



Annual Statistics on Formal Investigations of Research Misconduct in Ireland - 2022 Calendar Year

The National Forum on Research Integrity¹ (NRIF) was established in June 2015. In April 2018, the NRIF 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 had been collated centrally and made available to the public. Reports for the calendar years 2017 through 2020 have been published subsequently and are available for review online.¹ The publication of these reports accorded 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 several other European countries 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 Ireland³ 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:

<p>Core “Research Misconduct”</p> <ul style="list-style-type: none"> • Fabrication of data • Falsification of data • Plagiarism <p>FFP includes, for example:</p> <ul style="list-style-type: none"> - 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 	<p>Research practice misconduct, for example:</p> <ul style="list-style-type: none"> - 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
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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>

<p>Data-related misconduct, for example:</p> <ul style="list-style-type: none"> - Not preserving primary data where appropriate - Bad data management, storage - Withholding data from the scientific community <p>NB: The above applies to physical research materials as well</p>	<p>Publication-related misconduct, for example:</p> <ul style="list-style-type: none"> - 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 - 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.
<p>Personal misconduct in the research setting, for example:</p> <ul style="list-style-type: none"> - 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. 	<p>Financial, and other misconduct, for example:</p> <ul style="list-style-type: none"> - 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 NRIF 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 NRIF’s guidance document “Guidelines for the Investigation of Misconduct in Research”.⁵

During January 2024, the NRIF gathered the information outlined in the list above for the calendar year 2022 on a confidential basis from the RPOs. This includes the universities, technological universities, institutes of technology, the Royal College of Surgeons in Ireland, Teagasc, Marine Institute, Dublin Institute for Advanced Studies and Mary Immaculate College.⁶

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. A full list of the RPO’s who submitted a response is annexed to this report.

The data gathering exercise determined that there were **six** formal investigations concluded in the calendar year 2022 in the RPOs, of which **two** were upheld. The investigations pertained to:

- Fabrication (one investigation, was upheld);
- Plagiarism (one investigation, not upheld);
- Data Related Misconduct (one investigation, not upheld);
- Research Practice Misconduct (one investigation, was upheld);
- Publication-Related Misconduct (one investigation, not upheld).
- Personal Misconduct in the Research Setting (one investigation, not upheld).

There are a number of international examples of reported concluded investigations in similar contexts. For example, the Austrian Commission for Research Integrity, established in 2008, in its Annual Report for 2022,⁷ reported on 26 concluded inquiries, of which six were upheld. In its third year of operation (2022), the Swedish National Board for Assessment of Research Misconduct concluded investigations on 40 cases, of which seven were upheld.⁸ UK Research & Innovation reported on 74 allegations of research misconduct (of which thirteen were upheld and one partially upheld) reported to or otherwise detected by the UK Research Councils and Research England during the period 1st April 2021 to 31st March 2022.⁹ In general, the number of cases reported by these entities varies from year to year. It is important to note that all four countries mentioned here invest more in research in Higher Education annually than Ireland. According to the OECD’s 2022 Report, the estimated annual Higher Education Expenditure on Research and Development (HERD) in Ireland is \$939.6m in 2021, compared to \$3.8bn Austria, \$4.9bn in Sweden and \$20bn in the UK (only 2020 available).¹⁰

The chart below (*Fig. 1.*) shows the trend in numbers of formal investigations of research misconduct carried out in Irish RPOs since 2016 (when records began). Similar to the international examples described above, the number of formal investigations has varied from year to year. The number has not yet exceeded six investigations in any one calendar year. Publication-related misconduct is the most frequently observed, representing 41% (*Fig. 2.*, 9 in number) of formal investigations undertaken since 2016, and 38% (*Fig. 3.*, 5 in number) of upheld allegations.

