
Code of Research Conduct and Research Ethics

Foreword by Pro-Vice Chancellor Research

The University of Nottingham's *Code of Research Conduct and Research Ethics* provides a comprehensive framework for good research conduct and the governance of all research carried out across the University. The Code underpins the University's commitment to maintaining the highest standards of integrity, rigour and excellence in all aspects of our research and for all research to be conducted according to the appropriate ethical, legal and professional frameworks and standards. The Code is a fundamental component of the research environment, which is characterised by our culture of research integrity, good research practice, and the development and training of researchers at all stages of their careers. The Code outlines the duty of researchers including their responsibilities towards all participants of research including humans, animals, the environment and cultural materials, and it provides a basis for the transparent and appropriate communication and dissemination of research findings. The University welcomes the national framework for good research conduct and governance published as the *Concordat to Support Research Integrity* and endorses the Concordat as a recipient of public funding for research. This Code has been reviewed to be consistent with the commitments and aims of the Concordat and is the basis for applying research integrity across the University. We will monitor and, where necessary, improve the Code in order to further strengthen the integrity of research carried out across the University.

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Contents

[Overview](#)

- 1 [To whom and to what does the Code apply?](#)
- 2 [The context](#)

[Research Conduct](#)

- 3 [Foundations and specific requirements for research practice](#)
4. [Data](#)
 - 4.1 [Personal data](#)
 - 4.2 [Research data](#)
 - 4.3 [Sensitive data](#)
 - 4.4 [Confidentiality](#)
 - 4.5 [Data Sharing](#)
 - 4.6 [Criminal offences concerning obtaining, possessing or publishing information](#)
- 5 [Publications](#)
- 6 [Intellectual Property](#)
 - 6.1 [Intellectual Property \(IP\) and Intellectual Property Rights \(IPR\)](#)
 - 6.2 [Intellectual Property Ownership and the University](#)
- 7 [Supervision](#)
 - 7.1 [Lone Working](#)
 - 7.2 [Disclosure](#)
- 8 [Conflicts of interest](#)
- 9 [Adverse events](#)
- 10 [Insurance](#)
- 11 [Additional requirements](#)
 - 11.1 [International research collaborations](#)
 - 11.2 [Multi-funder research](#)
- 12 [Procedures for dealing with allegations of research misconduct](#)

[Research Ethics](#)

- 13 [Origins of research ethics](#)
- 14 [Ethics committees](#)
 - 14.1 [University Ethics Committees](#)
- 15 [The need for ethical review and the ethical review process](#)
 - 15.1 [Research involving human participants](#)
 - 15.2 [Human participants - Non-medical research](#)
 - 15.3 [Human participants - Medical or clinical research](#)
 - 15.4 [Research involving participation by children or vulnerable adults](#)
 - 15.5 [Occluded or covert research](#)
 - 15.6 [Research involving animals](#)
- 16 [Resources and links](#)
- 17 [Definitions](#)

Overview

1. To whom, and to what, does the Code apply?

The University of Nottingham requires all staff and students engaged in research to maintain the highest standards of rigour and integrity in the conduct of that research. This Code of Research Conduct and Research Ethics provides a framework for the governance of all research throughout the University and requires that all researchers adhere to the highest standards of performance and ethical conduct, and to all applicable statutes and Government guidelines in carrying out their research.

The Code follows the principles set out in University Statutes (Section 35) and seeks to ensure that academic staff have freedom within the law to question and test received wisdom, and to put forward new ideas and controversial and unpopular opinions without placing themselves in jeopardy of losing their jobs or privileges.

The Code applies to all UK employees, students, visiting and emeritus researchers, whether they are working on the University's premises or elsewhere.

The Code applies to all research deliverables and outputs in whatever form, and to all research activity, irrespective of how it is funded.

The document refers to "Schools" throughout to encompass departments/Faculties/Centres, Institutes and Professional Service Departments where this is appropriate. A list of terms and definitions is given in appendix A.

2. The Context

This Code takes reference from and follows both the Universities' UK Concordat to Support Research Integrity and UK Research Integrity Office (UKRIO) Code of Practice for Research that was written on behalf of the University sector and provides a basis for the conduct of all research in academia. The UK Research Integrity Office (UKRIO) is an independent advisory body, offering advice and guidance on the good practice of research and how to address misconduct in research. It is hosted by Universities UK and funded by a range of stakeholders including the funding councils, the UK Departments of Health and the research councils.

The Code links to and operates in conjunction with other University policies and procedures (outlined on the Human Resources website) that form part of contracts of employment as well as the [Quality Manual](http://www.nottingham.ac.uk/quality-manual/) (<http://www.nottingham.ac.uk/quality-manual/>). Some policies derive from Acts of Parliament, such as Health and Safety at Work, Data Protection and the Medicines for Human Use (Clinical Trials) Regulations. Other policies derive from guidelines issued by government departments, such as the Department of Health's Research Governance Framework for Health and Social Care.

Many funders of research have developed their own codes of conduct and/or detailed terms and conditions of award that must also be adhered to by grant holders, their host departments and the host institution. Some terms and conditions may require confidentiality concerning the research project. In some research areas there will be other considerations to be taken into account, such as profession-specific codes of conduct or practice and the need for specific qualifications or skills accreditation. Those undertaking research are required to observe new developments in their field and to meet any requirements for good research conduct as they arise. The Code also includes a definition of, and procedures for dealing with, allegations of research misconduct. These are linked to the University's staff and student disciplinary procedures and procedures on public interest disclosure.

The Code and its implementation are reviewed on an annual basis by the University's Research Ethics Committee and on a tri-annual basis by consultation across the institution. These reviews take into account changes and recommendations from external research funders, Acts of Parliament and other legislations. All reviews are undertaken by the University's Research Ethics Committee in conjunction with and ratified by the University's Research Board, and coordinated by Research and Graduate Service.

