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| Policy Name: | Policy on the Responsible Conduct of Research ¹ |
| Originating/Responsible Department: | Office of the Vice-President (Research and International) |
| Approval Authority: | Vice-Presidents Academic and Research Committee |
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| Contact: | Associate Vice-President (Strategic Initiatives and Operations) |

PREAMBLE

Researchers enjoy important freedoms and privileges, which include freedom of inquiry and the right to disseminate the results thereof, freedom to challenge conventional thought, freedom from institutional censorship, and the privilege of conducting research with human participants, with public monies, trust, and support. Along with these freedoms there are the responsibilities to ensure that research meets high scientific and ethical standards, is honest and thoughtful inquiry, involves rigorous analysis, and the application of professional standards.

Compliance with these standards and responsibilities throughout the University community are advanced by the ongoing education of the members of its community in matters of research integrity and by adopting and following appropriate policies within which research and scholarship should be conducted, policies that all major funding agencies require universities to have in place.

PURPOSE

The purpose of the ethical and regulatory standards embodied in this policy is not to limit research activities, but to promote and facilitate the conduct of all research in ways that respect the dignity and preserve the well-being of the researcher, research participants, animals, and the environment. We also strive, through the implementation of this document to adhere to the highest standards of compliance as articulated by national and international funding agencies.

1. DEFINITIONS

For the purposes of this Policy:

- 1.1 “Agency” means the funding agency, foundation, organization, sponsor or other Person, public or private, international, national, provincial or foreign, supporting in whole or in part any Research, or which has oversight of any Research.
- 1.2 “Agreements” includes all international project agreements, licensing agreements, research agreements, research contracts, research grant agreements, service agreements, shareholder agreements, clinical trial agreements, confidentiality agreements, material transfer agreements, partnership program agreements, collaborative research

development agreements, inter-institutional research agreements and industrial research chair agreements and any document accessory to such agreements.

- 1.3** “Chair” means the chair or director of a department or school and includes the chairs of all such units within which a researcher undertakes research.
- 1.4** “Data” includes all information or records of any sort related to the application for, performance of, data obtained from, conclusions and outcomes reached in the research in question including but not limited to formulae, discoveries, inventions, raw numbers, algorithms, products, compositions, processes, protocols, methods, tests, patterns, interviews, transcripts, surveys, publications and reports.
- 1.5** “Dean” includes the University Librarian and the deans of all faculties within which a researcher undertakes research.
- 1.6** “Hazardous Research” includes but is not limited to any research that involves hazardous materials which pose a significant physical or health hazard to individuals or facilities, any research which involves significant hazardous procedures or activities; any research that occurs in hazardous environments.
- 1.7** “Plagiarism” means the appropriation of another person’s ideas, processes, results or words without giving appropriate credit. Of growing concern is the act of ‘self-plagiarism which occurs when an author publishes a paper with passages or paragraphs that the same author has previously published, but without attribution.
- 1.8** “Regulatory Framework” includes federal, provincial and municipal laws, the regulations, policies and guidelines of the university and of agencies relating to the conduct of research, as they may exist from time to time. <https://research.carleton.ca/about/>
- 1.9** “Research” includes all forms of funded and unfunded scholarly, scientific and related activities based on intellectual investigation aimed at discovering, interpreting, revising, disseminating or publishing knowledge, whether conducted on campus or off campus.
- 1.10** “Research Misconduct” includes, but is not limited to the definitions of the funding agencies for such misconduct, for example: fabrication, falsification, unlawful destruction of research records, plagiarism, redundant publications, invalid authorship, inadequate acknowledgement, mismanagement of Conflict of Interest: or any other conduct that constitutes a significant departure from the ethical and other standards that are commonly accepted within the relevant research community for proposing, performing, reporting or reviewing research or treating human and animal research subjects, but does not include honest errors or differences of interpretation or judgment relating to data or results that are reasonable in light of the circumstances in which they are made or reached.
- 1.11** “Researcher” means any Carleton faculty member, emeritus faculty, staff, student, adjunct scholar, fellow and chair, paid and unpaid research associates and assistants, and any person in a like position, who conducts or advances research in that capacity, or (b) who accesses university students or staff as human research participants; (c) any other person who conducts or advances research as connected with the university; and (d) any person

who conducts research using university resources (whether research space, materials, equipment, or human resources).

