



Guidelines on Good Research Practice

RCSI is strongly supportive of research and does its utmost to ensure the existence of a healthy and vigorous research climate in which all members of research teams are encouraged to develop their skills. The College demands the highest standards of integrity and rigour from its researchers and endeavours to promote a culture in which these standards are followed. The College has therefore drawn up this set of 'Guidelines on Good Research Practice', as well as a separate 'Statement on the Handling of Allegations of Research Misconduct' outlining procedure for the investigation of allegations of research misconduct. The headings in this document are based on the Wellcome Trust draft guidelines relating to research which it funds, http://www.wellcome.ac.uk/doc_WTD002753.html

Many other documents have been consulted in drawing up these guidelines particularly the following:

- *Making Knowledge Work for Health* produced by the Department of Health & Children, Ireland, <http://www.doh.ie/pdfdocs/mkwfh.pdf>
- *Research: The Role and Responsibilities of Doctors* produced by the General Medical Council, UK <http://www.gmc-uk.org/guidance/current/library/research.asp>
- *World Medical Association Declaration of Helsinki : Ethical Principles for Medical Research Involving Human Subjects* <http://www.wma.net/e/policy/b3.htm>
- *Statement and Guidelines on Research Practice* produced by the National Health and Medical Research Council, Australia, <http://www.nhmrc.gov.au/funding/policy/researchprac.htm>

1. Integrity

RCSI requires that its researchers should apply the highest standards of honesty to all aspects of their own research including application for funding, experimental design, the generation and analysis of data, the publication of results, the acknowledgment of input, both direct and indirect, of others and the declaration of conflicts of interest. These standards must also be applied to their dealings with other researchers and their work.

Plagiarism, deception or the fabrication or falsification of results will be regarded as a serious offence and will be disciplined accordingly. Researchers have a duty to report cases of suspected misconduct without fear of recrimination and to do so in a responsible way. Such a report should be to the person's supervisor or to the Head of Department or to the Head of the School of Postgraduate Studies or to a more senior colleague who is in a position to and who is willing to ensure that the allegations are channelled in the appropriate direction for thorough investigation. Reports will be treated in the strictest confidence, will be dealt with in a thorough and serious manner and, if sustained, will lead to appropriate disciplinary action.

2. Openness and Dissemination of Results

In the interests of promoting knowledge acquired through research, the College encourages its researchers to be as open as possible in discussing their work with other researchers, both inside and outside the Institution, and with the public whilst at the same time recognising the need for scientists to protect their own research interests. Senior researchers will endeavour to ensure the existence of a research climate of mutual cooperation with an open exchange of ideas. An example of the approach to openness in RCSI is the Annual Research Day, which has existed since the early 1980s and is now a fixed event in the College calendar, at which researchers throughout the College present their most recent findings. This is a significant event with awards for best presentations in various categories and a distinguished guest lecture (occasionally by a Nobel Laureate) as a key feature. The meeting is open to the public and usually gets press coverage. The College also facilitates its researchers to attend and present at national and international conferences by way of postgraduate student bursaries, administered by the Research Committee, and conference allowances for College staff administered by the Finance Department.

Once published, the College expects researchers to make results, relevant data and materials available to other researchers on request, subject to compliance with ethical and consent issues as well as intellectual property rights.

The College expects the highest standard of publications from its researchers. It expects its researchers to publish their results within a reasonable period of time, to do so in the best possible journals and to avoid unnecessary fragmentation of material for the sake of multiple publications. However, where intellectual property protection may be an issue, the College respects the need for reasonable delay in publication although this should be kept to a minimum.

3. Legal Requirements, Research Standards

The College requires that its researchers be aware, as far as can be expected, of the legal requirements regulating their work. It also expects its researchers to be aware of and to observe the standards of research practice set out in guidelines published by scientific and learned societies, and other relevant professional bodies.

4. Supervision and Training

The College endeavours to ensure that the supervision of researchers meets the highest standards. It stresses the need for supervision of all stages of the research process from the initial project design and application for funding, through the supervision of the research work to the final publication outcome. Supervisors are required to check the research records/reports of their researchers on a regular basis.

Researchers being supervised by newly appointed academic staff are also assigned a senior co-supervisor, the responsibility for this resting with the RCSI Research Committee through the relevant Head of Department, see *Royal College of Surgeons in Ireland, Postgraduate Research Student Guide, Higher Degrees by Research, 2006 – 2007 section 4(i)*. Other situations, of course, also warrant co-supervision, e.g. where the research topic covers more than one discipline (in RCSI there are several examples where one supervisor is a clinician and the other a scientist).

