



Code of Practice for Research

The University of Lincoln's *Code of Practice for Research* is intended to support good conduct in research and help prevent misconduct, in order to encourage research of the highest quality. It provides general principles and standards for good practice in research, for the individual researcher (staff member or student) and the institution as a whole. This *Code* is modified from the standards and practices recommended by the UK Research Integrity Office (UKRIO) in their *Code of Practice for Research* (2009).

The *Code* complements existing guidance on research conduct, such as that provided by Research Councils UK, the Wellcome Trust, the EU and the Council for Science and Technology, and Universities UK Concordat to Support Research Integrity. The *Code* also refers to essential institutional policies, such as those for health and safety, raising concerns at work, management of finances, intellectual property, freedom of information, etc., all of which have a relationship with the good conduct of research.

The first part of this *Code of Practice* sets out the principles governing the conduct of research by individual researchers and the University; the second part of the *Code* lists the fundamental standards for good practice in research with which both researchers and the institution should comply.

Contents

| | |
|--|----|
| Definition of Terms..... | 3 |
| 1 PRINCIPLES FOR THE GOOD PRACTICE IN RESEARCH | 4 |
| 2 STANDARDS FOR THE UNIVERSITY AND ITS RESEARCHERS | 5 |
| 2.1 General Guidance on Good Practice In Research..... | 5 |
| 2.2 Leadership and Supervision | 5 |
| 2.3 Training and Mentoring..... | 6 |
| 2.4 Research Design..... | 6 |
| 2.5 Collaborative working | 7 |
| 2.6 Conflicts of interest..... | 7 |
| 2.7 Research involving human participants, human material or personal data | 8 |
| 2.8 Research involving animals..... | 9 |
| 2.9 Health and safety..... | 9 |
| 2.10 Intellectual property | 10 |
| 2.11 Finance..... | 10 |
| 2.12 Collection and retention of data..... | 11 |
| 2.13 Monitoring and audit..... | 11 |
| 2.14 Peer review | 11 |
| 2.15 Publication and authorship | 12 |
| 2.16 Misconduct in research | 13 |

Definition of Terms

Research

“Research is defined as a process of investigation leading to new insights, effectively shared.

It includes work of direct relevance to the needs of commerce, industry, and to the public and voluntary sectors; scholarship; the invention and generation of ideas, images, performances, artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and routine analysis of materials, components and processes such as for the maintenance of national standards, as distinct from the development of new analytical techniques. It also excludes the development of teaching materials that do not embody original research.

It includes research that is published, disseminated or made publicly available in the form of assessable research outputs, and confidential reports”. (REF 2014)

Researchers

Researchers refers to any person who conducts research, including but not limited to: as an employee; an independent contractor or consultant; a research student; a visiting or emeritus member of staff; or a member of staff on a joint clinical or honorary contract.

Good research conduct applies to all researchers who conduct research for the University of Lincoln – regardless of whether the research is funded or unfunded, who it is funded by and where the research is conducted.

The conduct of undergraduate students must always be overseen by an identified academic, who takes responsibility for ensuring that the Code of Practice for Research and all relevant policies and procedures are followed.

1 PRINCIPLES FOR THE GOOD PRACTICE IN RESEARCH

The University and its researchers should adhere to the following principles, which set out the responsibilities relevant to research.

The University and its researchers should be guided by these principles when implementing and complying with the core standards described in Section 2.

ACADEMIC FREEDOM

The University upholds the principle of academic freedom, the right to question and test received wisdom and to put forward new ideas and controversial or unpopular opinions, and for academic members of staff to choose their research domain, methods and modes of dissemination.

EXCELLENCE

The University and its researchers will strive for excellence when conducting research and aim to produce and disseminate work of the highest quality.

HONESTY

Researchers will be honest in relation to their own research and that of others. They will do their utmost to ensure the accuracy of data and results, acknowledge the contributions of others, and neither engage in misconduct nor conceal it.

INTEGRITY

The University and its researchers will comply with all legal and ethical requirements relevant to their field of study. All potential or actual conflicts of interest relating to research must be declared and, where necessary, steps must be taken to resolve them.

CO-OPERATION

The University and its researchers will promote the open exchange of ideas, research methods, data and results and their discussion, scrutiny and debate, subject to any considerations of confidentiality.

