

NUS CODE AND PROCEDURES FOR RESEARCH INTEGRITY

POLICY DOCUMENT INFORMATION				
Policy Document Category:	(i) Academic (ii) Administrative (iii) Research & Technology (iv) University-wide			
Policy Document Owner:	Office of the Deputy President (Research & Technology)			
Scope:	This document applies to any member of the NUS research community, which includes (i) Any NUS staff member (as defined in the Staff Disciplinary Procedures and Sanctions Policy) or (ii) NUS student (as defined in the NUS Statutes) or (iii) Non-NUS staff member (e.g. academic research visitor or consultants) or non-NUS student (e.g. interns) conducting research studies under the auspices of NUS in all sites, facilities or settings, including overseas research centres. However, Appendix 3 of this policy does not apply to persons who are neither NUS staff members nor NUS students.			
Effective Date:	17 February 2023			
POLICY DOCUMENT HISTORY				
Version No.	Approved by (Name, Designation)	Approval Date	Effective Date	Policy Document Change
V13	Professor Philip Moore (Chief Research Compliance Officer, Chief Research Integrity Officer)	17 Feb 2023	17 Feb 2023	Minor Amendment
V12	Professor Philip Moore (Chief Research Compliance Officer, Chief Research Integrity Officer)	29 Sep 2022	29 Sep 2022	Minor Amendment
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V10	Professor Philip Moore (Chief Research Compliance Officer, Chief Research Integrity Officer)	1 Jul 2021	1 Jul 2021	Major Amendment

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1 DEFINITIONS & INTERPRETATION

Please refer to Appendix 1 for the definition of the various capitalised terms used in this NUS CODE AND PROCEDURES FOR RESEARCH INTEGRITY. ("**Policy Document**").

Capitalized terms in this policy shall have the same meaning as in the Staff Disciplinary Procedures and Sanctions Policy, unless otherwise defined herein or if the context otherwise requires.

2 RATIONALE & OBJECTIVES

2.1 The University is committed to maintaining the highest standards of ethics and research integrity. It is a fundamental responsibility of the NUS research community to adhere to absolute intellectual honesty and to ensure that the reputation of the University for academic and research integrity is preserved. The University is also committed to encouraging high-quality research output by our research community, and to emphasize the importance of professional & research ethics.

2.2 The University fully endorses and subscribes to international guidelines, which include but are not limited to the below:

- a. **Singapore Statement on Research Integrity** and its 4 principles and 14 responsibilities (2010)¹
- b. **Joint Statement by A*STAR, NTU, NUS, SMU, SUSS and SUTD on Research Integrity relating to scholarly publications** and its six key principles (2016)²
- c. **International Committee of Medical Journal Editors (ICMJE) authorship guidelines** (2019)³ which recommends that authorship be based on all the following criteria:
 - i. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
 - ii. Drafting the work or revising it critically for important intellectual content; AND
 - iii. Final approval of the version to be published; AND
 - iv. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
- d. **Guidelines for ethical use of large language models (LLMs) in publications** (2023)⁴ which describes 2 requirements:

¹ Singapore Statement on Research Integrity (2010). <https://wcrif.org/guidance/singapore-statement>

² Joint Statement on Research Integrity relating to scholarly publications (2016).

<http://www.researchintegritysingapore.org.sg/Guidelines.asp>

³ International Committee of Medical Journal Editors (ICMJE) four authorship guidelines (2019).

<http://www.icmje.org/recommendations/>

⁴ Tools such as ChatGPT threaten transparent science; here are our ground rules for their use (2023).

<https://www.nature.com/articles/d41586-023-00191-1>

- i. That no LLM tools will be accepted as a credit author on a research paper, AND
 - ii. Researchers using LLM tools should document this use in the methods or acknowledgements section.
- 2.3 Research institutions and faculties should follow this policy for responding to allegations of Research Misconduct and other irresponsible research practices and for protecting those who report such behavior in good faith. When Research Misconduct or other irresponsible research practice is confirmed, appropriate actions should be taken promptly, including correcting the research record.
- 2.4 Research institutions and faculties should create and sustain environments that encourage integrity through education, clear policies, and reasonable standards for advancement, while fostering work environments that support research integrity.
- 2.5 Research integrity includes the rigour, care and accountability that are the hallmarks of good scholarship, and is not merely the avoidance of wrongdoing. All members of the NUS research community engaged in research should maintain the highest ethical standards. These include but are not restricted to:
 - a. maintaining the highest possible quality in research procedures and processes;
 - b. carrying out publication and discussion, where applicable;
 - c. supervising research and mentoring trainees appropriately;
 - d. maintaining accurate and detailed research records of procedures and results, sufficient to allow others to reproduce the work, in accordance with the NUS Research Data Management Policy;
 - e. assigning appropriate credit and responsibility for research and publications;
 - f. complying with all applicable laws, rules and codes of conduct.
- 2.6 The value and benefits of research are dependent on the integrity of research. While there can be and are disciplinary differences in the way research is organized and conducted, there are also principles and professional responsibilities that are fundamental to the integrity of research wherever it is undertaken.