RCSI offers training courses in supervisory skills facilitated by international experts in the area. Supervisors of RCSI research students are made aware of their general responsibilities in the booklet, *Royal College of Surgeons in Ireland, Postgraduate Research Student Guide, Higher Degrees by Research, 2006 – 2007*, which is updated annually. This provides general direction on matters such as frequency of contact, progress monitoring, and the broader developmental needs of postgraduate researchers. Supervisors are also referred to the UK

National Postgraduate Committee's *Guidelines for Codes of Practice for Postgraduate Research*, which deals with responsibilities of the supervisor,
<http://www.npc.org.uk/page/1003801720>

The School of Postgraduate Studies organises an annual induction day for new researchers dealing with matters relating to best research practice such as health and safety, research design, regulatory and ethics approvals and consents, the use of equipment, sourcing of information, data management, record keeping and intellectual property rights. Heads of Department are required to ensure that all new researchers within their departments receive specific training relevant to the research being undertaken.

5. Maintaining records, storage and disposal of data

As a matter of good research practice and also to facilitate proper investigation should questions later arise regarding the conduct of the research or the results obtained, the College requires its researchers to keep clear and accurate research records to include procedures followed and approvals granted, interim results and the final research outcomes. The College requires that data generated in the course of research should be kept securely either in paper or electronic format (with back-up records in the latter case), as appropriate for a minimum period of ten years. Data generated during the tenure of a research grant are the property of the College, the grant holder and the department concerned. On joining RCSI, researchers are required to sign a declaration to the effect that they will leave the research supervisor all experimental records, laboratory notebooks, reprints, etc. on leaving the College. It is the responsibility of the supervisor to ensure that this is executed. Should a research supervisor leave the College e.g. for employment elsewhere s/he is obliged to retain the research records for the ten year period and make them available for RCSI scrutiny in the event of investigations of malpractice.

6. Ethical practice

Research involving human participants

Prior to the commencement of research involving human participants or biological samples, approval from the RCSI Research Ethics Committee or an equivalent hospital or Health Board Research Ethics Committee is required. This approval is only given following a satisfactory objective ethical review. The Committee will also advise on other regulatory bodies from whom approval is required should this be necessary. The Committee requires that researchers should ensure the confidentiality of personal information relating to participants in research, and that the research fulfils any relevant legal requirements such as those of the Data Protection Act 1998.

The RCSI Biosafety Sub-committee (a sub-committee of the RCSI Research Committee) was established in June 2001 with responsibility for monitoring research involving genetically modified organisms according to EU regulations as set out by the Environmental Protection Agency. All recombinant DNA research carried out in RCSI must be notified to the Biosafety Sub-committee.

Research involving animals

Research involving animals must have prior approval of the RCSI Research Ethics Committee and the RCSI Biomedical Research Facility Committee and will require a license from the Department of Health & Children for the investigator and the project. The Biomedical Research Facility Committee closely monitors the use and maintenance of the facility. The College emphasises to its researchers their obligation to reduce and refine animal experiments to the minimum level possible and of the necessity of replacing these at every opportunity. The College does not permit research involving animals if another means of reaching the same research outcome is available.

7. Publication practice

The College expects its researchers to publish their results in refereed journals of the highest standard (see 2. above).

All authors listed on a paper must be familiar with its content, must be able to identify and take responsibility for their contribution to it and must be able to justify their inclusion as authors. The practice of honorary or guest authorship is totally unacceptable. The acquisition of funding alone or the provision of laboratory or other facilities alone or the collection of data does not justify authorship, nor does general supervision of a research group. The contributions of collaborators and others who directly assist or indirectly support the research, including funding agencies, should be properly acknowledged.

It is imperative that researchers are given due credit for their work and are included as authors (and in the proper positions in the order of authors) in publications when this is warranted. If a researcher feels that s/he has been unfairly treated regarding authorship of a publication s/he should inform the Head of School of Postgraduate Studies whose responsibility it is to investigate the matter fully and to make every effort to come to a satisfactory agreement with the parties involved. If this cannot be achieved the issue will be investigated by a Committee comprising the Chairperson of the RCSI Postgraduate Students' Association or the Chairperson of the RCSI Academic Staff Association as appropriate, the Dean of the Medical Faculty and the Head of School of Postgraduate Studies. Although the aggrieved researcher has every right to complain to the editor of the journal in which the article has appeared an internal resolution according to the above procedures is preferred.

The College strongly encourages its researchers to follow the requirements for authorship as set out in the Vancouver Protocol (see, International Committee of Medical Journal Editors (1997): Uniform Requirements for Manuscripts submitted to Biomedical Journals, *Ann Intern Med.* 126:36-47; *JAMA* 1997; 277:927-34. Updated February 2006 <http://www.icmje.org/>

8. Status of this Document

The original of this document was given the status of an official RCSI document in 2002 following discussion and approval by the RCSI Research Committee (9 September 2002) and the RCSI Faculty Board followed by Council, RCSI (September 2002) for final approval. The document will be updated periodically.

9. References

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