ACCOUNTABILITY

The University and its researchers will recognise that in and through their work, they are ultimately accountable to the general public and should act accordingly. They will ensure that any research undertaken complies with any agreements, terms and conditions relating to the project, and allows for proper governance and transparency. Researchers will follow the requirements and guidance of any professional bodies in their field of research. Researchers who are members of a regulated profession will follow the requirements and guidance of the body regulating their profession.

TRAINING AND SKILLS

The University will provide training and opportunities for development for their researchers, and the necessary resources to enable them to conduct research to the required standards. They will support researchers in identifying their needs for training and development through the review processes available to staff.

SAFETY

The University and its researchers will ensure the dignity, rights, safety and well-being of all involved in research and avoid unreasonable risk or harm to research subjects, patients, participants, researchers and others. They will report and address any concerns relating to the dignity, rights, safety and well-being of those involved in research. Research will begin or continue only if the anticipated benefits justify the risks involved.

2 STANDARDS FOR THE UNIVERSITY AND ITS RESEARCHERS

The University and its researchers will comply with the following core Standards, which will be interpreted in light of the Principles in Section 1, above. These standards state the rights and responsibilities of the University and its researchers.

2.1 General Guidance on Good Practice in Research

The University and its researchers shall comply with all legal and ethical requirements and other guidelines that apply to their research. This includes submitting research proposals/protocols for ethics review where appropriate and abiding by the outcome of that review. They should also ensure that all applicable bodies approve research projects - ethical, regulatory or otherwise - before any research is conducted.

When conducting, or collaborating in, research in other countries, the University and its researchers based in the UK should comply with the legal and ethical requirements existing in the UK and in the countries where the research is conducted. Similarly, organisations and researchers based abroad who participate in UK-hosted research projects should comply with the legal and ethical requirements existing in the UK as well as those of their own country.

The University and its researchers will ensure that all research projects have sufficient arrangements for insurance and indemnity, prior to research being conducted.

The University will:

- a) ensure that good practice in research, forms an integral part of its research strategy;
- b) ensure that these policies and procedures complement, and are in accordance with, existing organisational policies, such as those for health and safety, raising concerns at work, management of finances or of intellectual property, and equality and diversity;
- c) make sure that its researchers are aware of these policies and procedures and that all research carried out under the auspices of the University complies with them;
- d) provide training, resources and support to its researchers to ensure that they are aware of these policies and procedures and are able to comply with them;
- e) encourage its researchers to consider good practice in research as a routine part of their work; and
- f) monitor the effectiveness and appropriateness of these measures and revise them where necessary.

Researchers shall:

- a) recognise their responsibility to conduct research to high ethical standards;
- b) be aware of the University's policies and procedures relating to good practice in research;
- c) make sure that their research complies with these policies and procedures and seek guidance from the University when necessary;
- d) work with the University to ensure that they have the necessary training, resources and support to carry out their research.

2.2 Leadership and Supervision

The University and its researchers will promote and maintain an environment, which fosters and supports research with high ethical standards, mutual co-operation, professionalism and the open and honest exchange of ideas.

The University will support supervisors and researchers in meeting the legal and ethical requirements of conducting research.

The University will encourage the career development of their researchers and provide training and mentoring of new researchers, through IRPs (Individual Research Plans) and initiatives to support early career researchers such as RDF (Researcher Development Framework), following the principles of the **Concordat to Support the Career Development of Researchers**. The University will also offer development and support to those charged with the supervision and development of other researchers.

2.3 Training and Mentoring

The University will provide training for researchers to enable them to carry out their duties and develop their knowledge and skills throughout their career. The University will support researchers in identifying unmet needs for training and development through the annual appraisal process.

The University will provide mentoring to assist in the training and career development of new or inexperienced researchers and also provide career development and educational opportunities for researchers who are more established in their careers. In so doing, the University will support the principles of the **Concordat to Support the Career Development of Researchers**.

The University will provide specific support for student researchers, ensuring that student researchers understand which standards and organisational policies and procedures they are expected to comply with.