3. Research Conduct

Foundations and specific requirements for research practice

Everyone involved in research in the University owes a duty of accountability to society, to their profession, to the University, to all participants in the research and to its funders. Staff must accept full responsibility for their own conduct of their research and the activities of all staff, students and others under their direction or supervision.

Researchers must be honest and lawful in respect of their own actions in research and in their responses to the actions of other researchers. This applies to the whole range of research work, outputs and deliverables, including applying for funding, experimental design, generating and analysing data, publishing results, and acknowledging the direct and indirect contribution of colleagues, collaborators and others. Plagiarism, deception or the fabrication or falsification of results shall be regarded as research misconduct and a serious disciplinary offence. Researchers should declare and manage any real or potential conflicts of interest

The training needs of researchers at all career stages should be considered to ensure that research project management skills reflect best practice in the sector, and discussion of these should be included within the Personal Development and Personal Review process for academic staff or training plans for students.

Guidelines for the project management, costing and pricing and authorisation of research proposals with external funders can be found on the Research and Graduate Services workspace. In addition Research staff -- particularly research team leaders and Chief/Principal Investigators -- must take responsibility for:

- 3.1 The ethical basis and design of their research projects. Researchers must ensure that research projects are ethically sound and have received the approval of the relevant ethics committee(s) and all relevant statutory regulatory authorities before they commence;
- 3.2 The safety of all involved in the research process, ensuring that the research is carried out in accordance with health and safety policies and legislative requirements;
- 3.3 Ensuring that research is conducted in a suitable working environment with appropriate equipment and facilities;
- 3.4 The probity of the financial management of all research projects, and for seeking to provide the optimum value for the public or private funders who have invested in them including effective project management to agreed project plans and appropriate quality standards, as well as the timely delivery of any scheduled tangible outcomes;
- 3.5 Management of research data in accordance with the Data Protection Act 1998 and any other legal provisions, conditions and guidelines that may apply to the handling of personal information (see 4.1, below);
- 3.6 Undertaking professional development appropriate to the research;
- 3.7 Ensuring that all personal records of research progress, including authorised laboratory books, are maintained to the recommended or required standards, and that the falsification of results does not occur. Laboratory books must be signed and dated by the researcher, and signed off by the supervisor;
- 3.8 Ensuring confidentiality in order to achieve protection of intellectual property rights where appropriate;
- 3.9 Ensuring that research findings are suitably disseminated;
- 3.10 Except in the case of covert research that has been appropriately approved, ensuring that research participants participate in a voluntary way, free from any coercion;
- 3.11 Avoiding harm to participants and minimising any adverse effect that the research may have on people, animals and the natural environment and property.

4. Data

Distinction shall be drawn between personal and research data. Personal data is any data by which possession of could identify an individual. Research data are the metrics collected as part of the research and solely by which an individual cannot be identified. Personal data may also be research data. All processing of personal data (which includes the obtaining and storage of data) must comply with the terms of the Data Protection Act 1998 (<http://www.legislation.gov.uk/ukpga/1998/29/contents>). It is recommended that researchers familiarise themselves with published guidance which interprets the application of the Act and any other relevant legislation that is pertinent to specific fields of research.

Some central issues for researchers are:

4.1 Personal data

- 4.1.1 All staff and students using personal data in research have a duty of confidence to the individuals concerned;
- 4.1.2 Unless there are ethically and legally justified reasons for doing otherwise, researchers must ensure that they have each study participant's explicit informed written consent to obtain, hold and use their personal information;
- 4.1.3 Only personal information pertinent to the research should be collected;
- 4.1.4 Data security arrangements must be sufficient to prevent unauthorised breaches of confidentiality;
- 4.1.5 Personal data should not be kept for longer than is necessary.

4.2 Research data

- 4.2.1 Data must be recorded in a durable form with appropriate references;
- 4.2.2 Data must be retained intact for a period of at least seven years from the date of any publication which is based upon them. Data should be stored in their original form – i.e. tapes/discs etc should not be deleted and reused, but kept securely as outlined.
- 4.2.3 Schools must have procedures for the retention of data. These procedures must be made known to all of their staff and students, who must comply with them.
- 4.2.4 Confidentiality provisions relating to publications may apply in circumstances where the University or the researcher has made or given confidentiality undertakings to third parties or confidentiality is required to protect intellectual property rights. It is the obligation of the research leader to inform researchers as to whether confidentiality provisions apply and of researchers to enquire of their research leader whether there are any obligations with respect to these provisions

4.3 Sensitive data

Research that involves investigations using sensitive data, such as "sensitive personal data" as defined in the Data Protection Act 1998 – see below, should also undergo an ethical review by a suitable ethics committee as in [section 15](#).

- 43.1 Note: "Sensitive personal data" in the Data Protection Act, 1984 means personal data consisting of information as to:
 - i. the racial or ethnic origin of the data participant;
 - ii. his political opinions;
 - iii. his religious beliefs or other beliefs of a similar nature;
 - iv. whether he is a member of a trade union (within the meaning of the [1992 c. 52.] Trade Union and Labour Relations (Consolidation) Act 1992);
 - v. his physical or mental health or condition;
 - vi. his sexual life;
 - vii. the commission or alleged commission by him of any offence; or

- viii. any proceedings for any offence committed or alleged to have been committed by him, the disposal of such proceedings or the sentence of any court in such proceedings.

4.4 Confidentiality

Individual participant personal information obtained as a result of research is to be considered confidential and disclosure to third parties is prohibited with the exception of statutory notification as applicable to the particular research. Participant confidentiality should be ensured by utilising identification code numbers to correspond to research data in any research paperwork and computer files.