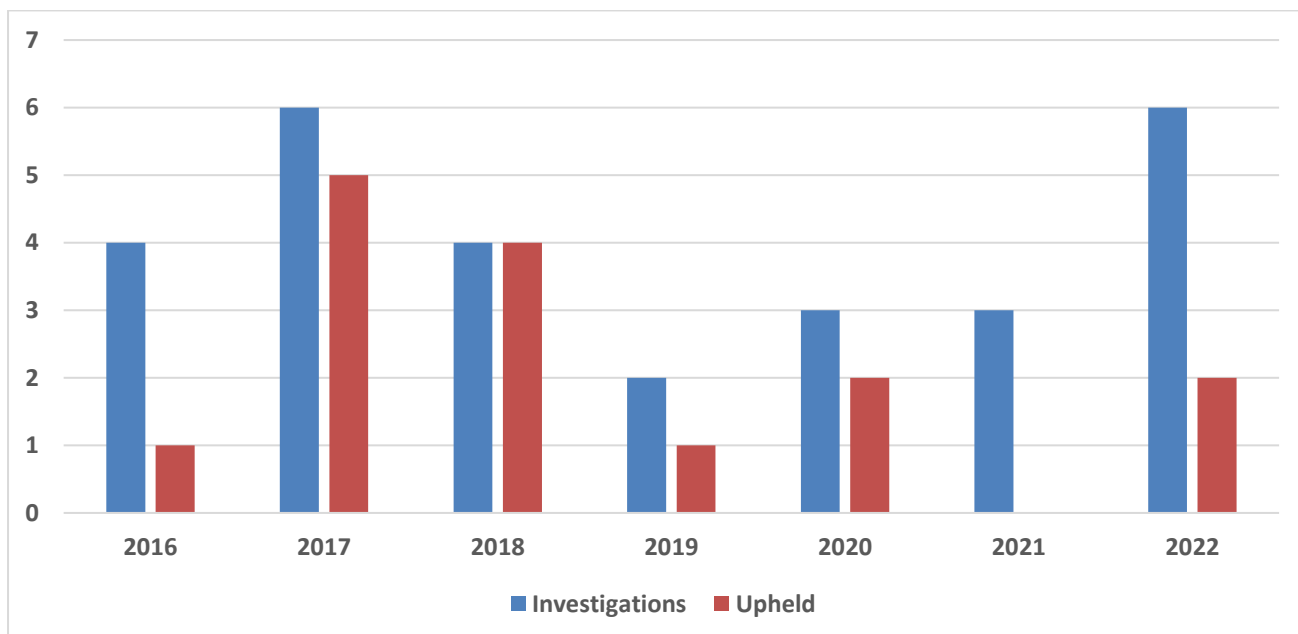


Fig. 1. Formal investigations of research misconduct carried out in Irish RPOs since 2016

⁷ Report for 2022 (to date only published in German) <https://oeawi.at/wp-content/uploads/2024/02/Jahresbericht-Kommission-2022.pdf>

⁸ Board Report for 2022 (only published in Swedish) is available at <https://npof.se/wp-content/uploads/2023/06/Arlig-rapport-Npof-2022.pdf> and an overview of their statistics to date can be found here: <https://npof.se/en/statistics/>

⁹ <https://www.ukri.org/wp-content/uploads/2023/05/UKRI-220523-AnnualNarrativeStatementResearchIntegrity2021To2022.pdf>

¹⁰ https://read.oecd-ilibrary.org/science-and-technology/main-science-and-technology-indicators/volume-2022/issue-2_1cdcb031-en#page54

