RESEARCH INTEGRITY POLICY

Note: This document is only valid on the day it was printed.

1. INTRODUCTION

1.1 The Earlham Institute (EI) has a responsibility to ensure that the funds it disperses are properly spent, in accordance with the law, funder requirements, its charitable aims, and in the public interest. Researchers have a duty to their profession, to EI and to research funders, to conduct their research according to best scientific practice and the highest professional standards.

1.2 *The Concordat to Support Research Integrity (referred to in this document as the Concordat)* sets the framework by which the UK research community, and those collaborating with them, can support the trustworthiness of UK research. The Concordat asks universities, research institutes and individual researchers to commit to ensuring their work is underpinned by the highest standards of rigour and integrity, as such the Concordat will be referenced throughout this policy. The Concordat is hosted on behalf of the UK research community by the UK Committee on Research Integrity. https://ukcori.org/research-integrity-concordat/

2. POLICY AIMS

2.1 Research misconduct (as defined below) is least likely to arise in an environment where professional standards and principles of good practice are adopted and where appropriate managerial systems are in place to provide training, support and oversight. EI is committed to the maintenance of such an environment through the provision of this policy and through supervision at all levels to ensure good research practice is adhered to.

3. SCOPE

3.1 This policy applies to all staff, students or visiting workers working at EI, including but not limited to: research, support and administrative staff employed by EI; staff employed on grants or short-term contracts. Students may also be subject to additional policies of their sponsor or registering University. Students registered at UEA will also be required to adhere to the UEA research integrity policies and practices: https://www.uea.ac.uk/research/about-uea-research-and-impact/integrity/uea-research-integrity-policies-procedures-and-guidelines.

3.2 The term 'research' as used here refers to all aspects of the research process, including but not limited to: applications for funding; the formulation of a hypothesis; the designing of experimental protocols; the performance of experiments and the generation of data; the recording, analysis, publication and archiving of data; the preparation and publication of experimental designs, data and conclusions; the communication of research to colleagues and the wider community; and the use of experimental organisms and materials.

4. PROFESSIONAL STANDARDS

4.1 EI researchers must adhere to the following standards of professional conduct at all times:

4.1.1. Honesty and fairness: EI scientists should be honest when reporting on their research, particularly concerning how it is conducted, interpreted and reported, its potential implications, and in acknowledging the work of others.

4.1.2. Accuracy and rigour: in conducting, reporting and publishing research, clarifying what the data and conclusions are based on, where they were derived from, and how they can be verified. Proper record keeping of the primary data is essential, as is the fair representation of individual contributions.

4.1.3. Accountability: to funders and the general public.

4.1.4. Openness and transparency: Researchers should have no other interest beyond their own scientific integrity and should always be willing and able to account for their actions. Researchers should always be prepared to communicate, analyse, report and question the outcome of their research and to disclose any conflicts of interest.

4.1.5. Independence: Researchers are expected to conduct their research with independence and impartiality, in keeping with the environment of academic freedom they work in and regardless of the funder of the research. Researchers should not interfere with the independence of their colleagues or team members.

4.1.6. Respect: for colleagues and for experimental organisms and subjects, including compliance with relevant research ethics policies and requirements.

4.1.7. Co-operation: and collegiality in scientific interactions and communications, and in the sharing of resources.

4.1.8. Lawfully and ethically: comply with ethical, legal and professional frameworks, obligations and standards as required by statutory and regulatory authorities, and by employers, funders and other relevant stakeholders and ensure that all their research is subject to active and appropriate consideration of ethical issues.

5. DEFINITION OF RESEARCH MISCONDUCT

5.1 EI researchers are expected to observe the highest standards of professional conduct, outlined above, in the proposing, conducting and reporting of research. Any practice or conduct that deviates from ethical and professional standards for these activities constitutes misconduct.

5.2 **Research misconduct** constitutes the behaviours and deliberate actions that fall short of the principles in Commitment 1 of the Concordat to Support Research Integrity, occurring at any point in the research lifecycle. This includes behaviours associated with the ideation of research proposals, reviewing the work of others, and the reporting of research findings.