3 SCOPE

This document applies to any member of the NUS research community, which includes

- a. any NUS staff member (as defined in the Staff Disciplinary Procedures and Sanctions Policy) or
- b. NUS student (as defined in the NUS Statutes) or
- c. non-NUS staff member (e.g. academic research visitor or consultants) or non-NUS student (e.g. interns) conducting research studies under the auspices of NUS in all sites, facilities or settings, including overseas research centres.

However, Appendix 3: Procedures for Investigation Into Research Misconduct does not apply to persons who are neither NUS staff members nor NUS students. Any actions to be taken in relation to persons in breach of this policy who are neither NUS staff or NUS students shall be in accordance with the agreements or other arrangements entered into with

- a. third parties in relation to such persons in breach (e.g. where there are joint appointments or secondment arrangements with third parties) or
- b. the persons in breach (e.g. interns or visitors).

A. POLICY STATEMENTS

4 NUS CODE OF CONDUCT FOR RESEARCH INTEGRITY

Key Principles

4.1 These key ethical principles help the research community to coordinate their research actions or activities and to establish the public's trust of the discipline. They are:

- a. **Honesty** in all aspects of research
- b. **Accountability** in the conduct of research
- c. **Professional courtesy** and fairness in working with others
- d. **Good stewardship** of research on behalf of others

Responsibilities of the research community

4.2 The responsibilities⁵ of the research community are as follows:

- 4.2.1 **Integrity**: Researchers should take responsibility for the trustworthiness of their research.
- 4.2.2 **Adherence to Regulations**: Researchers should be aware of and adhere to regulations and policies related to research.
- 4.2.3 **Research Methods**: Researchers should employ appropriate research methods, base conclusions on critical analysis of the evidence and report findings and interpretations fully and objectively.
- 4.2.4 **Research Records**: Researchers should keep clear, accurate records of all research in ways that will allow verification and replication of their work by others.
- 4.2.5 **Research Findings**: Researchers should share data and findings openly and promptly, as soon as they have had an opportunity to establish priority and ownership claims.
- 4.2.6 **Authorship**: Researchers should take responsibility for their contributions to all publications, funding applications, reports and other representations of their research. Lists of authors should include all those and only those who meet applicable authorship criteria.
- 4.2.7 **Publication Acknowledgement**: Researchers should acknowledge in publications the names and roles of those who made significant contributions to the research, including writers, funders, sponsors, and others, but do not meet authorship criteria.
- 4.2.8 **Peer Review**: Researchers should provide fair, prompt and rigorous evaluations and respect confidentiality when reviewing others' work.

⁵ Singapore Statement on Research Integrity (2010), <https://wcrif.org/guidance/singapore-statement>

- 4.2.9 Conflict of Interest: Researchers should disclose financial and other conflicts of interest that could compromise the trustworthiness of their work in research proposals, publications and public communications as well as in all research activities.
- 4.2.10 Public Communication: Researchers should limit professional comments to their recognized expertise when engaged in public discussions about the application and importance of research findings and clearly distinguish professional comments from opinions based on personal views.
- 4.2.11 Reporting Irresponsible Research Practices: Researchers should report to the appropriate authorities any suspected Research Misconduct, including fabrication, falsification or plagiarism, and other irresponsible research practices that undermine the trustworthiness of research, such as carelessness, improperly listing authors, failing to report conflicting data, or the use of misleading analytical methods.
- 4.2.12 Societal Considerations: Researchers and research institutions should recognize that they have an ethical obligation to weigh societal benefits against risks inherent in their work. Researchers should have due regard for the safety, health and well-being of the community, those who are connected to the research work and the wider society.

4.3 Research integrity relating to scholarly publications⁶

The University fully endorses and subscribes to the “Joint Statement on Research Integrity relating to scholarly publications” and its six key principles that are reproduced below. The University is committed to preserving the highest ethical standards in furtherance of our mission of teaching, research and public service. Our respective policies, procedures, codes of conduct and standards provide guidance for application of the ethical values stated below in our daily life and work as members of the NUS research community, and NUS is committed to abide by the Singapore Statement of Research Integrity. In addition to the University’s existing policies, procedures, codes of conduct and standards, all members of the NUS research community are expected to strictly adhere to the following research publication principles:

- 4.3.1 Leadership: Senior research personnel (or anyone in research supervisory role) must lead by example in upholding the highest standards and provide active oversight and management of the research work that goes into publication.
- 4.3.2 Honesty: Research personnel must ensure consistency in data that are represented in the publication and prevent inappropriate or fraudulent data manipulation.
- 4.3.3 Reproducibility: Research personnel must maintain accurate and detailed research records of procedures and results (for a minimum of 10 years), to allow others to replicate the work, and ensure reproducibility of one’s experimental results
- 4.3.4 Citation: Research personnel must provide appropriate citation for all usage of text, data or figures from other publications, sources or individuals, including from one’s previous publications. Plagiarism, including self-plagiarism, is unacceptable.
- 4.3.5 Acknowledgement: Research personnel must appropriately recognize individuals who have contributed to their publications. Individuals and organisations who have contributed to the publication must be acknowledged, and those who have provided substantial intellectual contribution (to be determined by the first or last author), and/or who have participated in the drafting of the publication, should be recognized as authors.