2.4 Research Design

When designing research projects, the researchers shall ensure that:

- a) the proposed research will contribute to the advancement of knowledge;
- b) the design of the study is appropriate for the question(s) being asked and addresses the most important potential sources of bias;
- c) all necessary skills and experience will be available to carry out the proposed research, in the proposed research team or through collaboration with specialists in relevant fields;
- d) sufficient resources will be available to carry out the proposed research and that these resources meet all relevant standards; and
- e) any issues relating to the above are resolved as far as possible prior to the start of the research.

Researchers will conduct a risk assessment of the planned study to determine:

- a) whether there are any ethical issues (advice may be sought from College Ethics Leads) and to ensure the project is conducted in compliance with the University's ethics procedures
- b) the potential for risks to the organisation, the research, or the health, safety and well-being of researchers and research participants (see section 2.9, also); and
- c) what legal requirements govern the research.

Where the design of a study has been approved by ethics, regulatory or peer review, the University and its researchers will ensure that any subsequent alterations to the design are

subject to appropriate review to determine that they will not compromise the integrity of the research or any terms of consent previously given.

Where risks have been identified, researchers will ensure that the project is carried out in compliance with the University's relevant policies and procedures governing such risks. The University will provide guidance and support in such cases.

2.5 Collaborative working

The University and its researchers will pay particular attention to projects which include participants from different countries or where work will be carried out in another country due to the additional legal and ethical requirements and other guidelines that may apply.

The University will work with partner organisations to ensure the agreement of, and compliance with, agreed standards and procedures for the conduct of collaborative research, including the resolution of any issues or problems that might arise and the investigation of any allegations of misconduct in research if they occur, typically by agreeing which institution's procedures should cover all, or identified parts of, the joint project.

Researchers shall make themselves aware of the standards and procedures for the conduct of research followed by any organisations involved in collaborative research that they are undertaking. They will also make themselves aware of any contractual requirements involving partner organisations, seeking guidance and assistance where necessary and reporting any concerns or irregularities to the appropriate person(s) as soon as they become aware of them.

Researchers shall try to anticipate any issues that might arise as a result of working collaboratively and agree jointly in advance how they might be addressed, communicating any decisions to all members of the research team. In particular, agreement will be sought on the specific roles of the researchers involved in the project and on issues relating to intellectual property, publication, and the attribution of authorship, recognising that, subject to legal and ethical requirements, roles and contributions may change during the time span of the research.

2.6 Conflicts of interest

The University recognises that conflicts of interest (i.e. personal or institutional considerations, including but not limited to financial matters and personal relationships) can inappropriately affect research and that identifying, declaring and addressing conflicts of interest is necessary to avoid poor practice in research or potential misconduct.

When addressing a conflict of interest, the University and its researchers will decide whether it is of a type and severity that poses a risk of fatally compromising the validity or integrity of the research, in which case researchers and the associated organisations will not proceed with the research, or whether it can be adequately addressed through declarations and/or special safeguards relating to the conduct and reporting of the research.

Any potential conflict of interest must be confidentially disclosed in writing to the Head of School, or (for more senior staff) Line Manager, and an agreed plan to address the potential conflict drawn up. All conflicts of interest and plans will be confidentially lodged with the DVC with responsibility for research. Institutional level conflicts of interest will be managed by the DVC with responsibility for research, and disclosed to the Vice Chancellor and if appropriate Chair of the Board of Governors.

2.7 Research involving human participants, human material or personal data

The University and its researchers will ensure that any research involving human participants, human material or personal data complies with all legal and ethical requirements and other applicable guidelines.

Appropriate care should be taken when research projects involve: vulnerable groups (such as the very old, children or those with mental illness); covert studies or other forms of research which do not involve full disclosure to participants. The dignity, rights, safety and well-being of participants must be the primary consideration in any research study. Research must not begin and/or continue if the anticipated benefits do not justify the risks involved.

When conducting, or collaborating in, research in other countries, the University and its researchers based in the UK will comply with the legal and ethical requirements existing in the UK and in the countries where the research is conducted. Similarly, organisations and researchers based abroad who participate in UK-hosted research projects will be required to comply with the legal and ethical requirements existing in the UK as well as those of their own country.

