

Research with Integrity: Guidance for students

The College expects all students undertaking a research project, however short, to recognise that it is their responsibility to conduct the research with rigour and integrity and to the highest possible ethical standards.

The core elements of research integrity are honesty, rigour, transparency, open communication and care and respect for all participants in, and subjects of, the research. You should be aware of, and comply with, all College policies, with ethical and legal requirements and any other guidelines that apply to your work. Moreover, if you are carrying out research in a country outside the UK, or collaborating with researchers who are, you must additionally be mindful of, and comply with, the legal and ethical requirements of those other countries. *Note that if you are planning to undertake any research outside the College, whether it is to be conducted in the UK or in another country or countries, with the help of your supervisor you must carry out the appropriate risk analysis. You should also seek reassurance from your supervisor that both you and the work that you plan to do will be covered by insurance and that all the necessary permissions are in place.*

Planning and carrying out your research

When designing a research project (or a study or studies within a project) you should be quite clear that the proposed research addresses pertinent question(s) and is designed either to generate new knowledge, add to existing knowledge or to develop a novel method(s) to enable a particular topic to be researched further. The study design must be appropriate for the question(s) being asked and should as far as is reasonably possible, take into account potential sources of bias. The design and conduct of a study should have been carefully thought through before embarking on any data collection; this includes consideration of how data will be collected, stored, managed, analysed and the results made available to others.

You should ensure that you have the appropriate skills and expertise to carry out the planned work and where you do not, it can be provided through help from your supervisor, another member of their research group or through collaboration with another researcher. You should not embark on a study if there are insufficient resources to carry out the proposed plan of work. *Note that you should expect to receive appropriate training before using a facility, laboratory, piece of equipment or carrying out a specific protocol. If you are asked to take responsibility for others it is up to your supervisor, not you, to make sure that they too have received the appropriate training, except when you have been asked to deliver that training. If you think that they have not received adequate training, you should inform your supervisor and should not accept responsibility for them until this has been rectified.*

Ethical approval

The dignity, rights, safety and well-being of participants must be the primary consideration in any research study that involves humans or animals and should only be initiated and continued if the anticipated benefits justify their use. Research involving vulnerable groups of individuals, or that which does not involve full disclosure to participants, requires particular care and attention.

Before starting any research that involves the use of humans or animals, you must ensure that you or your supervisor have obtained approval for the planned study(ies) from the relevant Ethical Committee(s) and if the work is to be carried out under the Animals (Scientific Procedures) Act 1986, that there is a Home Office approved project licence in place. In addition, if you are to carry out procedures on animals yourself, you must be in possession of a personal licence that allows you to perform the techniques you are intending to use and that you have been assessed as competent to carry out those procedures.

You should also be mindful of, and ensure that you comply with, any legal, ethical or other guidelines on research involving human participants, human material or personal data.

In all instances, you and your supervisor must abide by the decision of the Ethical Committee and incorporate any recommended amendments arising from the ethical review process into your protocols. If subsequently any modification to an approved protocol or procedure is found to be necessary, you must find out from your supervisor whether further ethical review/amendment of the

project or your personal licence is required as a consequence and not embark on any studies until ethical permission has been granted or the licence(s) amended by the Home Office.

Informed consent

When carrying out research involving human or animal participants in which informed consent is required from an individual or the owner or keeper of an animal, you must satisfy yourself that this has been obtained through the provision of sufficient accurate information given in an appropriate form. This will normally involve a written consent form which must be kept until after the work has been completed. Storage of information in an electronic form must comply with the requirements of the Data Protection Act.

You must inform research participants (or the owners/keepers of animals) that data collected during the course of the research may be disseminated, albeit not in a way that is attributable to an individual (unless this has been specifically agreed), and the form that it might take. This includes (but is not limited to) internal {RVC} reports and presentations, verbal or poster presentations at scientific or clinical meetings, and publications in peer-reviewed and other literature. You must be aware of, and adhere to any limitations to data dissemination imposed by legislation or any relevant bodies, ethical, regulatory or otherwise, and to by contractual obligations with funders or non-academic partners.

If at any time you become concerned that an animal(s) involved in your research is/are being subjected to what you believe is unreasonable risk or harm, you *must* report your concerns immediately to your supervisor, the head of the RVC BSU, or to the named animal care worker and/or the named veterinary surgeon.

Data collection and storage

You should collect and record data accurately, efficiently and according to the agreed design of the research project. You must also ensure that it is stored in a secure and accessible form that conforms to the College's policy on good research practice.

You must comply with all legal, ethical, funding body and College requirements for the collection, use and storage of data, especially personal data, where particular attention should be paid to the requirements of the Data Protection Act. *Data should be kept intact for any legally specified period and otherwise for ten years at least, subject to any legal, ethical or other requirements, from the end of the project. It should be kept in a form that would enable retrieval by a third party, subject to limitations imposed by legislation and general principles of confidentiality. 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 should be done so in accordance with all legal, ethical, research funder and organisational requirements and with particular concern for confidentiality and security.*

Conflict of interest

A conflict of interest, whether it involves personal or institutional considerations (including but not limited to financial matters), can inappropriately affect research. You should *always* declare any conflict(s) of interest in order that the severity can be assessed and providing it is feasible to do so, a means of addressing it identified (such as through declarations and or other safeguards) in order to avoid poor practice in research or even potential misconduct. You must agree to abide by any direction given by your supervisor, the College, or Ethics Committee in relation to such conflicts of interest.