⁶ Joint Statement on Research Integrity relating to scholarly publications (2016), <http://www.researchintegritysingapore.org.sg/Guidelines.asp>

4.3.6 Reporting: Research personnel must be proactive in reporting suspicious practices that do not meet these key principles to their respective institutions. Reporting should follow the procedures listed below.

4.4 The University is committed to adopting the highest standards of research and publication ethics and standards at all times. Any breach of this policy will be dealt with by the University's disciplinary procedures as stated in Appendix 3.

5 RESEARCH MISCONDUCT

5.1 The University has zero tolerance towards Research Misconduct. All reported or discovered cases with credible evidence shall be investigated.

5.2 Research Misconduct (as defined below) by any member of the NUS research community is unacceptable.

5.2.1 It is the responsibility of all members of the NUS research community to adhere to prescribed standards of integrity in their research and to report acts of misconduct when they are known or suspected to have occurred. It is the responsibility of research institutes, faculties, supervisors and Principal Investigators of research to diligently and carefully monitor the research under their supervision and to subject their research procedures and findings to rigorous evaluation.

5.2.2 Any other individual who collaborates in research with members of the NUS research community will be expected to abide by the NUS Statement and Code of Conduct for Research Integrity when working with the University. Any Research Misconduct by any member of the NUS research community committed whilst working on a collaborating institution's premises or other off- campus facility or research site, is also covered by this policy.

5.2.3 Any member of the NUS research community who becomes involved in any way in an inquiry or investigation into Research Misconduct by another institution or body must immediately report the details of such inquiry/investigation to their Head of Department, Dean and the Deputy President (Research & Technology).

5.3 "Research Misconduct" is defined as fabrication, falsification, plagiarism or any questionable research practices or wrongdoing in proposing, designing, performing, recording, supervising or reviewing research, or in reporting research data/results.

5.4 Research Misconduct includes but is not limited to the following practices:

5.4.1 Dishonesty in reporting data/results: includes fabrication of data/results, improper adjustment of data/results, inappropriate image manipulations, gross negligence in collecting or analysing data/results, selective reporting or omission or withholding of research results or data for deceptive purposes, or otherwise tampering with the primary research record. The "research record" is the record of data or results and includes, but is not limited to, research proposals, laboratory records (both physical and electronic), progress reports, abstracts, theses, oral presentations, internal reports, and journal articles. If there is fabrication or falsification in a published or submitted paper, report, patent or other research record, every author may be investigated and may be held liable for any Research Misconduct in accordance with this policy.

- 5.4.2 Deliberately misrepresenting research: includes misrepresenting the progress of research; misrepresentation of achievements by falsely claiming novelty or priority by wilfully ignoring prior relevant reports in the research literature; knowingly publishing material that will mislead readers (e.g. misrepresenting data); adding names of authors who do not satisfy the relevant authorship criteria; or otherwise giving undue credit to or excluding names of authors who meet the relevant authorship criteria.
- 5.4.3 Plagiarism: includes taking credit for someone else's work or ideas; using others' results or methods without attribution; deliberately omitting acknowledgement of significant assistance received from others; copying the writing of others without proper acknowledgement; and otherwise falsely taking credit for the work or ideas of others or appropriating their intellectual property. This would include self-plagiarism or any attempt to take or duplicate any of previously self-published text, papers, or research results and make it appear brand new.
- 5.4.4 Breach of trust: includes irresponsible taking or releasing of ideas or data which were shared with the legitimate expectation of confidentiality (e.g. use of confidential results without permission from a previous employer), using ideas from others' grant proposals, award applications, patents, reports, manuscripts or presentations; failure to disclose financial ties to foreign governments or any other entities; espionage or research theft involving trade secrets, scientific ideas, designs, devices, intellectual property, data and methods.
- 5.4.5 Violation of law and regulations and failure to comply with applicable policies, guidelines and ethical codes: includes failure to obtain approvals required for work governed by regulations or legislation (e.g. approvals required from the NUS Institutional Review Board ("IRB"), the NUS Institutional Animal Care and Use Committee ("IACUC"), the NUS Institutional Biosafety Committee ("IBC") or the Office of Safety, Health & Environment ("OSHE") and under other institutional requirements); failure to comply or observe the regulations or conditions set by any relevant authorities; failure to comply with NUS policies and guidelines; failure to comply with the applicable ethical codes. Failure to comply with the requirements of journals and conferences when submitting papers (e.g. falsely certifying that a paper is original material when it has substantially been published elsewhere) is also an offence under this section.
- 5.4.6 Misuse of human research subjects, human tissue or other human materials: includes failure to protect the health, safety, privacy or confidentiality of research subjects or material donors; or other failures to follow the requirements of NUS, including the IRB and RCI Office (as defined in the Appendix), which may require adherence to relevant protocols including protocols approved under the National Health Group (NHG) Domain Specific Review Board (DSRB), SingHealth Centralised Institutional Review Board (CIRB) or the Health Science Authority (HSA).
- 5.4.7 Interfering with the research of others: includes stealing, deliberately damaging or disposing of research materials, equipment, research consumables/non-consumables items, or products of research.
- 5.4.8 Misuse of research funding: includes failure to spend research funds in ways consistent with the goals/terms and conditions stated in the relevant funding documents; grant fraud; corruption; failure to maintain clear and proper records of expenditure; submission of duplicate or overlapping grant applications to agencies without full disclosure to these agencies; failure to provide complete and accurate reports to funders when required.