2. SCOPE

This Policy applies to all research conducted at or under the auspices of the university, or elsewhere by a researcher in his or her capacity as affiliated with the university.

3. ROLES and RESPONSIBILITIES

3.1 The primary responsibility for the conduct of research shall rest with the researcher and to this end he or she shall:

- (i) maintain the highest standards of honesty, integrity and ethical behaviour in all research;
- (ii) familiarize himself or herself with and abide by the Regulatory Framework within which his or her research must be conducted;
- (iii) not misrepresent his or her academic, professional or employment credentials or experience;
- (iv) obtain all necessary approvals including, but not limited to, specific licenses and permits, ethics approvals, protocol and standard operating procedure approvals, before embarking on any research and as may be necessary while engaged in research;
- (v) use a high level of rigour in proposing and performing research; in recording, analyzing, and interpreting data; and in reporting and publishing data and findings;
- (vi) keep complete and accurate records of data, methodologies and findings, including graphs and images, in accordance with the applicable funding agreement, institutional policies and/or laws, regulations, and professional or disciplinary standards in a manner that will allow verification or replication of the work by others;
- (vii) reference and, where applicable, obtain permission for the use of all published and unpublished work, including data, source material, methodologies, findings, graphs and images;
- (viii) include as authors, with their consent, all those and only those who have materially or conceptually contributed to, and share responsibility for, the contents of the publication or document, in a manner consistent with their respective contributions, disciplinary norms, and authorship policies of relevant publications;
- (ix) acknowledge, in addition to authors, all contributors and contributions to research, including writers, funders and sponsors;
- (x) appropriately manage any real, potential or perceived conflict of interests in accordance with Carleton's policy on Conflict of Interest in Research.

3.2 Subject to any pre-existing, multi-centered project constraints, in the case of collaborative or team research, the principal investigator shall take reasonable measures to ensure that the members of the research group or team to whom this policy applies are aware of and comply with this policy and the Regulatory Framework relevant to the research being undertaken.

3.3 In the case of research conducted by a student for academic credit or a postdoctoral fellow, the student's or postdoctoral fellow's official supervisor shall take reasonable measures to:

- (i) inform the student or postdoctoral fellow of his or her obligations in respect of academic integrity (found at: <https://carleton.ca/registrar/academic-integrity/>) and the

- ethical conduct of research;
 - (ii) ensure that the student or postdoctoral fellow receives a copy of all project related documents which he or she has been asked to sign and a copy of all modifications or revisions to such documents;
 - (iii) ensure that the student or postdoctoral fellow is aware of the Regulatory Framework relevant to his or her particular research;
 - (iv) disclose to the student or postdoctoral fellow any special conditions concerning such matters as constraints on publication, limitations on future use of data, and ownership of intellectual property that may influence a student's or postdoctoral fellow's decision to participate in the research.
- 3.4** A researcher shall ensure that publications do not misrepresent data or images and that the nature and purpose of any image manipulation is explained.
- 3.5** Results of all research undertaken in the university shall be fully publishable at the discretion of the principal investigator, subject only to qualifications listed in these procedures.
- 3.6** A researcher who is a student or postdoctoral fellow shall not submit a manuscript for publication or release any data to any person without having first advised his or her collaborators of his or her intentions and, where appropriate, obtained the supervisor's approval.
- 3.7** A researcher shall acknowledge his or her affiliation with the university in all publications resulting from research undertaken while a member of the university community. A researcher who is no longer a member of the university community shall cease to indicate in publications, other than those resulting from research performed while a member of the university community, his or her affiliation with the university.
- 3.8** A researcher who engages in private research activities for persons external to the university shall comply with the university policy governing conflicts of interest, and conflicts of commitment and consulting activities.
- 4. RESEARCH DATA**
- 4.1** A researcher shall collect data concerning human and animal subjects in accordance with the Regulatory Framework governing the use of such subjects, and shall organize his or her data in a manner that accurately reflects, and allows for verification by third parties.
- 4.2** A researcher shall respect the laws governing access to personal information and privacy in his or her collection and use of data.
- 4.3** In some circumstances, a researcher may engage in research in which access to certain kinds of data, in the custody of a government or other person, is restricted in order to protect the privacy of persons. Subject to Articles 4.3.1 and 10, this is permissible provided that any delay in publication does not exceed one year. Further delays would be subject to written approval of the Vice-President (Research and International).
- 4.3.1** A request by a third party for a delay in publication of research undertaken by a graduate student for his or her thesis, or a postdoctoral fellow that exceeds one year shall be

agreed to only in exceptional cases and shall require both:

- (i) written consent of the student or postdoctoral fellow; and
- (ii) written approval of the Vice-President (Research and International) (for postdoctoral fellows) or the Dean of Graduate and Postdoctoral Affairs (for graduate students).

