

Annual statement on research integrity

Section 1: Key contact information

Question	Response
1A. Name of organisation	CRUK Scotland Institute (previously CRUK Beatson Institute)
1B. Type of organisation: higher education institution/industry/independent research performing organisation/other (please state)	Independent research performing organisation
1C. Date statement approved by governing body (DD/MM/YY)	Statement covering period 1 January 2023 to 31 December 2023 Approved by the CRUK Scotland Institute's Board of Directors on 04/03/2024
1D. Web address of organisation's research integrity page (if applicable)	https://www.crukscotlandinstitute.ac.uk/about/research-integrity.html
1E. Named senior member of staff to oversee research integrity	Name: Prof Martin Bushell Deputy Director of the CRUK Scotland Institute
	Email address: martin.bushell@glasgow.ac.uk
1F. Named member of staff who will act as a first point of contact for anyone wanting more information on matters of research integrity	Name: Dr Catherine Winchester Head of the Research Integrity Service
	Email address: c.winchester@beatson.gla.ac.uk

Section 2: Promoting high standards of research integrity and positive research culture.

Description of actions and activities undertaken

2A. Description of current systems and culture

We advocate the core values of research integrity (honesty, ethics, rigour, openness, transparency and accountability) in the generation and analysis, management and preservation, and dissemination and publication of data. Research integrity is fundamental to all aspects of our research and as such, all activities are overseen by the Head of the Research Integrity Service and endorsed by the Institute Director and Senior Management Team.

- **Policies**

Research integrity at the CRUK Scotland Institute is underpinned by the following policies relating to responsible research practices and a culture that is collaborative, inclusive and diverse:

- Code of Good Practice in Research
- Data Preservation
- Data Protection
- Ethics
- Financial Conflict of Interest
- Intellectual Property and Technology Transfer
- Misconduct in Research
- Press and Social Media
- Publishing and Open Access
- Statement on Dealing with Allegations of Research Misconduct Under United States Public Health Service (USPHS) Research-related Activities for Foreign Institutions

- Whistleblowing

In addition, we have policies that encompass generating a positive research culture: Career Development, Equal Opportunities, Bullying and Harassment, Adoption Leave and Pay, Maternity Leave and Pay, Paternity Leave and Pay, Shared Parental Leave and Pay, Special Leave, Flexible Working, Hybrid Working, Immigration and Visa and Long Service.

- **Systems**

We have systems in place to ensure our research is conducted and disseminated in a responsible manner.

Researchers at the CRUK Scotland Institute are supported, advised and protected, by the Head of the Research Integrity Service, who oversees research integrity training and raises awareness of best practice; supports data stewardship; develops and implements research policies and guidelines; conducts pre-submission manuscript reviews; supports post-publication data queries; coordinates the research integrity champions; engages with the sector to share and identify best practice; and is the internal and external point of contact for matters relating to research conduct and breaches of research integrity.

The CRUK Scotland Institute is fully committed to open access publishing and as such our papers are published under the CC BY 4.0 licence and are archived at Europe PubMed Central to maximise readership and use. We encourage researchers to use the [Credit¹](#) taxonomy to define authors' precise contributions and ensure appropriate credit is given and that authors are accountable for their data, as well as acknowledging other contributions to published work. To promote transparency and reproducibility in our papers, we encourage the publication of protocols, appropriate and responsible data presentation, such as the use of [Super Plots²](#), and clear and precise descriptions of data and metadata, in compliance with [FAIR³](#) standards. We have a mandatory process for archiving data associated with all publications and depositing large data sets in repositories, as well as promoting the sharing of all other data. To facilitate best practice in reporting, we have guidelines for preparing manuscripts, which can be used in conjunction with our publication checklist (available from our inhouse research integrity toolkit). In addition, all manuscripts are reviewed by the Head of the Research Integrity Service prior to journal submission or posting on pre-print servers.

We have over 40 [research integrity champions⁴](#), embedded within each research group and each core facility team. This voluntary role, mainly undertaken by early career researchers, enables grassroots activity in promoting and supporting research integrity. The champions play an invaluable part in disseminating information, implementing research policies and supporting the stewardship of published data in their groups, as well as engaging in projects with the Head of the Research Integrity Service and attending a yearly meeting of the research integrity

champions.

- **Training**

Research integrity training is mandatory for all researchers at the CRUK Scotland Institute, from PhD students to group leaders, and forms part of the induction process for all new researchers. Attendance is monitored and recorded by the Head of the Research Integrity Service.