- 5.4.9 Failure to declare Conflict of Interest: includes failure to disclose financial or any other conflicts of interest that could compromise the trustworthiness of their work in research, including research proposals, publications and public communications as well as in all review activities. Failure to disclose conflicts of interest may also be a breach of the University's Conflict of Interest Policy for NUS Staff.
- 5.4.10 Failure to report observed instances of Research Misconduct: includes covering up or otherwise failing to report breaches of this policy by others.
- 5.4.11 Retaliation: taking punitive action against an individual for having reported alleged breaches of this policy.
- 5.4.12 Making frivolous and baseless allegations of breaches of this policy by others.
- 5.4.13 Failure to cooperate with a Research Integrity Officer or others involved in a Research Misconduct Inquiry: Any refusal to cooperate with any officer involved in a Research Misconduct Inquiry will be subject to staff disciplinary action or dismissal.
- 5.4.14 Any acts that undermine the validity and productivity of research in NUS, as well as those that constitute wilful abuse or endangerment of any NUS researcher, are also considered acts of Research Misconduct. These would include the following, when they occur within the context of research activities in the University:
- a. abuse of animal and human research subjects;
 - b. harassment of research co-workers;
 - c. vandalism of research data/materials of other researchers, equipment or research facilities/premises; and
 - d. violations of safety procedures and requirements in research.
- 5.5 Research Misconduct does not include honest error or honest differences in interpretations or judgments of data that are inherent in the creative process and which are normally corrected through further research and scholarship.
- 5.6 In ascertaining what constitutes Research Misconduct, University shall seek guidance from the principles and responsibilities in this policy.
- 5.7 Any investigations into Research Misconduct shall be carried out in accordance with Appendix 3.

B. PROCEDURES

6 PROCEDURE

Procedures for investigation into Research Misconduct are detailed in Appendix 3: Procedures for Investigation into Research Misconduct.

C. GENERAL

7 REVIEW OF POLICY DOCUMENT

- 7.1 This Policy Document shall be reviewed by the Policy Document Owner in accordance with the requirements set out in the University Policy Framework, or more frequently if deemed necessary by the Policy Document Owner. Any recommendation for changes to this Policy Document (whether amendments, repeal or otherwise) must similarly be carried out in accordance with the requirements of the University Policy Framework.
- 7.2 The University shall be entitled to revise, amend or update this Policy Document and to issue additional Policy Documents from time to time. All such revisions, amendments, updates and additions shall be deemed to be a part of this Policy Document. Any revisions, amendments, updates or additions to this Policy Document issued by the University may be published or notified through written notice, electronic mail, the University website, or such other form of communication as the University may deem appropriate.

8 QUERIES

- 8.1 All questions as to the interpretation of this Policy Document shall be referred to the Policy Document Owner.

9 INTERPRETATION

9.1 Headings

The headings of the provisions of this Policy Document are to facilitate reference only and do not form a part of this Policy Document, and shall not in any way affect the construction or interpretation thereof.

9.2 Inconsistency with this Policy Document

In the event of any inconsistency between the requirements set out in this Policy Document and those set out in any other Policy Documents or other documents relating to the subject matter of this Policy Document, the requirements set out in this Policy Document shall prevail unless otherwise stated.

10 ADHERENCE TO POLICY DOCUMENT

10.1 Compliance with this Policy Document is mandatory and any failure to comply with this Policy Document (including any arrangements that are established under it) may, at the University's absolute discretion, be investigated and result in such corrective and/or disciplinary action(s) as the University deems fit.

11 EXCEPTIONS TO THIS POLICY DOCUMENT

11.1 Any exceptions to the requirements of this Policy Document requires prior written approval from:

- a. for University-wide Policy Documents- President (or such other appropriate senior management personnel as the President may from time to time designate)
- b. for Academic/Administrative/Innovation & Enterprise/Research & Technology categories- Cluster Head of the Policy Document Owner;

and such approval will only be granted in very exceptional circumstances.

12 ARCHIVAL OF RECORDS

12.1 Records of each allegation and inquiry shall be maintained in a secure form by the RCI Office for at least 10 years.