5.3 Research misconduct includes, but is not limited to:

5.3.1. **Fabrication;**

5.3.2. **Falsification;**

5.3.3. **Plagiarism**;

5.3.4. **Misrepresentation** of data and/or interests and/or involvement;

5.3.5. **Breaching legal, ethical and professional requirements** needed for research, for example those needed for human research participants, animals, or human organs or tissue used in research, or for the protection of the environment. Examples of this include proceeding with research without ethical approval, not obtaining informed consent or proceeding with an international collaboration without the required due diligence checks and authorisations.

5.3.6. **Improper dealings of allegations of misconduct**

5.3.7. Failures to follow accepted procedures or to exercise due care in carrying out responsibilities for avoiding unreasonable risk or harm to:

I. Humans;

II. animals used in research; or

III. the environment.

5.3.8. Failures to follow accepted procedures or to exercise due care in carrying out responsibilities for the proper handling of privileged, private or sensitive information on individuals collected during the research.

5.4 Full definitions research misconduct are included in Annex A of the Concordat to Support Research Integrity *and can be further referred to under the UKRIO detailed procedure for investigating breaches of research integrity.*

5.5 Research misconduct does not include honest error, or honest differences in the interpretation or assessment of data.

5.6 However, once an error is detected it is the researcher's responsibility to address the issue and fix the record in a timely fashion. Failure to do so could be construed as research misconduct.

6. PRINCIPLES OF GOOD RESEARCH PRACTICE

6.1 A Critical Approach

6.1.1. Researchers should always be prepared to question the outcome of their research. EI expects all research results to be checked by a researcher's line manager before being made public. It is important that research can be challenged and tested once published.

6.1.2. Researchers should not become subject to other pressures such that the normal processes of research inquiry cannot be enforced, e.g. via their line manager or by constraints imposed by the source of funding of the research. Pressure to produce results that suit the specific interests of a funder must be resisted. This is particularly the case where researchers could be perceived to have a conflict of interest, e.g. where they might have an equity share in the funder, or may hold a position with or be involved in consultancy with the funder. Any such conflict of interest, whether real, potential, or perceived, should be disclosed as soon as it arises to The Chief Operating Officer and entered on the register of outside interests. For further guidance please see EI's Conflicts of Interests Policy.

6.2 Documenting Results

6.2.1. Throughout their work, researchers should keep clear and accurate records, in English, of the procedures they have followed, the sources of research material, where archives or collections are located and of the results obtained, including interim results. This is necessary not only as a means of demonstrating proper research practice, but also for effectively responding to questions and concerns, for example, about how research has been conducted, about the results obtained, and about the ownership of the data or results. The proper documentation of lab work, code written, software used including versions and parameters, and the correct archiving of raw data (see point below) will minimise instances where essential information required by publishers is delayed, or for dealing with allegations of research misconduct, such as the original data, have allegedly been lost or cannot be replicated. It is recommended that all primary data and relevant code, analysis, images and documents relating to a publication are held in a specific folder or directory in a backed up digital storage location. This makes it easier for all staff concerned with a publication to access the relevant data, have version control on the document and to be able to revisit the data in future as necessary.

6.2.2. The record of research is the joint responsibility of the individual and their line manager, it must be accessible immediately on request by the Group Leader, Research Faculty Office or Director.

6.3 Storage and Disposal of Data

6.3.1. Primary data that forms the basis of published work should be securely stored for at least 10 years in a durable digital and/or hard copy form, and in accordance with funder requirements. The means of data storage should be appropriate to the task and approved by the Institute. Provision should be made for the automatic back-up of data or software stored on a personal institute-provided computer, or an internal storage system with an automatic back up facility. Attention should be paid to guaranteeing the security and integrity of electronic data, and any relevant confidentially needs, especially if these data include private or sensitive information. Responsibility for provision and use of appropriate storage and backup facilities lies with the research leader, and it is the responsibility of researchers to use these facilities to ensure all data is appropriately backed up and stored securely. Support for data storage will be provided by EI Scientific Computing staff and NBIP Research Computing staff.

6.3.2. For further guidance on data storage and retention please refer to EI's Scientific Data Management Policy and EI's Human Data in Research Policy.

6.4 Authorship and Publication

6.4.1. Authorship is important in the context of good research practice. Authors are typically defined as individuals who have made substantial contributions to the conception or design of the work, or to the acquisition, analysis, or interpretation of data for it; they also contribute to drafting and revising of any subsequent article for its intellectual content and must approve a final version for publication. Authors must therefore be familiar with the content of the published article and be accountable for all relevant aspects of the work, and for ensuring that questions relating to the accuracy or integrity of any part of the work are appropriately responded to, investigated and resolved. Where co-authors cannot be contacted or are deceased, it is at the Group Leaders discretion to include them on the paper. However, such inclusion must be made adhering to the highest standards of integrity.