4.5. Data Sharing

4.5.1 The principles of data sharing are widely recognised and underpin many international activities. A report on "Principles and Guidelines for Access to Research Data from Public Funding" by the Organisation for Economic Co-operation and Development (OECD, www.oecd.org) which represents the governments of its 30 member countries (including the UK) highlights the following principles:

- Publicly-funded research data are a public good, produced in the public interest
- Publicly-funded research data should be openly available to the maximum extent possible

The report concludes that widespread data sharing will enable researchers, empower citizens and convey tremendous scientific, economic, and social benefits. The University subscribes to these data-sharing principles and aims to see the widespread ethical use of high quality data to advance research endeavour. We are committed to creating a scientific culture in which data sharing is embedded to facilitate more rapid scientific and social advances. Researchers will be responsible for liaison with discipline specific external data repositories to ensure that publically funded research data should be openly available. Where no such resource exists applicants may consider sharing data *via* other third party mechanisms such as journal websites and / or open access repositories, many of which are now able to capture and share data underpinning publications.

4.5.2 The University's Open Access policy applies to all members of staff employed by the University at all campuses. It requires that:

- i. All research papers (including journal articles, conference proceedings, book chapters and similar material), where copyright allows, should be made available in an open access form upon publication;
- ii. All research papers (either in the form of the author's final manuscript or the formally-published version), where copyright allows, should be deposited in the [Nottingham ePrints](#) repository upon publication or as soon as possible thereafter;
- iii. Where available, researchers should take advantage of opportunities to publish their work in an open access form offered by journal publishers, and can make use of research grants and/or the central Open Access publication fund, in order to pay open access publication fees.

Full details of the University's Open Access policy can be found on the workspace [Open Access for Research](#)

4.6 Criminal offences concerning obtaining, possessing or publishing information

In certain circumstances it is a criminal offence to obtain, possess or publish specified classes of information unless a defence is established (e.g. that this is done for a legitimate reason as for proper teaching or research purposes). Examples include the Terrorism Act 2000 s.57 (possession of an article for a purpose connected with terrorism) or s.58 (collection of information likely to be useful to a person committing or preparing an act of terrorism); the Obscene Publications Act 1959 (possession for gain or publication of obscene material); the Protection of Children Act 1978 s.1 and the Criminal Justice Act 1988 (possession or distribution of an indecent photograph of a child). Other offences apply to the publication in particular circumstances of threatening, abusive or insulting material.

Further guidance can be found in the UUK document Freedom of Speech on Campus: rights and responsibilities in UK Universities (2011)
<http://www.universitiesuk.ac.uk/highereducation/Documents/2011/FreedomOfSpeechOnCampus.pdf>.
If any member of staff wishes to seek advice on the application of this or similar legislation they should contact Clare Martlew (Deputy Director of HR/Head of Employment Services Team 1) (clare.martlew@nottingham.ac.uk).

5. Publications

For the purposes of the Code, publications include reports and technical reports in printed and electronic form, where these are related to a programme of research (including internally and externally funded research), even where these have a limited circulation and have been prepared to report on progress of the research.

Researchers are encouraged to disseminate their research and research findings in an appropriate form, usually as papers in refereed journals. Publication and wider dissemination of research and research findings must be carried out responsibly and with an awareness of the consequences of dissemination in the wider media.

- 5.1 A publication must contain appropriate reference to the contributions made by all participants in the relevant research;
- 5.2 The research funder should be notified in advance when research might be published, publicised or disseminated;
- 5.3 Any person who has not participated in a substantial way in conceiving, executing or interpreting at least part of the relevant research is not to be included as an author of a publication derived from that research;
- 5.4 In addition to meeting the requirements of the points above, an author must ensure that the work of research students, research assistants, research officers, and technical officers is recognised in all publications derived from research to which they have made a contribution;
- 5.5 A publication which is substantially similar to other publications derived from the same research must contain appropriate reference to the other publications;
- 5.6 A researcher who submits substantially similar work to more than one other publisher should disclose that fact to the publishers at the time of submission;
- 5.7 Publication and dissemination of work electronically or on the Web should be treated with the same degree of integrity as every other form of publication;
- 5.8 Individuals who are or have been the participant of the research should not be identified or identifiable in any publication. Measures should be taken to disguise the identity of research participants unless explicit consent is given by them for revealing their identity.

In addition to publications, all external communications, whether through websites, e-bulletins, press releases, media briefings, or events should be undertaken with the core principles of openness, transparency and accountability.

6. Intellectual Property

The University has specific policies arising from Intellectual Policy and these must be adhered.

6.1. Intellectual Property (IP) and Intellectual Property Rights (IPR)

IP is defined as: "The products of creative effort". It includes, but is not limited to, the results of research in the form of data, inventions, notes, records, books, papers, designs, art work, music, software, business methods, schemes for processing and assessing information and mathematical formulae. IP Rights are the legal rights that protect IP from inappropriate use or exploitation by others. The forms of IPR are limited and in the UK consist of the following:

- Patents
- Copyright
- Database rights (form of copyright)
- Registered and unregistered design rights
- Plant breeders rights
- Registered and unregistered trade marks

6.2 Intellectual Property Ownership and the University

IP generated by University employees belongs to the University if it was made in the course of normal duties or during circumstances where an invention might reasonably be expected to take place. Unfettered IP (not owned by a third party) generated by students belongs to the student. If the inventorship is shared with a member of staff and the University elects to protect the IP, the University will request the student to assign their rights to the University. If you believe that you have generated IP during the course of your research, you should contact the IP Office who will send an IP assessor to take details of the IP or 'disclosure'. The University will assess the IP and determine whether or not to protect and commercialise the IP. If the University elects not to proceed it will assign its rights to the inventor(s). Full details of the University's policies on and procedures for IP and IPR can be found on the Business Engagement and Innovation Services workspace: .