4.4 A researcher shall not knowingly use or publish data known to be false or of unknown provenance.

4.5 ***Retention of Research Data***

4.5.1 A researcher shall retain all data that would be required to allow third parties to validate the results or audit the findings for at least the greater of the following periods:

- (i) the period specified by the agency supporting the research; or
- (ii) the period recognized as “best practice” by the researcher’s discipline for the type of research at issue; or
- (iii) a period of seven (7) years from publication of the data.

4.5.2 Data shall be retained by the researcher or the department or research unit in which they were generated as appropriate.

4.5.3 A researcher who retires from the university shall leave a copy of his or her original published data with the department or research unit where the data was generated unless alternative written arrangements are made with his or her Chair. Data retention is to be consistent with article 4.5.1.

4.5.4 A researcher who is the principal investigator and who resigns from the university shall leave a copy of any published data with the department or unit where the data was generated unless alternative written arrangements are made with his or her Chair. Data retention is to be consistent with article 4.5.1.

4.6 ***Access to Research Data***

4.6.1 Subject to exceptions based on a duty of confidentiality and the laws respecting intellectual property and access to information, a researcher shall make his or her data available after publication to a person presenting a reasonable and legitimate written request to examine the data.

4.6.2 In cases where there is a disagreement over access to data between the researcher and the person requesting the data, the disagreement shall be referred for resolution

- (i) first to the Chair;
- (ii) then, if necessary, to the Dean; and
- (iii) finally, if necessary, to the Office of the Vice-President (Research and International).

4.7 ***Ownership of Research Data***

4.7.1 Research collaborators, at the commencement of their collaboration, shall make reasonable efforts to reach agreement preferably in writing on the ownership and future use of data.

4.7.2 In the absence of an agreement between research collaborators, the ownership and future use of the data shall be governed by university policies and the laws relating to intellectual property.

4.7.3 In the event that a dispute should arise between research collaborators concerning the ownership and future use of the data the university shall assist in facilitating the resolution of dispute in accordance with section 6.4.

5. USE OF OTHERS' WORK

5.1 A researcher shall not engage in plagiarism.

5.2 A researcher shall not use the unpublished work or data of another, whether with or without proper attribution, without the prior preferably written permission of the author.

5.3 A researcher shall not use new information, concepts or data obtained through access to confidential information or documents including material obtained by him or her as part of processes such as peer review without the prior written permission of the author.

5.4 A researcher shall not enter into, or participate in, any arrangement whereby an agency or other person may have exclusive use of, or access to, the data of a research collaborator, whether with or without proper attribution, without the research collaborator's prior written informed consent.

5.5 A researcher shall use archival material in accordance with the rules of the archival source.

6. COLLABORATIVE RESEARCH

6.1 AUTHORSHIP

6.1.1 A researcher shall recognize the substantive contributions of all research collaborators including students and postdoctoral fellows.

6.1.2 A researcher shall ensure that where a co-authored publication is based primarily on the work of a student, including a dissertation or thesis, or a postdoctoral fellow, the student or postdoctoral fellow is granted due prominence in the list of co-authors in accordance with the established practices of the discipline.

6.1.3 A researcher shall ensure that authorship of published work:

- (i) includes all those who have materially contributed to, and share responsibility and accountability for, the contents of the published work;
- (ii) includes only those who have materially contributed to, and share responsibility and accountability for, the contents of the published work.

6.1.4 In the absence of an agreement between research collaborators, the following rules shall govern the order of attribution of authorship:

- (i) authorship shall be attributed to all those researchers who have made significant scholarly contributions to the work and who share responsibility and accountability for the results;
- (ii) attribution of authorship shall be determined according to:
 - (a) the quality and quantity of a researcher's contribution;
 - (b) the extent of a researcher's responsibility and accountability for the results; and
 - (c) the customs of the discipline;

6.1.5 A person who provides only administrative and/or managerial services to a collaborative

research endeavour shall not normally qualify for co-authorship.

