protect their own research interests in the process of planning their research and obtaining their results, and the need to adhere to the terms and conditions of any relevant research contracts, the University expects researchers to be as open as possible in discussing their work with other researchers and with the public. Researchers have a duty to disseminate their research as widely as possible, especially to those who will benefit directly from it, and to publish where their research will have the greatest impact.

Once results have been published, the University expects researchers to make available relevant data and materials to other researchers, on request, provided that this is consistent with the sponsor’s interests, ethical approvals and consents which cover the data and materials or the 1998 Data Protection Act, intellectual property agreements and any other confidentiality agreements.

2.1 Disseminating research results
It is crucial to advances in knowledge and understanding that research is published where the academic community is most likely to learn about it. In general, this means via peer reviewed journals, national and international conferences or scholarly monographs. For disciplines such as within the medical sciences, academic journals may not be the reading material of most practitioners working in the profession, so for the research to reach these people alternative vehicles, such as professional journals, should be utilised. Where research may be of interest to the public and/or may help raise awareness of research in higher education, consideration should be given to communicating the findings more widely.

2.2 Exploitation of intellectual property
The University recognises that publication of the results of research may need to be delayed for a reasonable period pending the protection of intellectual property arising from the research. The University regards the creation of intellectual property as one of its major objectives and is committed to being “an innovative institution, that values and encourages the transfer of knowledge and technology to influence and advance economic development regionally, nationally and internationally and that rewards and provides practical support to staff who engage in commercially significant innovation and/or create intellectual property” (Manchester 2015). Researchers should make themselves aware of the University’s Intellectual Property Policy which outlines the University’s procedures for supporting the exploitation of commercially viable intellectual property.
The University expects researchers to be aware of and adhere to its rules, policies and guidelines, any legal and policy requirements which regulate their work and any standards of research practice set out by scientific and learned societies, funding bodies and other professional organisations.

### 3.1 Health and safety
All research should be conducted in an environment which is safe with respect to all researchers involved, the University and the environment. Risk assessments should be carried out for every new research procedure and should comply with the Control of Substances Hazardous to Health regulations. Researchers should receive adequate information, training and monitoring regarding safe practices.

### 3.2 Data protection
All processing of personal data (data relating to a living individual who can be identified by that information or from that and other information in the possession of the data user including any expression of opinion about the individual and any indication of the intentions of the data user/controller in respect of that individual) must comply with the terms and principles of the Data Protection Act 1998 as provided for in the University's Data Protection Policy.

### 3.3 Freedom of information
Researchers must be aware of the University’s guidelines in relation to the Freedom of Information Act 2000 and must assist the University in responding appropriately to any requests under the Act.
4 Strong research leadership

Senior members of the University (including the President, Vice Presidents for Research, Deans, Associate Deans for Research, Heads of School and School Research Directors (or equivalent)) will provide direction and leadership for research activities and, through doing so, ensure that a research climate is created and a culture embedded that requires researchers to conduct research within the principles of good practice and reward them for doing so.

Heads of School and senior colleagues are responsible for ensuring that the research culture promulgated at the institutional level is communicated to all involved in research in the school and that these individuals are made aware of the University’s Code of Good Research Conduct.

Those responsible for leading groups of research staff (including principal investigators) are responsible for ensuring that the research culture promoted at the institution and school level is translated into good practice during the conduct of research activities. They should create a research environment of mutual cooperation, in which all members of a research team are encouraged to develop their skills and in which the open exchange of ideas is fostered and proper conduct of research is carefully observed. They must also ensure that appropriate supervision and mentoring of researchers are provided, taking special account of the needs of new researchers.
5 Sound management practice

Sound management practice should create an effective, supportive and enabling environment ensuring the integrity and quality of research activities and the timely delivery of research outputs. Sound management practice includes good recruitment practice, effective management of staff and research students, including their development and training, and implementing robust systems of project and budget management and the recording, storage and archiving of research data. Where appropriate, there should be clearly documented protocols for conducting research and standard operating procedures for items of equipment to ensure that data/material are obtained consistently and accurately.

Researchers who are new to the University community may not be as aware as more senior researchers of good research practice. It is the responsibility of all members of staff, particularly senior staff, to ensure that students and other new researchers understand the principles of good research practice and are encouraged through development, training and mentoring arrangements to reach their full potential as researchers.

5.1 Management of research data and records

Requirements for the recording and storage of research data and material will vary by discipline. Researchers should always adhere to guidance provided by funding bodies, professional guidance where available, any principles set out at school or faculty level as well as the University’s requirements as outlined below and in its Records Management Policy.