The University and its researchers will adhere to the University's policies and guidance on data protection and conducting research with humans and non-human animals and all relevant UK Government legislation and guidance to ensure the confidentiality and security of personal data relating to human participants in research and human material involved in research projects.

The University and its researchers working with, for, or under the auspices of, any of the UK Departments of Health and/or the National Health Service conducting health or social care research will adhere to all relevant guidelines, for example the Department of Health's **Research Governance Framework for Health and Social Care** and Health Research Authority Guidance.

Where research involves: NHS Services; patients; clinical data; biological materials; NHS Staff, premises or facilities; Ionising Radiation; Clinical Trials of Investigational Medicinal Products (CTIMPS) and/or medical devices for human use - researchers will seek review and sponsor approval from the University of Lincoln prior to submitting for review and approval from the Health Research Authority (HRA) and any Regulatory bodies (e.g. MHRA, ARSAC etc.) if applicable and should obtain organisational permission. The research should also comply with the principles of ICH¹: Good Clinical Practice and any relevant other relevant legislation.

The University and its researchers will ensure that appropriate procedures for obtaining informed consent are in place and observed in projects involving human participants, having particular regard to the needs and capacity of the participants involved.

The University and its researchers will maintain the confidentiality and security of personal data relating to human participants in research and human material involved in research projects.

Researchers shall inform research participants that data gathered during the course of research may be disseminated not only in a report, but also in different forms for academic or other subsequent publications and meetings. Such data should not be in an identifiable form, unless previously agreed, and subject to limitations imposed by legislation or any applicable bodies, ethical, regulatory or otherwise.

¹ International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH)

Researchers who are members of a regulated profession must ensure that research involving human participants, human material or personal data complies with any standards set by the body regulating their profession.

Researchers have a duty to publish the findings of all clinical research involving human participants. In addition, it is government policy to promote public access to information about any research and research findings affecting health and social care, including the principle that trials should appear on public registers. In this context "trials" means all comparative studies of health interventions, not just ones conducted in a clinical setting.

If researchers consider that human participants in research are subject to unreasonable risk or harm, they must report their concerns to their Head of School, and, where required, to the appropriate regulatory authority. Similarly, concerns relating to the improper and/or unlicensed use or storage of human material, or the improper use or storage of personal data, should be reported, in compliance with the policies and guidance on research misconduct for staff or the **University General Regulations** for students.

2.8 Research involving animals

The University and its researchers will ensure that research involving animals adheres to all legal and ethical requirements and other applicable guidelines. They should consider the opportunities for reduction, replacement and refinement of involving animals in research projects.

When conducting, or collaborating in, research in other countries, the University and its researchers based in the UK will comply with the legal and ethical requirements existing in the UK and in the countries where the research is conducted. Similarly, organisations and researchers based abroad who participate in UK-hosted research projects will be required to comply with the legal and ethical requirements existing in the UK as well as those of their own country.

The University will ensure the ethical, regulatory and peer review of research projects involving animals.

The University will ensure that their researchers are aware and have access to all relevant guidance and legal and ethical frameworks.

Researchers will submit research projects involving animals for review by all relevant ethics committees and abide by the outcome of that review. They will also ensure that such research projects have been approved by all **applicable** bodies, ethical, regulatory or otherwise.

If researchers consider that animals involved in research are subject to unreasonable risk or harm, they must report their concerns to the University Research Ethics Committee (UREC), as stipulated in the University's **Ethical Principles for Conducting Research with Humans and Non-Human Animals** section B and, where required, to the appropriate regulatory authority.

2.9 Health and safety

The University and its researchers will ensure that all research carried out under their auspices, or for which they are responsible, fulfils all requirements of health and safety legislation and good practice. They will bear in mind that certain types of research, for

example social research in a conflict zone, can present particular issues of health and safety. The University will ensure that all research which involves potentially hazardous or harmful material or which might cause harm to the environment complies with all legal requirements and other applicable guidelines and that any policies and legislation governing laboratory safety and security are adhered to. (See section 2.4, also.)

Researchers planning projects that have potential health and safety risks must undertake a risk assessment in compliance with the University's Risk Assessment Policy and accept the outcome of any resulting review.