Training is delivered as face-to-face workshops and seminars by the Head of the Research Integrity Service and scientists with relevant research experience. The training programme includes an induction and sessions on integrity in scientific communication, integrity in managing research data and responsible image processing. As well as outlining our policies and expectations the programme raises awareness of reproducible and responsible research practices, encourages behaviour change and offers opportunities to discuss important issues and new initiatives underpinning research integrity. It also serves to highlight support and guidance available at the CRUK Scotland Institute. Our training is bespoke and covers generic issues, but course content is specific to the local environment and the research being conducted.

Good research practice training continues informally within research groups and guidance on experimental design, data acquisition, processing and analysis is also captured in the training researchers receive from the [CRUK Scotland Institute's Advanced Technology⁵](#) facility staff.

In addition, researchers receive generic training to foster a positive research culture; Developing Team Trust and Culture, Bullying and Harassment, Equality and Diversity, Unconscious Bias, Positive Mental Health at Work and Leadership Styles and Quality.

- **Communications and engagement**

To identify and share best practice and to stay up to date with current developments we are members of several national research integrity organisations:

- Cancer Research UK's research integrity group
- Scottish Research Integrity Network (SRIN)
- UK Reproducibility Network ([UKRN⁶](#))
- UK Research Integrity Office ([UKRIO⁷](#))

The Head of the Research Integrity Service disseminates information internally via email, interactions with the research integrity champions, content in the research integrity training programme and the inhouse research integrity toolkit.

- **Culture, development and leadership**

We foster a collaborative and inclusive research culture that aims for all researchers to thrive and conduct responsible research. This is facilitated by membership and participation in a variety of activities across the Institute enabling everyone's voice to be heard; EDI Forum and Advocates, Disability and Neurodiversity Group, LGBTQ+ Community and Allies, Staff Forum, Postdoc Forum and Eco Committee. Additionally, researchers are supported by the wellbeing advice in the Employee Assistance Programme on the HR portal and trained mental health first aiders.

Researcher development is at the forefront of our research culture. As well as training researchers with technical, scientific and professional skills they are supported through mentoring, advisers and annual performance and personal development reviews. Key competencies, such as building relationships, collaboration, communication and presentation skills, curiosity and innovation, leadership and management capability and scientific outreach, are also evaluated to ensure we are taking a holistic approach to researcher development.

Effective leadership is an important aspect of our research culture and as such all new Group Leaders attend the EMBO Laboratory Leadership course. We also run leadership and management training programmes across the Institute to continue leadership development for more experienced research leaders.

- **Monitoring and reporting**

Queries relating to breaches of research integrity or allegations of research misconduct and investigations are recorded by the Head of the Research Integrity Service. In accordance with our Misconduct in Research Policy, the Head of the Research Integrity Service reports all concerns and initial informal investigations to the Institute Director. Preliminary misconduct investigations are reported to the Chair of the Board of Directors and all formal investigations are reported to CRUK and any other funder of the research/researcher concerned. Investigations involving researchers and data generated at external organisations are reported to the relevant funders and employers. Any problems identified in publications are reported directly to the journal concerned.

2B. Changes and developments during the period under review

- **Policies, practices and procedures**

In 2023, 25 review / commentary / collaborative articles were checked for text plagiarism using [iThenticate](#)⁸ and 59 primary research papers were reviewed for quality control and best reporting practices prior to submission by the Head of the Research Integrity Service. We checked all our first year PhD students' literature reviews and 10 final year PhD student theses for text plagiarism using [iThenticate](#)⁸. In addition, we revised our manuscript pre-submission review process and introduced a formal review report and the use of [ImageTwin](#)⁹ to scan figures for potential integrity issues. We have developed a research integrity action plan for 2024 to coincide with the development of the CRUK Scotland Institute's Research Integrity Service.

- **Communications and engagement**

We have continued to engage with the sector.

As members of CRUK's research integrity group we advised and shared practice, including guidance on data archiving and misconduct investigations, with a number of stakeholders and wrote articles for CRUK's cancer news blog ([Integrating training into research culture](#)¹⁰, [Why building networks is vital for integrity](#)¹¹ and [Look back and a look forward](#)¹²).

The Head of the Research Integrity Service joined [UKCORI's Research Integrity Indicators project](#)¹³ Advisory Group and Martin Bushell became our [UKRN Institutional Lead](#)¹⁴. We participated in UKRN's Open Research Programme and became part of the Community of Practice for the [Open and Responsible Researcher Reward and Recognition \(OR4\)](#)¹⁵ project.

We also shared practice at the UKSG 2023 annual conference, where the Head of the Research Integrity Service joined UKRIO on a panel discussing "[Cold comfort or hot potato: who's responsible for publication ethics?](#)"¹⁶.