6.4.2. It is critical that Group Leaders appreciate the importance of authorship to their team members and co-authors. Authorship is the primary currency of productivity in science, and it can dramatically impact a researcher's career. Therefore, senior/corresponding authors should ensure that authorship and author ranking is distributed in a fair and transparent manner. Pre-arranged authorship deals, e.g. when

a team member is promised first authorship prior to the completion of the experiments, should not be made. Conversely, team members should appreciate the importance of authorship to their peers and should not aggressively and unfairly lobby their line manager for a position that doesn't reflect their contribution relative to their colleagues.

6.4.3. To support fair attribution the Earlham Institute has adopted the use of Contributor Roles Taxonomy (CReDiT). The Institute requires that for research projects the team involved in the lifetime of that project are recorded and then used to attribute authorship. For details and guidance please refer to the EI document **Acknowledgements of Funding and Support**.

6.4.4. If a researcher at EI is informed of, or discovers for themselves, errors in a published article that they have co-authored that diminish the reliability of the published results or the key conclusions drawn, they must discuss this with the lead investigator of the paper and notify promptly any co-authors and the journal concerned. A rapid correction to the published work should be sought, either in the form of a published correction or a retraction, depending on the circumstances involved.

6.5 Acknowledgements

6.5.1. The funding of a piece of work by UKRI-BBSRC via the strategic support of the Institute and its facilities must be acknowledged alongside grant specific sources, in all relevant contexts, this is mandatory for all publications including poster presentations.

6.5.2. Staff are required to acknowledge their colleagues' contributions where authorship is not already applicable. The EI document **Acknowledgements of Funding and Support** provides comprehensive guidance and the specific details required for inclusion, to acknowledge our funders and colleagues in full.

6.6 Collaborators and Funding Partners

6.6.1. Any person who participates in a substantial way in conceiving, executing or interpreting a significant part of the relevant research should be given the opportunity to be included as an author of a publication that derives from that research. The practice of honorary authorship is unacceptable - only those who have participated in the research or substantially contributed to the manuscript should be listed as an author. The contributions of formal collaborators and all others who directly assist or indirectly support the research should also be properly acknowledged. This applies to any circumstances in which statements about the research are made, including provision of information about the nature and process of the research, and in publishing the outcome. In accordance with funders requirements and where

appropriate, the funders of the research and other collaborating bodies should be acknowledged.

6.7 Exploitation and Protection of Intellectual Assets

6.7.1. Exploiting intellectual property (IP) generated by research is important both to improve economic competitiveness and to generate revenue. The potential to exploit IP should be considered when submitting applications or negotiating contracts, or in discussion with industry partners, and before data are submitted for publication or presented in any other public forum. For full details refer to the **EI Intellectual Property Policy** and Trusted Research Policy.

6.8 The use of Artificial Intelligence with integrity

6.8.1. The UK Department for Science, Innovation, and Technology policy paper, "*A pro-innovation approach to AI regulation*" (2023) [1], the pro-innovation framework is underpinned by 5 principles to guide and inform the responsible development and use of AI in all sectors of the economy: i) safety, security and robustness; ii) appropriate transparency and explainability; iii) fairness; iv) accountability and governance; (v) contestability and redress.

6.8.2. Relevant sector guidance "Embracing AI with integrity"[2] has been produced by the UK Research Integrity Office. This outlines five key challenges to research integrity alongside pertinent advice:

I. Breaching laws, regulations, and conditions
II. Ethical considerations
III. Protecting the research record
IV. Research dissemination
V. Creativity and critical thinking

6.8.3. EI researchers are required to adhere to the Use of Generative AI tools at EI Policy and to contribute to establishing best practice in this area of rapid development.

[1] https://www.gov.uk/government/publications/ai-regulation-a-pro-innovation-approach/white-paper#executive-summary
[2] https://ukrio.org/wp-content/uploads/Embracing-AI-with-integrity.pdf

7. INSTITUTE SUPPORT AND OVERSIGHT

7.1 Support and oversight are two key responsibilities held by EI in support of research integrity. In recognition of this, EI provides training and oversight to all employees in the following ways.

