Annual Statistics on Formal Investigations of Research Misconduct in Ireland - 2019 Calendar Year

The National Forum on Research Integrity[1] ('the National Forum') was established in June 2015. In April 2018, the National Forum agreed to publish an annual consolidated report about formal investigations of research misconduct concluded within its member research performing organisations (RPOs) in the preceding calendar year. The first report, of statistics from the 2016 calendar year, was published during 2019 and represented the first time in Ireland that data of this nature has been collated centrally and made available to the public. It accords with Action 7.3b in Innovation 2020,[2] Ireland's strategy for research, development and innovation "Agree a process and format for the publication of the outcome of research integrity investigations having regard to existing regulations relating to misconduct and discipline." This approach aligns Ireland with other European countries such as Denmark and Austria, which have established national committees/structures on research integrity, and are in the practice of publishing similar reports.

The National Policy Statement on Ensuring Research Integrity in Ireland[3] sets out the following definitions of research misconduct, adapted from the OECD document "Best practices for ensuring scientific integrity and preventing misconduct".[4] These are summarised in the table below:

Core "Research Misconduct" • **F**abrication of data • **F**alsification of data • **P**lagiarism FFP includes, for example: - Selectively excluding data from analysis - Misinterpreting data to obtain desired results (including inappropriate use of statistical methods) - Manipulating images in publications - Producing false data or results under pressure from a sponsor	**Research practice misconduct, for example:** - Using inappropriate (e.g., harmful or dangerous) research methods - Poor research design - Experimental, analytical, computational errors - Violation of human subject protocols - Abuse of laboratory animals - Concealment of research misconduct
Data-related misconduct, for example: - Not preserving primary data where appropriate - Bad data management, storage - Withholding data from the scientific community NB: The above applies to physical research materials as well	**Publication-related misconduct, for example:** - Claiming undeserved authorship - Denying authorship to contributors - Artificially proliferating publications ("salami-slicing" and "self-plagiarism") - Failure to correct the publication record - Including authors without permission

[1] http://www.iua.ie/research-innovation/research-integrity/
[2] https://dbei.gov.ie/en/Publications/Publication-files/Innovation-2020.pdf
[3] http://www.iua.ie/wp-content/uploads/2019/08/IUA_Research_Integrity_in_Ireland_Report_2019.pdf
[4] http://www.oecd.org/sti/scienceandtechnologypolicy/40188303.pdf

	- Selective citing to enhance importance of finding - Establishing or supporting journals that undermine the quality control of research ('predatory journals') - Grossly exaggerating the importance and practical applicability of findings.
Personal misconduct in the research setting, for example: - Inappropriate personal behaviour, - Harassment, bullying - Inadequate supervision, mentoring, counselling of researchers - Insensitivity to social or cultural norms - Misusing seniority to encourage violations of research integrity - Delaying or inappropriately hampering the work of other researchers.	**Financial, and other misconduct, for example:** - Peer review abuse e.g., non-disclosure of conflict of interest, unfairly holding up a rival's publication - Misrepresenting credentials or publication record - Misuse of research funds for unauthorised purchases or for personal gain - Making an unsubstantiated or malicious misconduct allegation

The National Forum agreed to publish the following information:

- The number of formal research misconduct investigations completed in the preceding calendar year;
- The number of those investigations where the allegations were upheld;
- An overview of the types of misconduct seen in those investigations (as outlined in the table above).

Formal research misconduct investigations are those investigations carried out by the RPO following a preliminary review of allegations made against an individual or individuals. The preliminary review involves checking a) whether the allegations fit within the published definitions of research misconduct as outlined above, b) if the allegations are frivolous, mistaken or malicious and c) if there is sufficient substance to justify a formal investigation. More details on the process can be found in the National Forum's guidance document "Guidelines for the Investigation of Misconduct in Research".[5]

During summer 2020, the National Forum gathered the information outlined in the list above for the calendar year 2019 on a confidential basis from all of the RPOs represented at the Forum. This includes the universities, institutes of technology, the Royal College of Surgeons in Ireland, Technological University Dublin, Teagasc, Marine Institute, Dublin Institute for Advanced Studies and Mary Immaculate College.[6]

The data gathering exercise determined that there were **two** formal investigations concluded in the calendar year 2019 in the RPOs, of which one was fully upheld**.** The investigations pertained to:

- Plagiarism
- Other

A number of international examples exist of reported concluded investigations in similar contexts. For example, the Austrian Commission for Research Integrity, established in 2008, in its Annual Report for 2019,[7] reported on 19 concluded inquiries, of which five were upheld and one was inconclusive. The most recent published Decisions of the Danish Committee on Research Misconduct, from 2015,[8] included details of four concluded investigations, of which none were upheld. In general, the number of cases reported by these entities varies from year to year. It is important to note that both Austria and Denmark invest more in research in Higher Education annually than Ireland. According

[5] http://www.iua.ie/wp-content/uploads/2019/08/Guidelines-for-RI-investigations-FINAL-17-08-16-1.pdf

[6] There are approximately 22,000 researchers (including academic staff, research staff, research students and research support staff) across these organisations combined. Reference: https://enterprise.gov.ie/en/Publications/Publication-files/HERD-2016-2017.pdf and information obtained directly from Teagasc, the Marine Institute and Dublin Institute for Advanced Studies.

[7] https://oeawi.at/wp-content/uploads/2020/07/Annual-Report-2019-final.pdf

[8] Formerly the Danish Committees on Scientific Dishonesty, established 1992. https://ufm.dk/en/research-and-innovation/councils-and-commissions/The-Danish-Committee-on-Research-Misconduct/decisions/2015/2015

to the OECD, the annual Higher Education Expenditure on Research and Development (HERD) in Austria and Denmark is $3.1bn and $2.9bn respectively, compared to $924m in Ireland.[9]

ABOUT THE NATIONAL RESEARCH INTEGRITY FORUM

The National Forum on Research Integrity ('the National Forum') has its origins in the publication of the "National Policy Statement on Ensuring Research Integrity in Ireland".[2] It was established in June 2015 with representation from research performing organisations, research funders and other stakeholders to ensure continual development and adoption of good practice towards a strengthened approach to ensuring research integrity in Ireland. The Forum is coordinated by the Technological Higher Education Association and the Irish Universities Association and is chaired by Professor Anita Maguire, Vice President for Research & Innovation at University College Cork (UCC). The Deputy Chair is Dr Jennifer Brennan from the Technological Higher Education Association.

Key responsibilities of the National Forum:

- To support the implementation of research integrity policies and processes in a harmonised manner across the research performers;
- To support national research funders in implementing harmonised research integrity statements in grant conditions and associated audit processes;
- To agree a process and format for the public dissemination of the outcome of research integrity investigations having regard to existing regulations relating to misconduct and discipline in the research-performing organisations, and the Terms and Conditions of grants awarded by the research funding organisations;
- To support the development and roll-out of research integrity training programmes for staff and students in the research performers;
- To monitor international developments and policy in the area of research integrity, and making appropriate recommendations for adjustments in research integrity policy and practice in Ireland;
- To communicate the importance of research integrity to the Irish research community and to the general public.

More information on the members and role of the Forum can be found at https://www.iua.ie/for-researchers/research-integrity/

[9] https://read.oecd-ilibrary.org/science-and-technology/main-science-and-technology-indicators/volume-2019/issue-1_g2g9fb0e-en#page53