- **Training**

The research integrity training programme was updated again in 2023 to encompass national initiatives for responsible and open research and to encourage researchers to reflect on good research practises within their field. We held 13 research integrity induction workshops, 9 integrity in scientific writing & communication workshops, 8 integrity in managing research data workshops and 1 responsible digital image processing seminar, for newly appointed research staff and as refresher sessions for long-standing staff. We also contributed to the University of Glasgow's MSc course in Cancer Research & Precision Oncology by delivering a workshop on establishing good research practices. In addition, training

was held for the research integrity champions on their role and how to support their research groups and for the CRUK Scotland Institute's Histology Facility.

- **Culture, development and leadership**

In 2023 we created a new HR position and appointed Sharon Gorman as the Head of People and Culture. The focus of Sharon's role is to deliver the vision and aims as set out in the Institute's 2020 EDI Strategy, including gender equality. This involves leading EDI activities and representing EDI on the Senior Management Team. Her role is supported by EDI Advocates, who are a representative group of staff and students. We also created the role of Head of the Research Integrity Service and promoted our Senior Research Adviser – Grants & Research Integrity (Catherine Winchester) to this position.

We provided leadership development for our Senior Management Team and Group Leaders, including training in strategic thinking skills to support delivery of the Institute's vision. We also supported our Group Leaders with leadership coaching. We provided mentoring opportunities through a range of channels including CRUK's [Women of Influence mentoring scheme¹⁷](#), which our fellows and early career researchers joined. Attendance was also encouraged at the ICR's [Pathway to Independence course¹⁸](#) and the University of Glasgow's sponsored [EMBO Lab Leadership course¹⁹](#). We worked in close collaboration with the University of Glasgow's [Athena SWAN VOICE Committee²⁰](#) to ensure that our early career researchers and faculty share best practice including input to our wider EDI Agenda.

2C. Reflections on progress and plans for future developments

Engagement with the sector was useful for sharing practice and keeping abreast of current best practice.

We have developed a research integrity action plan for 2024 that we will initiate with the development of the Institute's Research Integrity Service that will be led by the recently appointed Head of the Research Integrity Service.

2D. Case study on good practice

In 2023, the research integrity champions at the CRUK Scotland Institute continued to embrace and expand their roles of encouraging best research practices within

their own research groups. They now regularly hold focussed lab meetings dedicated to research integrity to discuss principles of good research practices, recap on Institute policies related to research integrity and disseminate updates from the research integrity champion's annual meeting. The Head of the Research Integrity Service has also attended lab meetings hosted by champions to support their discussions on manuscript preparation, including collation and storage of source data, and identifying and acknowledging research contributions. In addition, several champions have hosted the [Dilemma²¹](#) game, to initiate and structure conversations around research integrity and moral approaches to research. These activities by the research integrity champions are crucial for embedding the Institute's values of research excellence and reinforcing the training delivered by the Head of the Research Integrity Service.

Section 3: Addressing research misconduct

3A. Statement on processes that the organisation has in place for dealing with allegations of misconduct

Our **Misconduct in Research** policy sets out our procedure for making an allegation of research misconduct and how we deal with any such allegation, including the investigation steps, timescale, team, reporting and recommendations. The named person for making allegations of research misconduct is the Head of the Research Integrity Service, Dr Catherine Winchester, who undertakes an initial informal assessment of the validity and seriousness of any allegation. A report is submitted to the Institute Director who determines whether there is sufficient evidence of research misconduct to proceed with an investigation, which comprises of preliminary and formal stages. The preliminary investigation is undertaken by two staff members who have no conflicts of interest in the case, are unbiased and have expertise to evaluate the appropriate research issues. The preliminary investigators conclude whether the investigation should end or proceed to a formal investigation, in a report submitted to the Director. At this time, a summary of the report is submitted to CRUK's Chief Executive Officer, Director of Research Funding, Communications and Partnerships, Head of Research Funding Operations and Senior Policy & Governance Manager. The formal investigation panel includes an external member, as well as appropriate members of staff, who may or may not have been involved with the preliminary investigation. Their report is submitted to the Director, Chair of the Board of Directors, CRUK's Chief Executive Officer, Director of Research Funding, Communications and Partnerships, Head of Research Funding Operations and Senior Policy & Governance Manager, and if appropriate other funding organisations.

The publicly accessible web link to our Misconduct in Research Policy is not yet in place.

Our **Whistleblowing** policy is designed to enable staff that have a reasonable and honest suspicion of malpractice or impropriety, including research misconduct, to raise such concerns. Any concerns raised are taken seriously and investigated responsibly, without fear of reprisal.