7.2 Training on Research Integrity

7.2.1. EI provides an annual workshop for students and staff at all levels to train them on key aspects of research integrity and publishing ethics.

7.2.2. All newly-appointed scientific members of EI are required to attend the workshops during their first year of employment at the EI and to attend as a refresher every three years. Appropriate management action will be taken in relation to any non-attendance.

7.3 EI Oversight of Good Practice

7.3.1. EI staff are expected to adhere to the highest standards of research integrity. Our core values include openness, technical excellence, innovation and collaboration. We pursue open science for its obvious benefits to the research community whilst also providing unparalleled transparency, whereby this presumes that open accountability reduces the potential for research misconduct.

7.3.2. As part of the Institute commitment to **open science** all EI (first and/or corresponding author) publications are **required** to be published first as a preprint thereby lowering the barrier to scrutiny of our research practice prior to peer-reviewed publication. This also demonstrates our firm commitment at the institutional level to the free and open dissemination of research. For full details please refer to EI's Open Access Policy and Publication Checklist.

7.3.3. As set out by our Scientific Data Management policy, primary research data and derived analyses should be held within our Scientific Computing environment in a project-based, backed up location. Any code and associated testing data used for publication should be held in a public versioned repository such as GitHub and provided as a full release package to the Research Faculty Office. Steps should be taken by researchers and Group Leaders to prevent data tampering or malicious modification. Support for protecting research data within the EI Scientific Computing environment (e.g. HPC) is provided by EI Scientific Computing staff and NBIP Research Computing staff.

7.3.4. To fulfil our Open Access commitments a full list of EI publications are provided via the EI website. UKRI-funded research papers must be made open access immediately

upon publication, with the Creative Commons CC BY licence. BBSRC and MRC also require final published open access versions to be deposited in Europe PMC.

7.3.5. EI publications should provide the resources required to repeat any experiment under the FAIR data principles, such as but not limited to, the analysis scripts, processed data, and links to data submitted to or retrieved from online community data repositories such as the European Nucleotide Repository (ENA).

7.3.6. The Research Faculty Office at EI audits the provision of our data to public repositories on an annual basis to ensure these commitments are upheld. Any non-compliance is reported to the Institute Executive.

7.3.7. EI undertakes an internal and regular oversight process of Institute publications once a year, whereby 5% of the papers submitted in the last 12 months, by an EI corresponding author are selected for review by a Scientific Standards Committee. This may include any manuscript in the public domain, therefore it includes preprints.

7.3.8. The Scientific Standards Committee will be convened by the Research Faculty Office, plus three to five scientists (of differing career stages) chosen from across the Institute for expertise in the field of the publications for review and without conflict of interest.

7.3.9. The Committee will request from the corresponding author either the original supporting material, or the location where they can be accessed, to the Chair of the Committee within two weeks. This may include any of the requirements listed in the EI pre-publication checklist, as deemed relevant by the committee such as:

- The location of all data sets and public repository DOIs
- authorship and the basis for inclusion (demonstrating the use of CReDiT)
- software, scripts and documentation
- laboratory notebook evidence (electronic or paper based)

7.3.10. The Committee will then review and make a judgement on the robustness and integrity of the submitted manuscript. The outcome will be reported to the Institute Executive and any appropriate follow up actions implemented as a consequence of findings, and in accordance with the EI policy on misconduct. A full record of reviewed publications will be presented to the Board meeting annually for review.

7.3.11. This process is restricted to published papers whose corresponding author is at EI. In the case of papers published in collaboration with other organisations, EI encourages collaborators to share their primary data in the interests of rigour and transparency.

8. PROCEDURE FOR REPORTING ALLEGATIONS OF RESEARCH MISCONDUCT

8.1 EI is committed to upholding the most rigorous standards of good conduct to ensure that the highest- quality research is conducted at and published by researchers at the EI. It will not condone any form of malpractice in the workplace and is committed to creating a safe, fair and honest working environment within the framework of the public disclosure act.

8.2 Individuals raising in good faith a genuine concern about malpractice, or co-operating in associated investigations, will be protected from any form of retribution or detriment as a result of doing so, including harassment or victimisation from another employee.