<https://workspace.nottingham.ac.uk/display/BEIS/Intellectual+Property>

7. Supervision

Schools must adopt guidelines for the supervision of research undertaken by staff and students in accordance with requirements prescribed from time to time by the Senate and as specified in the [Quality Manual](http://www.nottingham.ac.uk/quality-manual/) for Staff and Students (<http://www.nottingham.ac.uk/quality-manual/>). The workload of all staff carrying out research shall be considered and moderated by research team leaders, Chief/Principal Investigators and Directors of Research or Heads of Schools as appropriate.

All supervisors must observe and undertake the responsibilities set out in these guidelines.

A person must decline appointment as a supervisor unless he/she expects to be able to discharge the responsibilities set out in these guidelines.

7.1 Lone Working

Where research involves lone working or contact with research participants outside of the University premises a lone-working policy should be set up. Where possible, lone-working is to be avoided. Particular consideration should be given to lone-working where there are vulnerable populations of research participants involved (such as children or adults with a mental incapacity). Guidance on lone-working can be found on [the following workspace](#)

7.2 Disclosure and Barring Service

The DBS was established under the Protection of Freedoms Act 2012 and merges the functions previously carried out by the Criminal Records Bureau (CRB) and Independent Safeguarding Authority (ISA).

Where the research involves participation of children or vulnerable adults the participating organisation via whom the researcher hopes to recruit the study participants may request a Disclosure and Barring check (DSB) of the researchers, and researchers must be prepared to undertake this.

The DSB is an Executive Agency of the Home Office and its aim is to help organisations in the public, private and voluntary sectors by identifying candidates who may be unsuitable to work with children or other vulnerable members of society.

Please note that only organisations entitled to ask an exempted question under The Rehabilitation of Offenders Act 1974 (Exceptions) Order 1975 are eligible to request DSB checks. These organisations must either be registered directly with the DSB or apply through an organisation that is already registered an Umbrella Body).

7.3 An individual who needs to work with either children or vulnerable adults must be registered with the Independent Safeguarding Authority in order to do so. It is a criminal offence under the Safeguarding Vulnerable Groups Act, 2006 for either an employer or an employee to allow work to be conducted with children or vulnerable adults without this registration. The University's guidance on the Protection of Children and Vulnerable Adults can be found here:

<https://workspace.nottingham.ac.uk/download/attachments/110627444/childvulnerableadultprotectionpolicy%28April2009%29.pdf?version=1&modificationDate=1328712649000>

8. Conflicts of Interest

The University has a policy on external work undertaken by those on Research and Teaching contracts (R&T 4a-7), Clinical Academics, Fertility Nursing Services, Administrative, Professional and Managerial staff (APM4-7), and Technical Services (TS 4&5). This policy states that external work, whether or not remunerated, has to be regulated in order to ensure that it either does not create a conflict of interest or, if necessary, it has received formal sanction from the University. The policy sets out cases where permission to carry out external work is automatic, procedures by which permission may be sought in other cases, and the consideration that will be taken into account when it is decided whether permission shall be granted. See: <http://www.nottingham.ac.uk/hr/guidesandsupport/universitycodesofpracticeandrules/externalwork.aspx>

The University has a policy on Conflicts of Interest, Gifts and Hospitality. This policy states that if members of staff have any third party pecuniary or non-pecuniary interests which may give rise to conflicts of interest in carrying out their University duties, they should report them to their Head of School and to the Registrar. The Registrar shall enter them on a register kept for this purpose. See:

<http://www.nottingham.ac.uk/hr/guidesandsupport/universitycodesofpracticeandrules/conflictsofinterest,giftsandhospitality.aspx>

Where there is a potential conflict of interest in research that falls outside the areas covered by the above policies, this must be discussed with the Director of Research and Graduate Services at the earliest opportunity. Conflicts of interest may occur where researchers have an affiliation or financial involvement (including direct financial interest, provision of benefits and provision of material or facilities) with more than one organisation sponsoring or providing financial support for research. The Director of Research and Graduate Services can refer any potential conflict of interest to the Pro-Vice Chancellor Research.

9. Adverse Events

Researchers are responsible for monitoring and reporting any adverse events occurring in the course of the research and each School must have systems in place to ensure that all such adverse events are recorded and, if appropriate, investigated.

For clinical/medical research where ethical approval has been sought and granted from an NRES Research Ethics Committee there are specific reporting requirements for serious adverse events. In addition to these, specialised reporting requirements and actions apply in relation to clinical trials involving the use of Investigational Medicinal Products that are regulated by the 'Medicines for Human Use (Clinical Trials) Regulations 2004,' the UK implementation of the EU Clinical Trials Directive 2001/20/EC and the International Conference of Harmonisation's Good Clinical Practice guidelines. Standard Operating Procedures available on the [Research Governance Workspace Pages](https://workspace.nottingham.ac.uk/display/ResG/Introduction) (<https://workspace.nottingham.ac.uk/display/ResG/Introduction>) give instructions on how to meet these reporting requirements.

10. Insurance

10 The University holds insurance policies that provide indemnity for claims against both the University and the individual for:

- 10.1 Property and business interruption;
- 10.2 Employers liability: this covers for claims made for death, injury or disease to any person arising out of and in the course of their employment;
- 10.3 Public liability: this provides indemnity in respect of claims made for death, injury or disease to persons other than employees or loss or damage to third party property arising out of and during the course of the business;
- 10.4 Professional indemnity: this provides indemnity in respect of legal liability to third parties for breach of professional duty due to negligent act, error or omission in connection with your business; and
- 10.5 Clinical trials: this provides indemnity against legal liability for damages in respect of accidental injury of any research participant arising out of the business of conducting clinical trials

Each separate policy carries specific inclusions and exclusions. The Employer's Product and Public Liability policy extends world-wide. All the other policies are limited to Great Britain (England, Scotland, and Wales), Northern Ireland, Channel Islands and the Isle of Man.