13 RELATED DOCUMENTS

13.1 This document should be read in conjunction with the Related Documents set out in Appendix 2: Related Documents.

14 LIST OF APPENDICES

No	Appendix
1	Definitions
2	Related Documents
3	Procedures for Investigation into Research Misconduct

APPENDIX 1: DEFINITIONS

In this NUS CODE AND PROCEDURES FOR RESEARCH INTEGRITY (this “**Policy Document**”), the following words shall have the following meanings:

“Complainant”	The individual who makes allegations that a researcher has engaged in Research Misconduct
“CRCIO”	Chief Research Compliance and Integrity Officer
“CRCIO Investigation Report”	A report of its findings submitted by CRCIO to the Evaluation Authority
“DP(R&T)”	Deputy President (Research and Technology)
“IACUC”	NUS Institutional Animal Care and Use Committee
“IBC”	NUS Institutional Biosafety Committee
“IO”	Investigating Officers
“IRB”	Institutional Review Board
“ODP(R&T)”	Office of the Deputy President (Research and Technology)
“OLA”	Office of Legal Affairs
“ORMC”	Office of Risk Management and Compliance
“OSC”	Office of Student Conduct
“OSHE”	Office of Safety, Health & Environment
“Policy Document”	NUS Code and Procedures for Research Integrity
“RCI Office”	Research Compliance and Integrity Office
“Research Misconduct Inquiry”	A formal inquiry conducted by a Research Misconduct Inquiry Committee
“Respondent”	The individual who is alleged to have committed Research Misconduct
“RIO”	Research Integrity Officer
“RMI Committee”	Research Misconduct Inquiry Committee

15 INTERPRETATION

- 15.1 The word ‘may’ when used to bestow a duty or power indicates that the action or decision may be enacted or not, at discretion.
- 15.2 For the avoidance of doubt, the words ‘must’, ‘shall’ or ‘will’, if used to bestow a duty or power, indicate that the action or decision is mandatory and must be enacted.
- 15.3 A reference to the word ‘including’ in any form is not to be construed or interpreted as a word of limitation.

**APPENDIX 2:
RELATED DOCUMENTS**

This Policy Document should be read in conjunction with the following Related Documents:

No	Type	Name of Document
1	NUS Policy	Code of Conduct for NUS Staff
2	NUS Policy	Code of Student Conduct
3	NUS Policy	Staff Disciplinary Procedures and Sanctions Policy
4	NUS Policy	Whistleblowing Policy
5	NUS Policy	NUS Research Data Management Policy
6	NUS Policy	Conflict of Interest Policy for NUS staff
7	Legislation	Human Biomedical Research Act (2015)
8	Guidelines	Singapore Bioethics Advisory Committee Guidelines
9	Guidelines	Singapore NACLAR Guidelines
10	NUS Procedure	Procedures for Investigation into Fraud, Misappropriation or Corruption Under the Whistleblowing Policy
11	NUS Handbook	Research Compliance and Integrity Handbook
12	NUS Statutes & Regulations	Statute 6 - Discipline with Respect to Students
13	NUS Statutes & Regulations	Regulation 10 - Discipline with Respect to Students

APPENDIX 3: PROCEDURES FOR INVESTIGATION INTO RESEARCH MISCONDUCT

16 OVERVIEW

16.1 Research Misconduct is grounds for disciplinary action.

16.1.1 This Appendix applies to (i) any NUS staff member (as defined in the Staff Disciplinary Procedures and Sanctions Policy) or (ii) NUS student (as defined in the NUS Statutes). This Appendix shall not apply to persons that are not NUS staff or students.

16.1.2 Where there is Research Misconduct carried out by a member of the NUS research community who is a NUS student (at the point in which misconduct occurs) and is **not** a staff member, this Appendix shall not apply and RCI Office shall refer the case to the Office of Student Conduct ("OSC"), who shall lead subsequent actions.

16.1.3 Where there is Research Misconduct carried out by a member of the NUS research community who is **both** a staff member **and** a NUS student (as defined in the NUS Statutes), the member will be primarily investigated and disciplined as a staff member. RCI Office shall lead subsequent actions in accordance with this Appendix. For the avoidance of doubt, nothing herein precludes the University from sanctioning such person both as a staff member as well as a student.

17 REPORTING SUSPECTED RESEARCH MISCONDUCT

17.1 Allegations that a researcher (i.e. any person who is engaged in the design, conduct, or reporting of research at or for the University) has engaged in Research Misconduct can be made by any individual (hereinafter referred to as the "Complainant"), in writing in a sealed envelope, signed and marked "strictly confidential", or via telecommunication or email to the University's RCI Office under the Office of the Deputy President (Research and Technology) ("ODP(R&T)"). A Complainant shall make allegations in good faith and co-operate with the inquiry. Similarly, the Respondent (as defined below) shall co-operate with the inquiry.

18 HANDLING ALLEGATIONS OF RESEARCH MISCONDUCT

18.1 The individual who is alleged to have committed Research Misconduct will be referred to as the "Respondent" hereinafter.

18.2 NUS is committed to ensuring that all allegations of Research Misconduct are investigated thoroughly and fairly, within as short a time as possible.

18.2.1 All allegations of Research Misconduct shall be handled by the RCI Office. Other University officials shall refer any Research Misconduct allegations made to them to the RCI Office.