6.2 RESPONSIBILITIES OF CORRESPONDING AUTHOR

6.2.1 In the absence of an agreement between research collaborators, the co-author(s) who accepts responsibility for submitting a manuscript for publication shall be the corresponding author(s).

6.2.2 Prior to the submission of a manuscript for publication, the corresponding author shall:

- (i) ensure all persons who are entitled to co-authorship are included as co-authors;
- (ii) make a reasonable attempt to obtain the consent of the co-authors to the order of attribution of authorship;
- (iii) ensure that persons who have made useful contributions to the research which do not qualify them for co-authorship, are appropriately acknowledged in accordance with the standards of the discipline and the publisher;
- (iv) provide each co-author an opportunity to comment on the manuscript prior to its submission for publication; and
- (v) provide each co-author with a copy of the manuscript submitted for publication.

6.3 OWNERSHIP OF INTELLECTUAL PROPERTY

6.3.1 Research collaborators shall endeavour to reach an agreement, consistent with the goals established in the *Collective Agreement negotiated between Carleton University and the Carleton University Academic Staff Association* concerning the allocation of copyright.

6.3.2 In the absence of agreement between research collaborators, the allocation of copyright shall be governed by the laws relating to intellectual property.

6.4 DISPUTES RESOLUTION IN COLLABORATIVE RESEARCH

6.4.1 The university shall assist in facilitating the resolution of disputes between research collaborators (“the disputants”), in accordance with section 6.4. The university, however, has no obligation to ensure that such disputes are resolved.

6.4.2 Disputants shall first seek to resolve their dispute amicably between themselves as facilitated by the principal investigator if he or she is not a party to the dispute.

6.4.3 In the event that an amicable resolution of the dispute is not or cannot be achieved in accordance with section 6.4.2, the disputants shall refer the dispute to the Chair or the Dean of the faculty, if it is one without departments, who shall attempt to resolve the dispute. The Chair or Dean, as the case may be, may appoint a senior member of the academic staff of the department or faculty acceptable to the disputants to act in his or her stead.

6.4.4 In the event that the dispute is not resolved in accordance with section 6.4.3, the disputants shall seek the assistance of the Vice-President (Research and International) in achieving a resolution. The Vice-President (Research and International) may appoint a senior member of the university staff acceptable to the disputants to act in his or her stead.

6.4.5 The Vice-President (Research and International), or appointee, may assist the disputants in selecting an internal or external mechanism, including conciliation, mediation or binding

or non-binding arbitration, for the resolution of their dispute on the understanding that their involvement in any of these processes is without prejudice to the disputants' rights in any subsequent internal or external process.

6.4.6 Notwithstanding section 6.4.5, in the event that a resolution acceptable to the disputants is reached:

- (i) it shall be acknowledged by them in writing and in sufficient detail to allow for its implementation; and
- (ii) it shall be deemed to be final and the disputants thereby waive any further internal and external recourse based on the facts having given rise to the dispute.

6.4.7 Sections 6.4.1 through 6.4.6 do not apply to disputes that may arise because of alleged research misconduct or disagreement as to the ownership of intellectual property rights which disputes shall be resolved respectively in accordance with:

- (i) the *Academic and Research Misconduct Policy*
- (ii) relevant legislation on Intellectual Property
- (iii) The Carleton University Academic Staff Association Agreement

7. RESEARCH FUNDS

7.1 A researcher shall ensure that all research funds administered by him or her, or through delegation to staff, will be in compliance with the general terms and conditions governing agreements and any terms and conditions specific to each grant or granting program, contract or contribution agreement established by the Agency.

7.2 A researcher shall effectively manage the finances of the research project complying with relevant Institutional policies and program guidelines.

7.3 Over expenditures on research funds are generally not permitted unless approved in advance by a Chair or Dean. A researcher shall make up the over-expenditure in the event that, due to their actions, the expenditure of a research project exceeds the value of the funding award.

7.4 A researcher, and those with oversight of funds and their use, shall comply with the Regulatory framework relating to the management and disbursement of funds and reimbursements for expenses.

7.5 A researcher shall inform Carleton University and the relevant agency as appropriate, of changes in (i) eligibility status (ii) if the nature of the research has changed such that it may have an impact on the certification or approval for research involving humans, animals or biohazards, environmental assessments, financial reporting and other related policies

7.6 A researcher shall acknowledge, in all published works resulting from his or her research, all agencies and other public and private funding sources which supported his or her research. A researcher shall adhere to any agreement between the university and a research sponsor who has legitimately and in good faith requested anonymity.