Details can be found on the Commercial Services web page or by contacting the University Insurance Officer. See: <http://www.nottingham.ac.uk/fabs/commercial-services/insurance/insurance.aspx>.

11. Additional Requirements

Any special standards of work performance and ethical conduct that are imposed by law or by the University in relation to particular categories of research are deemed to be included in this Code in its application to persons engaged in that research in the University. Project managers have a responsibility to inform staff about the implications and ensure that they agree to and accept the terms.

All research grants applications and commercial research contracts whose Principal or Chief Investigator is employed by the University must be approved by Research and Graduate Services and the Head of School or equivalent unit. Researchers have a responsibility to read the terms and conditions of funders and contractors before signing grant applications to ensure that they understand the implications of those terms and that they agree to, and accept them as a basis for that research.

11.1 International Research Collaborations

When proposing to conduct research overseas, researchers from the University of Nottingham UK campus have a responsibility to inform themselves and be aware of the regulations, local practices and guidelines governing that research within individual countries. All local permissions where the research is to be conducted must be sought and in place before the research commences.

For non-medical research at the University, ethical opinion must also be obtained via the usual route for your School. In addition to this, the University Insurance Officer must be informed of the proposed research activity so that any insurance issues can be clarified and resolved before the research starts. Special consideration should be given to the transfer of human or animal tissues and data sharing between countries. Both countries' laws and practices must be adhered to simultaneously.

Any medical research that is proposed to be conducted overseas must firstly be discussed with the Head of Research Governance. The University does not carry insurance for medical research conducted overseas and there are special arrangements for such research that must be in place before it can go ahead. The ethical

opinion sought from the National Research Ethics Service (NRES) for UK based medical research is not applicable overseas. All local regulations and customary practices must be adhered to in each country proposed to take part in the research.

Similarly, UK based researchers are responsible for ensuring that in any international research collaborations the conduct of the research being undertaken in the UK abides to applicable UK law. Any conflict with other collaborating countries' laws and practices must be resolved before the research starts.

11.2 Multi-Funder Requirements

Where research is funded by more than one funding body or contractor, researchers have a responsibility to read the terms and conditions of the different funding bodies to ensure they understand and agree to the terms and to ensure there is no conflict between the terms and conditions of the different funding bodies.

12. Procedures for dealing with allegations of research misconduct

Research misconduct means fabrication, falsification, plagiarism or deception in proposing, carrying out or reporting progress or results of research and deliberate, dangerous or negligent deviations from accepted practice in carrying out research and from this Code of Conduct, whether or not it causes harm. It includes failure to follow established protocols if this failure results in unreasonable risk or harm to humans, animals or the environment. It also includes assisting in misconduct by other researchers by collusion in, or concealment of, any of the actions listed above. It does not include honest error or honest differences in design, execution, interpretation or judgement in evaluating research methods or results or misconduct (including gross misconduct) unrelated to the research process. An allegation of research misconduct is a serious and potentially defamatory action and could lead to a threat (or even the instigation) of legal proceedings. Consequently for the protection of the complainant and of the party against whom the allegations are made, all enquiries (including the formal investigation, if any) should be conducted on a basis of strict confidentiality (wherever possible) as well as of integrity and non-detriment so that neither party should suffer solely as a consequence of the allegation being made.

In most instances, concerns about the conduct of research are likely to be resolved informally without the need for a formal process being initiated. Concerns about the conduct of research can be raised by a participant in the research, a student or member of staff, or a member of the public. Research and Graduate Services will act in an advisory capacity to support the process in cases of academic research misconduct.

Where a student, research participant or member of the public has concern about the conduct of research they should communicate the matter to the supervisor of the research project at the earliest opportunity. If the concern persists or is unresolved, the matter should be referred to the relevant Head of School for resolution. In the unlikely event that the concern remains beyond this, or that the Head of School has a conflict of interest, then the matter should be referred to the Dean of Faculty and Director of the Research and Graduate Services for advice. Where a member of staff has concerns about the conduct of research this should also, in the first instance, be communicated to the supervisor of the research project. Where this is not possible, staff are reminded that the University's [Whistle Blowing Policy](#) gives protection to employees to disclose confidential information about malpractice in the workplace, whether carried out by other employees or the employer. In such an instance, concerns should be raised to the relevant Head of School. Where this is not possible, the matter should be referred to the Chair of the University's Research Ethics Committee.

Allegations of research misconduct that cannot be informally resolved are participant to formal investigation and may be dealt with in accordance with the provisions of University procedures:

- Disciplinary procedure for staff subject to University statutes, section 35 (<http://www.nottingham.ac.uk/hr/guidesandsupport/performanceatwork/disciplinaryprocedures/documents/disciplinaryprocedure-forstaffsubjecttouniversitystatutes,section35.pdf>);

- Disciplinary procedure for staff not subject to University statutes, section 35 (<http://www.nottingham.ac.uk/hr/guidesandsupport/performanceatwork/disciplinaryprocedures/documents/disciplinaryprocedure-forstaffnotsubjecttouniversitystatutes,section35.pdf>);
- Procedure for public interest disclosure by staff or students of malpractice
- [The Code of Discipline for Students: http://www.nottingham.ac.uk/governance/documents/code-of-discipline.pdf](http://www.nottingham.ac.uk/governance/documents/code-of-discipline.pdf)
- Whistle Blowing Policy
<http://www.nottingham.ac.uk/governance/otherregulations/whistleblowing/index.aspx>

The University is required to report annually through Audit Committee whether any issues of research misconduct have arisen concerning any Research Council funded researchers. Schools should report this to Research and Graduate Services.