- 18.2.2 The Chief Research Compliance and Integrity Officer ("CRCIO") may appoint Investigating Officers ("IO") and/or Research Integrity Officer ("RIO") to oversee cases determined by CRCIO to warrant formal and independent investigation. RIOs shall be persons experienced in research, widely respected by the academic community and familiar with the operations of the University and/or other world-class universities.
- 18.2.3 Anonymous allegations will not normally be considered unless compelling evidence is presented.
- 18.2.4 The CRCIO, IO, RIO and all other University officials involved in the examination of any allegation should declare any conflicts of interest, and maintain confidentiality of information (to the maximum extent possible) regarding details of the case, the Complainant, Respondent or other affected individuals. All parties shall, except as otherwise prescribed by law or as mandated by its external stakeholders which includes government agencies, grantors and/or funders, maintain confidentiality in relation to information regarding the allegations and proceedings by the CRCIO, IO, RIO and Research Misconduct Inquiry Committee, including any disciplinary action meted out.
- 18.2.5 Throughout the process of handling any allegations of Research Misconduct, CRCIO, IO, RIO and members of the Research Misconduct Inquiry Committee may consult with the Office of Legal Affairs ("OLA"), as needed, for advice on possible legal risks and exposure.
- 18.2.6 The provisions on "administrative arrangements"⁷ in the Staff Disciplinary Procedures and Sanctions Policy shall similarly apply to staff disciplinary proceedings relating to Research Misconduct.

19 STAGE 1: PRELIMINARY INVESTIGATION & PRE-DISCIPLINARY ACTION

19.1 Initial Examination of Allegations

- 19.1.1 Upon receiving a complaint/allegation, the CRCIO may appoint an IO to conduct a preliminary examination, principally to establish whether there is a case to answer, and decide if a RIO needs to be appointed. CRCIO and/or IO shall conduct a preliminary examination of the allegation, normally within 30 calendar days, to determine if:
- a. it is unsubstantiated or groundless;
 - b. it is about Research Misconduct and within the purview of this policy;
 - c. it is covered by another University policy;
 - d. it is about a malpractice that does not constitute Research Misconduct; and/or
 - e. an allegation warrants further independent investigation and that the appointment of a RIO is warranted.
- 19.2 If the alleged complaint requires more time to make such determination, the CRCIO can extend the deadline accordingly.

⁷ Section 4 of the Staff Disciplinary Procedures and Sanctions Policy (HR 045/20), or such other relevant provision therein as may be amended from time to time.

19.3 CRCIO's Preliminary Determination

- 19.3.1 If CRCIO determines that the allegation is about Research Misconduct and within the purview of this policy but that a RIO need not be appointed, the IO shall conduct and complete the investigations and submit a final IO report stating the facts and evidence of the allegations.
- 19.3.2 If, however, CRCIO determines that the allegation warrants further independent investigation, then the CRCIO will appoint a RIO, pursuant to paragraph 19.1.1e above of this Appendix.
- 19.3.3 If the CRCIO, in consultation with RIO, determine that the Research Misconduct is serious and elaborate in nature, then the CRCIO may appoint a Research Misconduct Inquiry Committee to conduct a formal inquiry ("Research Misconduct Inquiry"). The Deputy President (Research and Technology) ("DP(R&T)") would be notified by the CRCIO of this action.
- 19.4 Groundless Allegations: If CRCIO determines that an allegation is groundless, a report shall be prepared for internal reference. In such a case, the Respondent does not need to be informed of the allegation. If the CRCIO believes that an allegation was made in bad faith, the case may be referred to the appropriate University authorities.

19.5 Pre-disciplinary Action

- 19.5.1 Actions by CRCIO: If the initial investigation (or at any stage throughout the investigation) shows possible risk and safety violation or as determined by the CRCIO, the CRCIO may suspend the study or its recruitment of new human participants or suspend the progress of the trial/research study for such period as it deems necessary. The CRCIO may, at his/her discretion, bar the Respondent from submitting new grant applications for such period as it deems necessary.
- 19.5.2 Other Actions: Without prejudice to the above, at any time during investigations, if CRCIO is of the view that other interim actions (including suspension and reassignment) under the Staff Disciplinary Procedures and Sanctions Policy could be appropriate, CRCIO may recommend such interim actions to be taken in accordance with the Staff Disciplinary Procedures and Sanctions Policy.
- 19.6 Multiple Policies Involved: If an allegation gives rise to investigative responsibilities under more than one University policy, the CRCIO or the RIO handling the allegation shall consult with the other appropriate administrative offices such as the IRB, OSHE, the IACUC, Office of Risk Management and Compliance ("ORMC"), OHR and/or Internal Audit Unit, to coordinate a consistent and effective review of the facts under this policy and related University policies and to avoid duplication of inquiries.
- 19.7 Timeline for preliminary investigations & pre-disciplinary action (Stage 1): Preliminary investigations conducted by CRCIO and/or IO would normally take up to 30 calendar days. If a RIO is appointed, an additional 30 calendar days (from date of their appointment) would be given for them to obtain further evidence, conduct preliminary interviews, and in consultation with CRCIO, determine if the misconduct is serious in nature and warrants a formal Research Misconduct Inquiry. An extension of this deadline may be requested from CRCIO.