The Institute has appointed an independent third party, NAVEX, to provide an external whistleblowing hotline service that is available 24 hours a day, 7 days a week.

Our **Bullying and Harassment** policy aims to create an environment that promotes

dignity and respect to all, and in which individual differences and the contributions of all our staff are recognised and valued. All complaints of harassment or bullying are dealt with promptly, either informally by addressing the harasser or seeking advice from HR or the complainant's Group Leader or following our formal procedure, whereby an investigation is undertaken using the CRUK Scotland Institute's Disciplinary and Grievances procedures. If necessary, counselling or training will be offered to the complainant and those accused of bullying or harassing behaviour. This policy aligns with CRUK's Policy on Dignity at Work in Research. The bullying and harassment policy and procedure is subject to ongoing review.

The CRUK Scotland Institute creates and embeds a research environment in which all staff and students feel comfortable to raise concerns or report instances of misconduct through research integrity training with the Head of the Research Integrity Service, signposting on our research integrity toolkit on the intranet and on our research integrity page on the CRUK Scotland Institute's website and our research policies. In addition, the Head of the Research Integrity Service is available for staff and students to have confidential discussions, raise concerns or report research misconduct. In line with the Concordat to Support Research Integrity, our research integrity induction emphasises researchers' responsibility to report research misconduct.

- **Lessons learned**

Research misconduct investigations can be complex and overlap with other concerns. We recognised that research misconduct investigations benefitted from aligning with work in other departments and the consideration of wider issues, such as HR. Investigations can be emotionally challenging for the claimant, respondent and investigator, and the mental well-being of all parties concerned should be taken into consideration, with training and support provided.

3B. Information on investigations of research misconduct that have been undertaken

Type of allegation	Number of allegations			
	Number of allegations reported to the organisation	Number of formal investigations	Number upheld in part after formal investigation	Number upheld in full after formal investigation
Fabrication	0	0	0	0
Falsification	0	0	0	0

Plagiarism	1	0	0	0
Failure to meet legal, ethical and professional obligations	0	0	0	0
Misrepresentation (eg data; involvement; interests; qualification; and/or publication history)	4	0	0	0
Improper dealing with allegations of misconduct	0	0	0	0
Multiple areas of concern (when received in a single allegation)	1	0	0	0
<i>Other*</i>	0	0	0	0
Total:	6	0	0	0

In 2023, there were no formal research misconduct investigations at the CRUK Scotland Institute. However, anonymous allegations of research misconduct posted on PubPeer or concerns raised by individuals and journals, were reviewed by the Head of the Research Integrity Service in accordance with our Misconduct in Research Policy and statement. None of the initial informal investigations performed by the Head of the Research Integrity Service proceeded to preliminary or formal investigation.

Links

1. <https://credit.niso.org>
2. <https://rupress.org/jcb/article/219/6/e202001064/151717/SuperPlots-Communicating-reproducibility-and>
3. <https://www.go-fair.org/fair-principles/>

4. <https://www.beatson.gla.ac.uk/about/research-integrity.html>
5. <https://www.beatson.gla.ac.uk/advanced-technologies.html>
6. <https://www.ukrn.org>
7. <https://ukrio.org>
8. <https://www.ithenticate.com>
9. <https://imagetwin.ai>
10. <https://news.cancerresearchuk.org/2023/01/24/research-with-integrity-integrating-training-into-research-culture/>
11. <https://news.cancerresearchuk.org/2023/03/22/research-with-integrity-why-building-networks-is-vital-for-integrity/>
12. <https://news.cancerresearchuk.org/2023/06/14/research-with-integrity-a-look-back-and-a-look-forward/>
13. <https://ukcori.org/our-work/exploring-indicators-of-research-integrity/>
14. <https://www.ukrn.org/institutional-leads/>
15. <https://www.ukrn.org/open-and-responsible-researcher-reward-and-recognition-or4/>
16. <https://www.uksg.org/event/conference23>
17. <https://www.cancerresearchuk.org/funding-for-researchers/research-career-development-opportunities/additional-support-for-funded-researchers/women-of-influence-mentorship-scheme>
18. <https://www.icr.ac.uk/careers/working-at-the-icr/professional-career-development#:~:text=We%20run%20Pathway%20to%20Independence,their%20transition%20to%20academic%20independence.>
19. <https://lab-management.embo.org/course-overview>
20. <https://www.gla.ac.uk/schools/cancersciences/athena/athenaswanvoicecom>

mittee/

21. <https://www.eur.nl/en/about-eur/policy-and-regulations/integrity/research-integrity/dilemma-game>