Research Ethics

13. Origins of Research Ethics

Consideration of ethical issues has long been a feature of medical research and most notable has its origins in the *Nuremberg Code 1947*, following the trials of the Nazi war criminals. It is the most important document in the history of the ethics of medical research and the first of its kind to ensure the rights of participants. The Nuremberg Code includes such principles as informed consent and absence of coercion; properly formulated scientific experimentation; and beneficence towards research participants.

The *Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects* first issued in 1964, is the policy-statement of the World Medical Association.

Although this text was written primarily for medical practice, many of the principles have general application; for example regard for human dignity; care for human and animal welfare, consideration of risk, and informed consent of human participants in research projects.

Many statutory, professional and regulatory and other bodies, for example Research Councils, have adopted either Codes of Practice or Guidelines. Two examples are the UK Economic & Social Research Council's *Research Ethics Framework* and *Respect Code of Practice for Socio-Economic Research* which is intended to form the basis of a voluntary code covering the conduct of social-economic research in Europe.

14. Ethics Committees

The *Declaration of Helsinki* enunciated the principle of independent assessment of experimental procedures involving human participants. In full this section (B13) reads:

"The design and performance of each experimental procedure involving human participants should be clearly formulated in an experimental protocol. This protocol should be submitted for consideration, comment, guidance and where appropriate, approval to a specially appointed ethical review committee, which must be independent of the investigator, the sponsor or any other kind of undue influence. This independent committee should be in conformity with the laws and regulations of the country in which the research experiment is performed. The committee has the right to monitor ongoing trials. The researcher has the obligation to provide monitoring information to the committee, especially any serious adverse events. The researcher should also submit to the committee, for review, information regarding sponsors, institutional affiliations, other potential conflicts of interest, and incentives for subjects."

The National Health Service was the first public body in the UK to give effect to these principles. The operation of RECs in the NHS is coordinated through the National Research Ethics Service (NRES). NHS RECs review and give ethical approval to all research involving the NHS and/or the use of investigational medicinal products or devices.

14.1 University Ethics Committees

As the importance of ethical scrutiny of research projects has grown, the value of having ethics committees in other institutions has been recognised. The University has a central University Research Committee that is responsible for all School Research Ethics Committees.

The purpose of ethical approval within the University is positive and threefold:

- i) The University is committed to following good ethical practice, as a principle in itself and as a means by which the public can be assured of confidence in the work of staff and students of the University.
- ii) The provisions for ethical review and approval assist researchers in the identification of ethical issues and to address them in the structuring of research protocols. The resultant development of good practice is expected to cascade down to students and inform their own emerging practice at both undergraduate and postgraduate level.
- iii) The approval process acts as a safeguard to researchers, supervisors and students who can be confident of the ethical propriety of their project once it has been approved.

15. Need for Ethical review and the review process

Ethical review (and approval) is required where the research involves the participation of human participants (participants, see Appendix A for definition), their data and/or their tissue. Where the use of animals is involved this is subject to regulation and the ethical review is carried out by the University's Ethical Review Committee – see section 9.3 – in line with the legislation. Researchers are advised that if in doubt about the need for an ethical review of their research to speak to their School Ethics Officer.

Responsibility for ensuring proper ethical review lays with the Chief or Principal Investigator reporting on behalf of co-investigators through his/her Head of School, and involving the University Ethical Review Process for licensed work as appropriate. The Research Governance Manager will monitor compliance and develop best practice through the University.

In addition to complying with the University's internal policies on the governance of Research Ethics Committees, each School must ensure that external systems are employed to review the ethical implications of research undertaken by its academic and research staff and students before any research commences. Normally, external research sponsors will not release funds unless they receive evidence that approval has been given by the relevant research ethics committee.

Heads of Schools who are able to support research with School funds must ensure that Research staff are especially vigilant regarding the potential need to seek the approval of one or more ethics committees. If there is any doubt about the need for ethical approval in relation to their proposed research, staff should seek advice from their School Research Ethics Officer.

15.1 Research involving human participants

For the purposes of this Code, research involving human participants is divided into non-medical research and medical or clinical research.

15.2 Non-medical research

Non-medical research involving human participants are reviewed by internal review via the individual School's ethics committee or through its agreed designated reviewing process through another School's committee. In exceptional circumstances when a School committee is unable to agree on ethical review such cases are referred to the University's Ethics Committee.

15.3 Medical or clinical research

Medical or clinical research NOT involving the use of an Investigational Medicinal Product (IMP) or medical device and involving the participation of healthy volunteers only is reviewed by the Medical School Research Ethics Committee.

Medical or clinical research involving NHS resources, staff, patients and biological materials or data derived from them and ALL clinical research involving the use of IMPs or medical devices on human participants must be approved by a UK Ethics Committee Authority registered ethics committee. These are part of the National Research Ethics Service. Also, any research involving resources, staff, patients and biological materials or data derived from them will also require approval from the R&D Office of each NHS Trust involved. Standard Operating Procedures available on the RGS web page under 'Research Governance' give instructions on how to do this.

15.3.1 Medical or clinical research involving NHS resources, staff, patients and biological materials or data derived from them and ALL clinical research involving the use of IMPs or medical devices on human participants requires the nomination of a Research Sponsor. The University of Nottingham acts as the Research Sponsor for all of its medical/clinical research where appropriate. The Research Governance Team reviews all applications for Sponsorship prior to the submission of approvals for ethics and regulatory approvals. Standard Operating Procedures available on the RIS web page under 'Research Governance' give instructions on how this is done. Furthermore, the University's Research and Graduate Services office checks and maintains records of ethical approvals in relation to the grants it administers.

15.3.2 Any research involving the use of Investigational Medicinal Products (IMPs) or medical devices will also require the approval of the Medicines and Healthcare products Regulatory Agency (MHRA). The Chief Investigator is responsible for obtaining approval where it is appropriate. Standard Operating Procedures available on the RGS web page under Research Governance give instructions on how to do this.