20 **STAGE 2: INQUIRY INTO RESEARCH MISCONDUCT**

20.1 If it is deemed that a Research Misconduct Inquiry is warranted

- a. Appointment of the Research Misconduct Inquiry Committee ("RMI Committee"): The CRCIO, in consultation with the RIO, will appoint a RMI Committee to conduct a Research Misconduct Inquiry into the alleged Research Misconduct. The RMI Committee may consist of 3 or more members (which may include individuals from outside the University as needed) with appropriate expertise. The members of the RMI Committee should disclose any conflicts of interest to the CRCIO. The CRCIO will provide the RMI Committee with instructions for carrying out the Research Misconduct Inquiry. The RMI Committee members should certify in writing that they will maintain confidentiality of information to the maximum extent possible at all times. They should obtain the same undertaking from other persons they may wish to consult; and
- b. Notification: After appointing an RMI Committee, the CRCIO may provide notification of the nature of the allegation, the appointment of the RMI Committee, and its membership to those with a need to know, including the Respondent's Dean and Head of Department. The CRCIO shall also brief the DP(R&T), and where necessary, Provost and the President.

20.2 When carrying out any investigations pursuant to this policy, the IO, RIO, RMI Committee or CRCIO (as the case may be), may take the following actions:

- a. Fact-finding: Examine relevant research and/or financial records and materials thoroughly and in depth and conduct sufficient interviews and fact-finding to determine whether or not the allegation is substantiated by the preponderance of the evidence.
- b. Ensure the Security of Evidence: This may include seizing laboratory records, financial records or other relevant materials/documents. It shall be a disciplinary offence under this policy to obstruct these or other actions of an IO, RIO or RMI Committee member. The CRCIO shall provide the IO, RIO and RMI Committee with a standard operating procedure to be followed.
- c. Notify stakeholders: If required by law or agency requirements, or if in the judgment of the CRCIO it is appropriate, then the CRCIO shall inform the external agencies or sponsors that an inquiry into Research Misconduct is being undertaken, after consultation with senior management and the Office of Legal Affairs. An external institution shall, in general, be notified only if there is reason to believe that the alleged Research Misconduct occurred at that institution, or if the Respondent has a joint research project with that institution and that project is the subject of the complaint, or if the Respondent has a joint appointment at that institution.

20.3 Responsibilities of the IO, RIO and RMI Committee

- 20.3.1 The IO, RIO or the RMI Committee are not bound to act in a formal manner and shall conduct its proceedings and inform itself in such manner as it thinks fit. The IO, RIO or RMI Committee shall take the following actions:
- a. **Interviews:** Interview the Complainant (where appropriate), the Respondent and any other key witnesses with respect to the allegation.
 - b. **Obtain testimony of Respondent:** Provide an opportunity for the Respondent to respond to the allegation(s), whether during one or more interviews and/or in writing.
 - c. **Preparing Report:** Prepare a report of its findings within 30 calendar days of the date of its appointment. If additional time is needed to prepare the report or conduct further inquiries, an extension of time may be sought from the CRCIO.
- 20.3.2 The termination of a Respondent's employment at the University, by resignation or otherwise, or his/her failure or refusal to give oral or written information to the IO, RIO or RMI Committee will not prevent the Research Misconduct Inquiry or any similar inquiry by the IO or RIO from proceeding, but these facts must be noted in their respective reports.

20.4 Report of the IO/RIO/RMI Committee

- 20.4.1 The written IO/RIO/RMI Committee report shall include the names and titles of the investigators and/or committee members and other experts, if any, consulted by the RMI Committee; the allegation of Research Misconduct, the Respondent or individual(s) named; the procedures followed by the IO/RIO/RMI Committee to arrive at its findings; from whom relevant information was obtained; a list of the research documents or financial records reviewed; summaries of any interviews; and a finding
- a. that Research Misconduct attributable to the Respondent has occurred, as supported by the preponderance of the evidence, or
 - b. that the Respondent engaged in questionable practices that are not deemed to be Research Misconduct, or
 - c. that there is insufficient evidence to reach a conclusion, or
 - d. that the allegation is without substance. In such event, the report shall also contain a finding as to whether the allegation was made in bad faith (i.e. made with reckless disregard for or wilful ignorance of facts or made falsely with malicious intent), where the available information supports such a conclusion.

20.5 Review and Revisions to IO/RIO/RMI Committee report

- 20.5.1 The CRCIO shall review the IO/RIO/RMI Committee report within 10 calendar days and determine if:
- a. the inquiry process has been sufficiently broad and thorough. For this to be the case, the IO/RIO/RMI Committee must have examined all relevant documentation, interviewed the Respondent, and other individuals with key information, and secured appropriate expertise to thoroughly evaluate the evidence. The IO/RIO/RMI Committee may consult any relevant external agency or expert; and

- b. the IO/RIO/RMI Committee report provides sufficient information to justify the investigative findings.

20.6 If the CRCIO deems the report to be lacking, the CRCIO shall refer the report back to the IO/RIO/RMI Committee for modifications and revisions. If the report has been referred back to the IO/RIO/RMI Committee for modification or revision, the IO/RIO/RMI Committee shall submit a final report, within 14 calendar days of such request. If additional time is needed to revise the report or conduct further inquiries, then the IO/RIO/RMI Committee shall request an extension of time from the CRCIO.

20.7 Within 10 calendar days of receipt of the IO/RIO/RMI Committee's final, signed report, the CRCIO shall conclude whether Research Misconduct has been established.