8.3 EI encourages and enables employees to speak out when they encounter or suspect malpractice. This is supported by public interest disclosure (whistleblowing) policies available on the HR pages of the intranet. While these procedures provide for the anonymous reporting of allegations, employees are encouraged to make open and specific disclosures in order aid any necessary investigation.

8.4 Any allegation reported by staff, visiting workers or students will be managed in accordance with the relevant procedure or arrangements applicable to the parties involved. This may include, but is not limited to:

- UKRI Policy and guidance on the governance of Good Research Practice
- NBI Whistleblowing Policy
- UKRI Whistleblowing Policy
- NBI Disciplinary Procedure
- UKRI Managing performance and conduct policy
- BBSRC employment code if employed prior to 1 October 2011 (Disciplinary Policy and Whistleblowing Policy)
- UKRIO Procedure for investigating breaches of research integrity

8.5 UEA registered students will also be required to adhere to UEA's policy on research integrity: Integrity – About UEA Research and Impact – Research - UEA, primary UEA contacts.

8.6 If an individual has a concern about potential research misconduct they should seek advice on process from the EI HR Manager and/or an EI Post-Graduate Director if they are a student. Additionally, they may seek advice their line manager, a Group Leader, the Director or, in the case of a matter involving the Director, the Chair of Board of Trustee Directors. In all cases, the concerns should be referred without delay.

8.7 **Reporting of Outcomes/Findings**

8.7.1. The Board of Trustee Directors considers the issue of scientific misconduct to be of the utmost importance. A full record of allegations will be presented to the Board meeting annually for review.

8.7.2. As required by the Institute grant terms and conditions, all issues of misconduct will be reported to the relevant UKRI research council via the designated contact. The issue will be reported if the matter concerns someone funded by or engaged with the Research Council(s) (including acting as a supervisor for a Research Council postgraduate student or engaged with peer review activities) even if it is about work not connected with a grant from UKRI.

8.7.3. EI is required to inform UKRI of any allegation of research misconduct where it relates to an individual's association with:

- A UKRI grant application under consideration;
- Any directly or indirectly funded UKRI research activity;
- UKRI activity such as acting as an expert reviewer or strategic advisor (e.g. panel, committee, council member).

This should be within one month of deciding to undertake a formal investigation (and must be reported at this stage at the latest) unless the case is deemed high-risk or an allegation is demonstrably irrefutable at an earlier stage, in which case UKRI should be informed immediately.

9. THE CONCORDAT FOR RESEARCH INTEGRITY AND ANNUAL STATEMENT

9.1 UKRI is a signatory to the Concordat to Support Research Integrity 2025[3] as a UKRI funded research institute EI is formally required to meet the requirements set out in this concordat along with the UKRI grant terms and conditions, and to adhere to the UKRI Policy and Guidelines on the Governance of Good Research Conduct.

9.2 The concordat seeks to provide a national framework for good research conduct and its governance. Signatories to the concordat to support research integrity, are committed to:

9.2.1. Upholding the highest standards of rigour and integrity in all aspects of research;

9.2.2. Ensuring that research is conducted according to appropriate ethical, legal and professional frameworks, obligations and standards;

9.2.3. Supporting a research environment that is underpinned by a culture of Integrity and based on good governance, best practice, and support for the Development of researchers;

[3] https://ukcori.org/wp-content/uploads/2025/04/The-Concordat-to-Support-Research-Integrity-2025.pdf

9.2.4. Using transparent, timely, robust and fair processes to deal with allegations of Research misconduct should they arise;

9.2.5. Working together to strengthen the integrity of research and to review progress regularly and openly.

9.3 An annual statement on research integrity will be provided to the Board and subsequently made public on the Institute website covering the following areas:

- a summary of actions and activities that have been undertaken to support and strengthen understanding and the application of research integrity issues.

- a statement to provide assurance that the processes the institution has in place for dealing with allegations of misconduct are transparent, timely, robust and fair, and that they continue to be appropriate to the needs of the organisation.

- a high-level statement on any formal investigations of research misconduct that have been undertaken, which will include data on the number of investigations.

- a statement on what the institute has learned from any formal investigations of research misconduct that have been undertaken, including what lessons have been learned to prevent the same type of incident re-occurring.

- a statement on how the institute creates and embeds a research environment in which all staff, researchers and students feel comfortable to report instances of misconduct.