15.4 Research involving participation by children or vulnerable adults

Research that involves participation by children (under 16 years old) or vulnerable adults such as those with a mental incapacity or prisoners should undergo an ethical review by a suitable ethics committee detailed in section 15 depending on the nature of the research. See also 6.2. There is legislation specific to research involving vulnerable adults and children. Researchers must ensure that they are familiar with the requirements of these legislations before designing their research. Advice can be sought from the Research Governance Manager.

15.5 Occluded or Covert research

Occluded research is where full information cannot be given to the research participant because this would introduce bias (such as the participant's knowledge of use of a placebo); be meaningless (such as in crowd observation); or invalidate the research (such as in certain psychological experiments).

Research may be undertaken in a covert way where the full written informed consent of the participant cannot be obtained because this may pose a risk (such as criminal disclosure) to the participant; or where the research necessarily involves concealment of the real objectives of the research without knowledge of this by the research participants. Thus the people being studied are not fully informed about the research. There are different types of covert research and these can include concealment, misrepresentation, and camouflage. All of these raise a number of ethical issues.

All such research *must* be ethically reviewed by a School ethics committee. The choice of committee depends on the nature of the research and whether the research is of a medical basis or not. Where the research is to investigate a medical condition then ethical approval as in section 9.2 must be sought. Where the research is non-medical ethical approval as in section 9.1 must be sought. In the latter instance advice can be sought from the University Ethics Committee at any time to inform any sub-committee's decision.

15.5.1 The withholding of information from participants should only occur when the researcher is clear that the aims and objectives of the research cannot be achieved by any other means and that the welfare of the participants is assured.

15.5.2 Covert methods necessarily violate the principles of informed consent and may invade the privacy of those being studied. Participant observation in non-public spaces or experimental manipulation of research participants without their knowledge should be resorted to only where it is impossible to use other methods to obtain essential data. In such studies it is important to safeguard the anonymity of research participants.

15.5.3 Where it is possible and practicable, and where it is judged that the consequences of doing so will not be harmful (e.g. cause distress) to participants and will not potentially jeopardise the research, disclosure and debriefing should follow participation as soon as possible. Here the participant should be offered the option of withholding their data in accordance with the principle of participation by informed consent.

15.6 Research involving the use of animals

The Animals (Scientific Procedures) Act 1986 (ASPA) requires that a local Ethical Review Process is maintained by establishments (designated by the Secretary of State) to apply regulated procedures to protected animals (Section 1.1 of ASPA). The University of Nottingham's local Animal Welfare and Ethical Review Body is required to mobilise institutional expertise and resources in order to promote good animal welfare and humane science by ensuring that the use of protected animals at designated establishment is justified. The process should ensure that proper account is taken of strategies to identify, and opportunities to apply, appropriate strategies to replace, reduce and refine animal production and use (the 3R's).

The Animal Welfare and Ethical Review Body should therefore be notified of all planned research involving protected animals to be undertaken by, or on behalf of, University staff either at this establishment or at an alternative site (including sites outside the UK). Subsequent approval by the Chair of the Animal Welfare and Ethical Review Body being required before Home Office project licence applications can be formally submitted to the Home Office or before animal work not covered by the Animals(Scientific Procedure) Act 1986 can commence.

See: <http://www.nottingham.ac.uk/animalresearch/erp/erp.aspx>

16 Resources and major research funders' guidance

Information relating to the University's Research Ethics Committee including details of School Research Ethics Officers can be found on the workspace: <https://workspace.nottingham.ac.uk/display/ResEth/Home>

Where appropriate to the research being undertaken, researchers should refer directly to the following guidance, and any other guidance relevant to the sponsor and/or specific research area.
We acknowledge the use of some of the following documents in the preparation of this Code:

[NHS Research Governance Framework \(2001; second edition: 2005\)](http://www.dh.gov.uk/en/Researchanddevelopment/A-Z/Researchgovernance/DH_4002112)
http://www.dh.gov.uk/en/Researchanddevelopment/A-Z/Researchgovernance/DH_4002112

[MRC Policy and Procedure for Inquiring into Allegations of Scientific Misconduct \(1997\)](http://www.mrc.ac.uk/index.htm)
<http://www.mrc.ac.uk/index.htm>

[MRC Ethics Series 'Personal Information in Medical Research \(2000\)](http://www.mrc.ac.uk/index.htm)
<http://www.mrc.ac.uk/index.htm>

[Mental Capacity Act \(2005\)](http://www.legislation.gov.uk/ukpga/2005/9/contents)
<http://www.legislation.gov.uk/ukpga/2005/9/contents>

[AMRC Guidelines on Good Practice in Research](http://www.amrc.org.uk/news-policy--debate_policies-positions-and-briefings_policy--position-statements)
http://www.amrc.org.uk/news-policy--debate_policies-positions-and-briefings_policy--position-statements

[The Wellcome Trust guidelines for researchers](http://www.wellcome.ac.uk/node3610.html)
<http://www.wellcome.ac.uk/node3610.html>

[UK Data Protection Act \(1998\)](http://www.opsi.gov.uk/ACTS/acts1998/19980029.htm)
<http://www.opsi.gov.uk/ACTS/acts1998/19980029.htm>

[EU Clinical Trials Directive \(2001/20/EC\) and ICH Good Clinical Practice Guidelines](http://www.mhra.gov.uk/home/idcplg?IdcService=SS_GET_PAGE&nodeId=136)
http://www.mhra.gov.uk/home/idcplg?IdcService=SS_GET_PAGE&nodeId=136