2.10 Intellectual property

The University and its researchers will ensure that any contracts or agreements relating to research include provision for ownership and use of intellectual property, in accordance with the University's **Intellectual Property Rights Policy**. Intellectual property includes, but is not limited to: research data and other findings of research; ideas, processes, software, hardware, apparatus and equipment; substances and materials; and artistic and literary works, including academic and scientific publications.

The University and its researchers may decide not make prior disclosure of research, or the findings of research, when this might invalidate any commercial property rights that could result and/or non-disclosure is part of its agreement with research partners. Nonetheless the University upholds the general presumption that any intellectual property discovered or developed using public or charitable funds should be disseminated in order to have a beneficial effect on society at large. Any delay in publication and dissemination pending protection of intellectual property should be kept to a minimum.

The University and researchers will comply with any additional conditions relating to intellectual property required by funding bodies.

The University's **Intellectual Property Rights Policy** (section 5) clearly states when its standard guidance does not apply, for example, waiving of copyright of articles prepared for publication in journals or books.

Researchers should try to anticipate any issues that might arise relating to intellectual property at the earliest opportunity and agree jointly in advance how they might be addressed, communicating any decisions to all members of the research team. This might be stated in a research grant application.

2.11 Finance

The University and its researchers will ensure that the terms and conditions of any grant or contract related to the research are adhered to.

The University's **Procurement Policy** and **Procurement Policy Guidance: List of Exemptions** state the researcher's obligation regarding the purchasing or procurement of materials, equipment or other resources for research. The hiring of staff for research projects is covered by the University's employment policies and procedures, and financial control by the University's financial and expenses policies and procedures.

Researchers will comply with organisational guidelines regarding the use and management of finances relating to research projects. They should co-operate with any monitoring and audit of finances relating to research projects, for example, by RCUK, and report any concerns or irregularities to the appropriate person(s) as soon as they become aware of them.

2.12 Collection and retention of data

The University and its researchers will comply with all legal, ethical, funding body and organisational requirements for the collection, use and storage of data, especially personal data, where particular attention should be paid to the requirements of data protection legislation. They will also maintain confidentiality where undertakings have been made to third parties or to protect intellectual property rights. The University and its researchers will ensure that research data relating to publications is available for discussion with other researchers, through the principle of open access, subject to any existing agreements on confidentiality.

Data must be kept intact for any legally specified period and otherwise for five years at least, subject to any legal, ethical or other requirements, from the end of the project.

The University and its researchers will comply with any subject-specific requirements for the retention of data; for example, certain disciplines, such as health and biomedicine, may require research data to be retained for a considerably longer period.

If research data is to be deleted or destroyed, either because its agreed period of retention has expired or for legal or ethical reasons, it shall be done so in accordance with all legal, ethical, research funder and organisational requirements and with particular concern for confidentiality and security.

Researchers should consider how data will be gathered, analysed and managed, and how and in what form relevant data will eventually be made available to others, in compliance with the University's **Research Data Management Policy**.

2.13 Monitoring and audit

Researchers will co-operate with the monitoring and audit of their research projects by applicable bodies and undertake such when required. They will co-operate with any outcomes of the monitoring and audit of their research projects. If they become aware of a need for monitoring and audit where it is not already scheduled, they will report that need to their Head of School. The University will ensure that researchers charged with carrying out such monitoring and audits have sufficient training, resources and support to fulfil the requirements of the role.

2.14 Peer review

The University considers that peer review is an important part of good practice in the publication and dissemination of research and research findings, the assessment of applications for research grants and in the ethical review of research projects.

The University will encourage researchers to act as peer reviewers for meetings, journals and other publications, grant applications and ethics review of research proposals, and support those who do so. The University recognises the obligations of peer reviewers to be thorough and objective in their work and to maintain confidentiality.

Researchers who carry out peer review will do so to the highest standards of thoroughness and objectivity. They will follow the guidelines for peer review of any organisation for which they carry out such work.

Researchers will maintain confidentiality and not retain or copy any material under review without the express written permission of the organisation which requested the review. They will not make use of research designs or research findings from a paper under review without the express permission of the author(s) and will not allow others to do so. Researchers acting as peer reviewers must declare any relevant conflicts of interest.