20.8 Timelines for Inquiries into Research Misconduct

20.8.1 The entire inquiry process above by the IO, RIO or the RMI Committee (as the case may be) would normally be completed within 60 to 100 calendar days following their respective appointments. Any extension of this time limit requires the approval of the CRCIO and must be documented in the final report and should comply with any applicable requirements of external funding agencies or sponsors.

21 STAGE 3: DETERMINATIONS AND FURTHER ACTIONS

21.1 Recommendations of the CRCIO and Determinations of Evaluation Authority

21.1.1 The terms "Evaluation Authority" and "Corrective Actions" shall have the same meaning as defined in the Staff Disciplinary Procedures and Sanctions Policy and any delegation of any functions by the Evaluation Authority shall be in accordance with the Staff Disciplinary Procedures and Sanctions Policy. After completion of the investigations and inquiry, the CRCIO shall submit to the Evaluation Authority (with a copy to OHR) a report of its findings and recommendations ("CRCIO's Investigation Report"). In the case where the Respondent is also a student, CRCIO shall also convey the findings to the Office of Student Conduct. The Evaluation Authority may extend a copy of CRCIO's Investigation Report to and choose to obtain inputs from the Head and Dean. Having considered the CRCIO's Investigation Report, the comments of the Head and Dean (if any) and OHR's recommendations on the next steps (including disciplinary sanctions) as appropriate, the Evaluation Authority may determine the following:

- a. Finding that an Allegation Lacks Substance: If the allegation was without substance, then he/she shall instruct CRCIO to, in consultation with DP(R&T), make reasonable efforts to notify appropriate individuals and organizations of the outcome of the inquiry. Any written responses to these efforts shall be placed in the records of the inquiry. If the Evaluation Authority accepts CRCIO's finding that the allegation was made in bad faith, then the case may be referred to the appropriate University authorities for disciplinary action against the Complainant.
- b. Finding further investigations required: If further investigation and/or clarification is appropriate, then he/she shall follow up with CRCIO as he/she thinks fit.
- c. Finding only Corrective Action required: If only Corrective Actions are required.

- d. Finding that there was Research Misconduct: If he/she accepts CRCIO's determination that Research Misconduct has occurred and determined that there is a prima facie case made out against the Respondent, the Respondent will be notified of the case against him/her and sanctions may be carried out in accordance with the notification and disciplinary sanctions process⁸ in the Staff Disciplinary Procedures and Sanctions Policy, provided that
 - i. the reference to the appointment of a COI to conduct a formal inquiry shall be deemed to refer to the RMI Committee and shall be deemed satisfied if a RMI Committee had already been appointed during investigations; and
 - ii. the provisions referring to "Committee of Inquiry" or "COI" in the Staff Disciplinary Procedures and Sanctions Policy shall not be applicable to inquiries under this policy.
- e. Finding of potential Violations Other Than Research Misconduct: If he/she accepts that there was no finding of Research Misconduct, but that the Respondent may have violated other University policies, then he/she shall instruct the CRCIO, in consultation with DP(R&T), to refer such possible violations in a separate summary memorandum to the appropriate University officer and/or the Respondent's supervisor for investigation and other appropriate actions.
- f. If Section 5.12(e) or 5.13 of the Staff Disciplinary Procedures and Sanctions Policy applies.

21.1.2 DP(R&T) and CRCIO, OHR and the Head and Dean of the relevant faculty (if relevant) shall be kept informed of any of the above determinations or further actions taken.

21.2 Notifications and Actions

- 21.2.1 Without prejudice to the above, CRCIO may from time to time take the following actions where appropriate:
 - a. Notification of Senior Management: The CRCIO shall update senior management on the case and outcome of preliminary and subsequent investigations with RCI Office's preliminary assessment/investigation reports, IO, RIO or RMI Committee reports and any other interim reports where appropriate and necessary. DP(R&T) shall be informed of all cases of misconduct that concerns research regardless of the employment status of the Respondent, while the Evaluation Authority shall also be informed if the Respondent is a staff member, and/or if the case investigation involves other units in the University (e.g., OIA, UCO and OSC).
 - b. Notification of Interested Parties: The CRCIO may, at his/her discretion, provide individuals/organisations previously notified of the inquiry with a written report of the IO/RIO/RMI Committee's findings and/or the CRCIO's determination of the case. The CRCIO, in consultation with DP(R&T), shall if it deems appropriate notify any appropriate funding agency and affiliated institutions and any other appropriate persons (e.g. journal editors) of the final outcome. At this time, any interested parties may be notified if it is deemed appropriate.

⁸ Sections 5.14 to 5.16 and Section 7 of the Staff Disciplinary Procedures and Sanctions Policy (HR 045/20), or such other relevant provisions therein as may be amended from time to time.

- c. Where Respondent is also a student: In the case where the Respondent is also a student, any further disciplinary proceedings and sanctions against the Respondent as a student shall be led by Office of Student Conduct in accordance with the NUS Statutes and Regulations.

22 STAGE 4: APPEAL

22.1 Appeal Process

- 22.1.1 The appeal process shall be in accordance with the Staff Disciplinary Procedures and Sanctions Policy.