[DEFRA Code of Practice.](http://www.defra.gov.uk/)
<http://www.defra.gov.uk/>

[ESRC Research Ethics Framework](http://www.esrc.ac.uk/about-esrc/information/research-ethics.aspx)
<http://www.esrc.ac.uk/about-esrc/information/research-ethics.aspx>

[National Research Ethics Service \(NRES\)](http://www.nres.nhs.uk/)
<http://www.nres.nhs.uk/>

[NHS Research & Development Forum](http://www.rdforum.nhs.uk/)
<http://www.rdforum.nhs.uk/>

[Animals \(Scientific Procedures\) Act 1986](http://www.legislation.gov.uk/ukpga/1986/14/contents)
<http://www.legislation.gov.uk/ukpga/1986/14/contents>

[Human Tissue Act](http://www.hta.gov.uk/)
<http://www.hta.gov.uk/>

[Medicines and Healthcare products Regulatory Agency](http://www.mhra.gov.uk/home/idcplg?IdcService=SS_GET_PAGE&nodeId=5)
http://www.mhra.gov.uk/home/idcplg?IdcService=SS_GET_PAGE&nodeId=5

[Genetic Manipulation Approval](#)

- HSE guidance document that supports the Genetically Modified Organisms (Contained Use) Regulations (<http://www.hse.gov.uk/biosafety/gmo/law.htm>)

- [ACGM Compendium of Guidance](#) - Guidance from the Health and Safety Commission's Advisory Committee on Genetic Modification (<http://www.hse.gov.uk/biosafety/gmo/acgm/acgmcomp/>)

[Council for Science and Technology](#) "Universal Ethical Code for Scientists"
<http://www.berr.gov.uk/files/file41318.pdf>

Biological, Toxin and Chemical Weapons, and Radiological or Nuclear Materials:
"Do no harm: reducing the potential for the misuse of life science research" (2004) [The Royal Society & Wellcome Trust](#).
<http://www.royalsoc.ac.uk/document.asp?tip=0&id=2830>

[Biological and Toxin Weapons Act 1974](#)
<http://www.dti.gov.uk/europeandtrade/non-proliferation/chemical-biological/btwc/bwa-1974/page26600.html>

[UK Chemical Weapons Act 1996](#)
<http://www.legislation.gov.uk/ukpga/1996/6/contents>

[UK Anti-terrorism, Crime and Security Act \(ATCSA\) 2001](#)
<http://www.hmso.gov.uk/acts/acts2001/20010024.htm>

[Export of Goods, Transfer of Technology and Provision of Technical Assistance \(Control\) Order 2005](#)
<http://www.hmso.gov.uk/si/si2005/20050468.htm>

[Human Fertilisation and Embryology Authority approval](#)
<http://www.hfea.gov.uk/cps/rde/xchg/hfea>

[Office of Research Integrity \(ORI\) - US Department of Health and Human Sciences - Model Policy for Responding to Allegations of Scientific Misconduct](#)
http://ori.hhs.gov/policies/model_policy.shtml

17 Definitions

Adverse event:

Any untoward or unexpected occurrence in a research participant which may not necessarily have a causal relationship with the research procedures.

Chief Investigator (clinical research only):

The authorised health professional, whether or not he is an investigator at any particular site, who takes primary responsibility for the conduct of the trial.

Covert Research:

Covert methods of research involve the researcher concealing their real role and identity and information about the research being withheld. The people being studied are not fully informed about the research. There are different types of covert research and these can include concealment, misrepresentation, and camouflage.

Informed Consent

A study participant's willingness and voluntary undertaking of participation in a research study after having been informed of all aspects of the study that are relevant to their decision to participate. No details of the study are withheld. Informed consent is usually documented by means of a written, signed and dated consent form.

Investigational Medicinal Product:

A pharmaceutical form of an active ingredient or placebo being tested or used as a reference in a clinical trial, including a product with a marketing authorisation when used or assembled in a way different from the approved form or when used for an unapproved indication or when used to gain further information about an approved use.

Occluded Research:

Occluded research is where full information cannot be given to the research participant because this would introduce bias (such as the knowing they were taking a placebo drug), be meaningless (such as in crowd observation); or invalidate the research (such as in psychological experiments where prior disclosure would invalidate the responses).

Principal Investigator:

1. The authorised professional, whether or not he is an investigator at any particular site, who takes primary responsibility for the conduct of the trial.
2. For clinical research the authorised professional at a particular site, who takes primary responsibility for the conduct of the trial at that site.

Research:

Any form of disciplined inquiry that aims to contribute to a body of knowledge or theory.

Research Ethics:

The moral principles guiding research, from its inception through to completion and publication of results and beyond – for example, the curation of data and physical samples after the research has been published.

Research Ethics Committee (REC):

A multidisciplinary, independent, body charged with reviewing research involving human participants to ensure that their dignity, rights and welfare are protected. The independence of a REC is founded on its membership, on strict rules regarding conflict of interests, and on regular monitoring of and accountability for its decisions.

Research Sponsor:

An individual, company, institution, or organization which takes responsibility for the initiation, management and financing (or arranging the financing) of clinical research.

Research Participants:

- i) Individuals (humans or animals) who are the recipients of the research interventions or procedures.

- ii) 'Human participants' are defined as including living human beings, human beings who have recently died (cadavers, human remains and body parts), embryos and fetuses, human tissue and bodily fluids, and human data and records (such as, but not restricted to medical, genetic, financial, personnel, criminal or administrative records and test results including scholastic achievements).

18 Contacts

If you have any questions regarding information in the Code of Research Conduct and Research Ethics, please contact the Research Governance Manager, Ms Angela Shone (email: angela.shone@nottingham.ac.uk; telephone +44 115 84 67906) or the Secretary to the University's Research Ethics Committee, Dr Claire O'Callaghan (email: claire.ocallaghan@nottingham.ac.uk; telephone +441158466197).