While carrying out peer review, researchers may become aware of possible misconduct, such as plagiarism, fabrication or falsification, or have ethical concerns about the design or conduct of the research. In such cases they should inform, in confidence, an appropriate representative of the organisation which requested the review, such as the editor of the relevant journal or chair of the relevant grants or ethics committee.

2.15 Publication and authorship

The University and its researchers accept their duty to publish and disseminate research in a manner that reports the research and all the findings of the research accurately and without selection that could be misleading.

The University will ensure that sponsors and funders of research respect the duty of researchers to publish their research and the findings of their research, do not discourage or suppress appropriate publication or dissemination and do not attempt to influence the presentation or interpretation of findings inappropriately.

Researchers will address issues relating to publication and authorship, especially the roles of all collaborators and contributors, at an early stage of the design of a project, recognising that, subject to legal and ethical requirements, roles and contributions may change during the time span of the research. Decisions on publication and authorship should be agreed jointly and communicated to all members of the research team.

Authorship will be restricted to those contributors and collaborators who have made a significant intellectual or practical contribution to the work, including any students, whether undergraduate or postgraduate. No person who fulfils the criteria for authorship should be excluded from the submitted work. Authorship will not be allocated to honorary or "guest" authors (i.e. those that do not fulfil criteria of authorship). Researchers will be aware that anyone listed as an author of any work should be prepared to take public responsibility for that work and ensure its accuracy, and be able to identify their contribution to it.

Researchers will list the work of all contributors who do not meet the criteria for authorship in an acknowledgements section, including any students, whether undergraduate or postgraduate. All funders and sponsors of research will be clearly acknowledged and any competing interests listed.

Researchers must clearly acknowledge all sources used in their research and seek permission from any individuals if a significant amount of their work has been used in the publication, including that of any students, whether undergraduate or postgraduate.

Researchers must adhere to any conditions set by funding or other bodies regarding the publication of their research and its findings in open access repositories within a set period and in compliance with the University's Open Access Policy.

Researchers will declare any potential or actual conflicts of interest in relation to their research when reporting their findings at meetings or in publications.

Researchers will be aware that submitting research reports to more than one potential publisher at any given time (i.e. duplicate submission) or publishing findings in more than one

publication without disclosure and appropriate acknowledgement of any previous publications (i.e. duplicate publication) is unacceptable.

2.16 Misconduct in research

The University has adopted the UK Research Integrity Office's **Procedure for the Investigation of Misconduct in Research**. UKRIO defines misconduct in research as including, but not limited to:

- a) Fabrication;
- b) Falsification;
- c) Misrepresentation of data and/or interests and/or involvement;
- d) Plagiarism; and
- e) Failures to follow accepted procedures or to exercise due care in carrying out responsibilities for:
 - i) avoiding unreasonable risk or harm to:
 - humans;
 - animals used in research; and
 - the environment; and
 - ii) the proper handling of privileged or private information on individuals collected during the research.

Procedures to investigate allegations of misconduct in research and their thorough and fair investigation in a timely manner are covered for staff in the University's **Code of Practice for Dealing with Allegations of Misconduct in Research** and for students in the **University General Regulations**.

The University's **Code of Practice** and the **General Regulations** identify members of staff who have responsibility for investigating allegations of misconduct in research and whom researchers and external organisations, such as journals, can contact with any concerns about the conduct of research.

The University will make it clear to researchers that any misconduct in research is unacceptable and will be reported; that researchers who are found to have committed misconduct in research will be subject to disciplinary proceedings and that where researchers are members of a regulated profession, cases of serious misconduct in research will be referred to the body regulating their profession. The University will also ensure that researchers who are found not to have committed misconduct will be supported, and appropriate steps taken, to restore their reputation and that of any relevant research project(s).

The University will support those who raise concerns about the conduct of research in good faith and not penalise them. This support will be in accordance with the University's **Public Interest Disclosure (Whistle-Blowing) Policy**.

Researchers will know what constitutes misconduct in research and report any suspected misconduct through the relevant procedure of the University as soon as they become aware of it. They will recognise that good practice in research includes reporting concerns about the conduct of research and will co-operate with any investigation of misconduct in research when requested. Researchers will work with the University to support those who raise concerns, in good faith, about the conduct of research and those who have been exonerated of suspected misconduct.