8. RESEARCH INVOLVING HUMAN PARTICIPANTS (REFER TO SECTION 1.8)

8.1 ALL RESEARCH THAT INVOLVES HUMAN SUBJECTS AS PARTICIPANTS (as defined in the Tri-

Council Policy Statement: Ethical Conduct for Research Involving Humans”) must be reviewed and approved by a University research ethics board (REB), before the research begins.

- 8.1.1** A researcher conducting research involving human participants shall:
- (i) conduct such research in accordance with the highest ethical standards;
 - (ii) respect the legal and moral rights of the persons who are the subjects of the research; and
 - (iii) comply with the Regulatory Framework governing such research including the *Policy on the Ethical Conduct of Research Involving Humans*.
- 8.2** A researcher shall not engage in self-experimentation involving any element above minimal risk to the researcher without the prior approval of an REB whether the researcher is the sole or one of the human subject participants. Self-experimentation, which involves any risks at a level above “minimal risk”, must have prior approval of an REB. Self-experimentation which involves minimal risk or less is permissible without REB approval if it is for purposes of quality control of research apparatus or methods.
- 8.3** A researcher shall not accept any personal benefit (including a bonus or milestone payment) for:
- (i) enrolling a particular number of participants or for meeting a deadline in recruiting human participants;
 - (ii) a particular number of human participants successfully completing the study or trial or for successfully completing it within a specific timeframe;
 - (iii) assessing potential recruits for a study or a clinical trial in which the researcher is involved.

9. RESEARCH INVOLVING ANIMALS (REFER TO SECTION 1.8)

9.1 ALL RESEARCH THAT INVOLVES ANIMALS AS SUBJECTS must be reviewed and approved by the University Animal Care Committee, before the research begins

- 9.2** A Researcher conducting research involving animals shall:
- (i) conduct such research in accordance with the highest ethical standards; and
 - (ii) comply with the Regulatory Framework governing such research

10. SECRET RESEARCH

A researcher shall not enter into any arrangement with any person to conduct any research under the auspices of the University, or on University premises or using students, postdoctoral fellows, academic, administrative or support staff, or university resources or facilities on the understanding that the conduct of the research is to be kept secret.

11. HAZARDOUS RESEARCH

- 11.1** A researcher proposing to engage in research involving hazardous experiments or materials of any kind shall:
- (i) comply with the Regulatory Framework governing the conduct of such experiments or the use of such materials;
 - (ii) obtain all necessary approvals before accepting delivery of hazardous materials, or embarking on the research;
 - (iii) perform comprehensive risk assessment to disclose potential hazards to participants, students and others that might be impacted; and

(iv) prepare written procedures describing the activities and how risks are to be managed.

- 11.2** A researcher engaged in research involving hazardous experiments or materials who has reasonable cause to believe that an incident which may pose a threat to any person or property has occurred or is imminent shall:
- (i) take appropriate measures to address the situation in accordance with the university's emergency guidelines; and
 - (ii) report the incident or potential threat to the Department of University Safety and the Researcher's Chair.

12. PROPRIETARY RESEARCH

12.1 A researcher shall not be obliged to seek commercial development of his or her invention, software or other discovery. The university shall respect the decision of a researcher not to commercialize his or her invention, software or other discovery.

12.2 A researcher who elects not to seek commercial development of an invention, software or other discovery developed through collaborative efforts may, in accordance with the Regulatory Framework governing intellectual property and proprietary research, permit his or her collaborators to seek its commercial development should they so wish.

12.3 A researcher who elects to develop an invention, software or other discovery or to become involved directly in its commercial application shall comply with the Regulatory Framework governing intellectual property and proprietary research.

13. CONFLICT OF INTEREST AND COMMITMENT

13.1 A researcher shall comply with the Regulatory Framework governing conflicts of interest, and conflicts of commitment and consulting activities.

13.2 A researcher shall disclose to all relevant persons (including other institutions, agencies, conference organizers and participants, and journals and publishers) any conflict of interest that might influence such persons' decisions.

14. RESEARCH MISCONDUCT

Any action that is inconsistent with integrity, honesty or the Regulatory Framework, including this Policy, may constitute a disciplinary offence and, where appropriate, shall be investigated in accordance with the *Academic and Research Misconduct Policy*.