Intellectual property and confidentiality

You will be asked to assign any intellectual property rights arising from your studies to the College unless you are a student based at a partner research institute or there is a contractual agreement in place with a funder or non-academic partner which takes precedence. It is College policy that research students have the same rights to benefit financially from intellectual property as members of academic, research and clinical staff (for further details see RVC IP and incentive policy). You must always maintain confidentiality when undertakings have been made to third parties or to protect intellectual property rights.

Publication and authorship

You have a duty to publish the findings of your research whenever possible, particularly research involving human or animal subjects or patients, and to do so in a manner that reports the research and all the findings accurately and without selection that could be misleading.

You should ensure that all the research data to be included in a publication is available for discussion with other researchers, subject to any existing agreements on confidentiality.

Authorship should be restricted to those contributors and collaborators who have made a significant intellectual or practical contribution to the work. No person who fulfils the criteria for authorship should be excluded from the submitted work. Authorship should not be allocated to honorary or “guest” authors (i.e. those that do not fulfil criteria of authorship). 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.

You should consider issues relating to publication and authorship, especially the roles of collaborators and contributors, at an early stage, 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 concerned.

You should list the work of all contributors who do not meet the criteria for authorship in an acknowledgements section. All funders and sponsors of the described work, and {where applicable} the external organisation(s) funding your PhD studentship, should also be clearly acknowledged and any competing interests listed.

You must clearly acknowledge all sources used in the research and seek permission from any individuals if a significant amount of their work has been used in the publication. You must adhere to any conditions set by the organisation(s) funding your PhD and the described work {and any other relevant bodies} regarding the publication of your research and its findings in open access repositories within a set period.

You should always declare any potential or actual conflicts of interest in relation to your research in publications or when reporting your findings at meetings.

You should be aware that submitting a research report 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 completely unacceptable.

If you are being discouraged from publishing and disseminating your research or its findings, or subjected to attempts to influence the presentation or interpretation of findings inappropriately, you must report this to the Vice Principal for Research & Innovation so that the matter can be investigated.

Research Misconduct

“Research misconduct is characterised as behaviour or actions that fall short of the standards of ethics, research and scholarship required to ensure that the integrity of research is upheld. It is a problem because it can cause harm (for example to patients, the public and the environment), damages the credibility of research, undermines the research record, and wastes resources”. *From The Concordat to support research integrity; Universities UK, 2012*

You should be aware of the College’s policy on misconduct in research. Misconduct includes (but is not limited to): fabrication; falsification; misrepresentation of data and/or interests and/or involvement; piracy (deliberate exploitation of the ideas of others without their consent); plagiarism and failure to follow accepted procedures or to exercise due care in carrying out your responsibilities for:

- i) avoiding unreasonable risk or harm to animals or humans used in research and the environment
- ii) the proper handling of privileged or private information on individuals collected during the research.

If you suspect that there may have been research misconduct, you must report the matter following the appropriate College procedure as soon as you become aware of it (see below). You should recognise that good practice in research includes reporting concerns about the conduct of research and you should be prepared to co-operate with any investigation of misconduct in research when requested to do so. You should work with the College to support those who raise concerns in good faith about the conduct of research as well as those who have been exonerated of suspected research misconduct.

Peer review

If you are invited to review a manuscript or a grant application, or are asked to comment on an application to the College's Ethical Committee or for a Home Office project licence, you should do so to the highest standards of thoroughness and objectivity. You must maintain confidentiality and not retain or copy any material that you are reviewing without the express written permission of the journal, organisation or individual that requested the review. You should not make use of study designs, methods or findings from the document under review without the express permission of the author(s) and should not allow others to do so. You must always declare any relevant conflicts of interest before undertaking a review.

If while carrying out a review you become aware of possible misconduct, such as plagiarism, fabrication or falsification, or have ethical concerns about the design or conduct of the research, you should inform, in confidence, an appropriate representative of the organisation which requested the review. This includes (but is not limited to) a journal editor, the chairman of a grants or the chairman of an Ethics Committee.

College Policies:

Good Research Practice

<http://intranet.rvc.ac.uk/DeptResearch/Docs/RVCGoodPracticeinResearchVersion03.pdf>

Procedures for dealing with research misconduct

<http://intranet.rvc.ac.uk/DeptResearch/Misconduct.cfm>

Policies and procedures on public disclosure (otherwise known as whistle blowing)

<http://www.rvc.ac.uk/Media/Default/About/Governance,%20Policy%20and%20Legal/Policy%20and%20Legal/PublicInterestDisclosurePolicyandProcedures.pdf>

RVC IP and incentive policy

<http://intranet.rvc.ac.uk/RVCEnterprise/Index.cfm>

RVC guide to intellectual property and commercialisation

<http://intranet.rvc.ac.uk/RVCEnterprise/Index.cfm>

Further reading:

The Concordat to support research integrity; Universities UK, 2012

<http://www.universitiesuk.ac.uk/highereducation/Documents/2012/TheConcordatToSupportResearchIntegrity.pdf>

Guidelines on promoting good practice and preventing misconduct; UK Research Integrity Office, 2009.

<http://www.ukrio.org/wp-content/uploads/UKRIO-Code-of-Practice-for-Research.pdf>

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