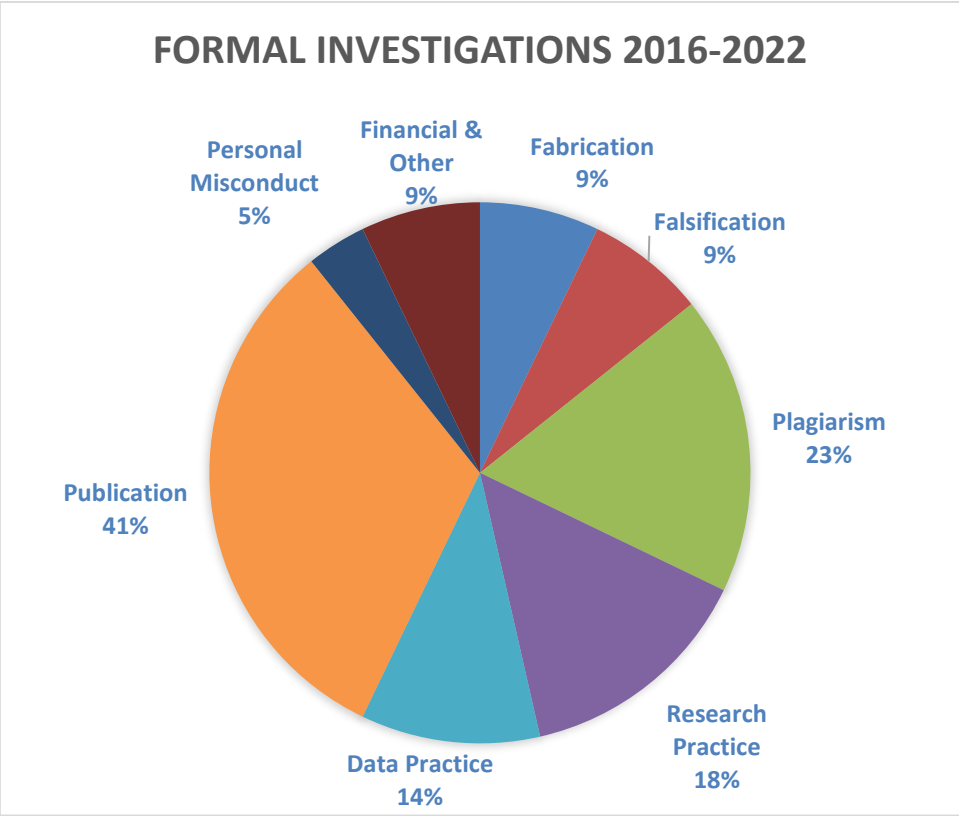


Fig. 2. Percentage of formal investigations undertaken per category of research misconduct

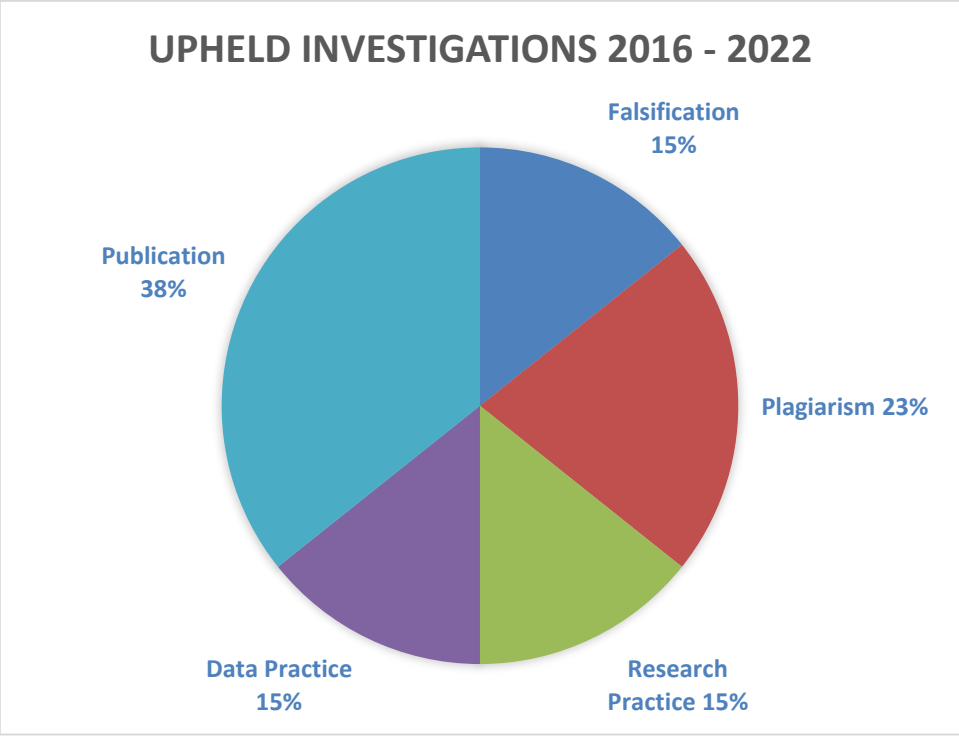


Fig. 3. Percentage of investigations upheld per category of research misconduct

ABOUT THE NATIONAL RESEARCH INTEGRITY FORUM

The National Forum on Research Integrity (NRIF) 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 NRIF is coordinated by the Technological Higher Education Association and the Irish Universities Association. In 2022, the NRIF restructured into two elements: 1) a high-level Steering Group and 2) an RPO-led Community of Practice. More information on the members and role of the NRIF can be found at <https://www.iaa.ie/for-researchers/research-integrity/>

ANNEX

LIST OF RESEARCH PERFORMING ORGANISATIONS RESPONSES RECEIVED FOR INCLUSION:

Atlantic Technological University (ATU)
Dublin City University (DCU)
Dublin Institute for Advanced Studies (DIAS)
Dundalk Institute of Technology (DKIT)
Marine Institute (MI)
Mary Immaculate College (MIC)
Munster Technological University (MTU)
Maynooth University (MU)
National Institute for Bioprocessing Research and Training (NIBRT)
Royal College of Surgeons in Ireland (RCSI)
South East Technological University (SETU)
Trinity College Dublin (TCD)
Teagasc
Technological University Dublin (TUD)
Technological University of the Shannon (TUS)
University College Cork (UCC)
University College Dublin (UCD)
University of Limerick (UL)