Researchers should keep clear and accurate records of their research including the procedures followed, approvals granted during the research process, sources used and results obtained (including interim results). This is necessary, not only as a means of demonstrating proper research practice, but also in case questions are subsequently asked about either the conduct of the research or the results obtained. When recording data, consideration should be given to requirements of anonymity and confidentiality where appropriate and local/professional guidelines followed.
5 Sound management practice

Depending on the nature of the research activity, for example where there is potential for intellectual property to be generated, the supervisor/principle investigator should review the main written record of research evidence, countersign and date it on a regular basis to signify that the entered data are accurate and complete. This practice not only assists the protection of intellectual property but also helps safeguard researchers against allegations of research misconduct and assures auditors and sponsors that robust academic supervision is in place.

Records of a research project are the property of the parent school and should reside with the research unit in which they were generated. Individual researchers should be able to hold copies of appropriate materials for their own use, but in order to protect the individual against loss or allegations of research misconduct, primary data in hard format (ie in a laboratory book) should be kept securely within the University. The project leader/principal investigator/supervisor should have access to the data at all times. University staff and students are not permitted to remove such records when leaving the University without obtaining permission from their head of school in writing.

Data should be stored in a way that permits a complete retrospective audit if necessary. Unless ethical/professional/local or funding body guidance requires otherwise, research results should be archived in a durable form that is immune to subsequent tampering and falsification for a minimum period of 5 years after the date of any publication which is based upon it. It is recommended good practice that evidence for research based on clinical samples or relating to public health should be retained for 15 to 20 years.
6 Accountability

The University expects all its staff and research students to consider the ethical implications of their research and to be aware of their responsibilities to society, the environment, their profession, the University, the staff, students and participants involved in their research and the organisation funding it. All research should be conducted within the terms and conditions defined or negotiated and must adhere to all current safety practices, research governance and ethical considerations.

6.1 Research involving humans
The dignity, rights, safety and well being of human participants must at all times be considered, respected and safeguarded. Research participants include research subjects, their tissue, organs or personal data. Where personal data is being obtained the principles of the Data Protection Act apply.

All projects conducted by University staff or students that involve human participants in a way that might harm, disturb or upset them (however slight the possibility) or where they can be deemed to be in a vulnerable or disadvantageous situation, must receive approval from a recognised research ethics committee. In the case of research involving patients or staff in the NHS, approval must be sought from a NHS Research Ethics Committee (REC) and a copy shared with the University Research Ethics Committee (UREC). In all other cases approval must be received from the UREC, which in this University is formally known as the Senate Committee on the Ethics of Research on Human Beings. It is advisable whenever using human participants in research to always check with the secretary of the relevant research ethics committee whether the research would raise any ethical concerns.

Principal investigators and supervisors must ensure that the procedures in the protocol approved by an appropriate research ethics committee are adhered to. Any amendments to the approved project should be notified to all stakeholders in the project including UREC. Where necessary, depending on the proposed area of research, further approval must be obtained from other regulatory bodies, such as the Human Fertilisation and Embryology Authority, the Gene Therapy Advisory Committee, the Human Tissue Authority or the Medicine Healthcare Regulatory Authority.

6.2 Research involving animals
For research involving animals, researchers should consider at an early stage in the design of any research the opportunities for reduction, replacement and refinement of animal involvement. Where animal use is unavoidable the proper Home Office legislation must be adhered to.
The University requires its staff to maintain high standards of academic conduct. In particular, they should be aware of the extreme seriousness of academic fraud, and alert to the need to avoid misconduct in research, whether consisting of plagiarism, deception, or the fabrication of research results.

The University is committed to ensuring that complaints of research misconduct are investigated with thoroughness and rigour. All staff and students, including those holding honorary contracts, are required to report, and individuals authorised to work in University institutions have a responsibility to report to the University, in confidence, any suspected incident of misconduct in research, whether this has been witnessed or for which there are reasonable grounds for suspicion.

Complaints shall be made in writing confidentially to the Registrar and Secretary in accordance with the University’s Code of Practice for Dealing with Allegations of Misconduct in Research which can be found on the Good Research Practice website (www.manchester.ac.uk/goodresearchpractice).
Acknowledgements

Research Councils UK (December 1998) Safeguarding Good Scientific Practice
www.ost.gov.uk/research/councils/safe.htm

Biotechnology and Biological Sciences Research Council (1998) Statement on Safeguarding Good Scientific Practice
www.bbsrc.ac.uk/funding/overview/good_practice.pdf

www.epsrc.ac.uk/ResearchFunding/infoforgrantholders/guidetogoodpracticeinscienceandengineeringresearch.htm

www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Images/Annex%20B_tcm6-9737.pdf

Medical Research Council Ethics Series (2000) Good Research Practice
www.mrc.ac.uk/pdf-good_research_practice.pdf

Research Councils UK, Terms and Conditions of Research Council Grants
www.rcuk.ac.uk/documents

Economic and Social Research Council, Research Ethics Framework
www.esrcsocietytoday.ac.uk/ESRCInfoCentre/opportunities/research_ethics_framework/index.aspx

The Wellcome Trust, Guidelines on Good Research Practice
www.wellcome.ac.uk/print/WTD002753_print.html

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