



Research Integrity in the UK

**Annual statement of the
UK Committee on Research Integrity**

2025



UKCORI
UK Committee on
Research Integrity



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Executive summary

Integrity underpins trustworthy research and thereby enables research to deliver impact. In this, the third annual statement of the UK Committee on Research Integrity, we provide a comprehensive overview of the current state of research integrity in the UK and highlight the challenges it faces.

The UK's attention to research integrity contributes to the strength and value of its research globally and domestically, particularly in the context of the UK's wide international research collaborations. The UK Committee on Research Integrity ('the Committee') promotes and supports a high integrity research system built on rigour, transparency and open communication, honesty, care and respect, and accountability.

This annual statement outlines the core framework guiding UK research integrity. We present analysis of the latest available evidence about research integrity and summarise the Committee's recent work in two key areas: the implications of generative artificial intelligence (GenAI) for research integrity, and the processes used to address research misconduct and poor research practices.

UK research is guided by a shared set of principles for research integrity, as set out in the Concordat to Support Research Integrity. The updated Concordat, published in April 2025, is a national framework that clearly defines the responsibilities of members of the research community, funders and employers in supporting and delivering research with integrity. Promoting multi- and interdisciplinary collaboration is a key priority in the research system.¹ Achieving this requires a shared framework for research integrity, which is provided by the Concordat.

In this annual statement we look at the evidence from organisations whose work is illustrative of the range, depth and breadth of work taking place across the research system that supports high integrity. Our findings show that trust and communication are essential for introducing new initiatives, and that evidence being gathered locally, nationally and globally is informing the activities taking place in research organisations.

Analysis of evidence relating to UK research outputs provides insight into how the system is working. This includes analysis of datasets relating to withdrawn research outputs (retractions), assessment of integrity in citations data and the UK's record in open publication. In these we find that UK researchers and research rate highly when compared with other countries.

As the use of GenAI tools rapidly increases among the research community, we consider the principles of integrity, highlighting case studies that demonstrate the commitment and innovation of colleagues across the system to continue improving integrity related practices.

Although available evidence does not provide a complete picture of research integrity in the UK, it does point to a system that is actively working to support and protect these important values. Despite pressures on the UK system and its relative size compared with other research-intensive nations, evidence shows that research integrity remains a priority in the UK and that the system is performing well in maintaining these standards. However, continued progress is essential, and this remains the responsibility of everyone working in the research system.

The UK's research system is built on strong foundations that continue to support its growth and resilience. The Committee convenes leaders from across the research system to strengthen, uphold and champion reliable and responsible research. We are now working across the sector to define the future infrastructure required to safeguard research integrity and ensure the continued trustworthiness of UK research.



Introduction

The UK Committee on Research Integrity ('the Committee') is a national voice for research integrity. We bring together leaders from across the research system to support and promote a research system built on trust, transparency and continuous improvement.



Research informs decisions that can improve people's lives and livelihoods. The Spending Review 2025 (SR25) indicated the government's confidence in research and development (R&D) and its ability to drive innovation, growth and living standards. It also recognised the long-term impact of R&D, including an above inflation increase in R&D spend, with total funding increasing to £22.6 billion per year by 2029-30.²

We believe that carrying out research with integrity is the most effective approach for the research community to deliver this impact and offers the best value for money. However, it can be difficult to identify robust evidence of this important effect. A House of Lords briefing published in October 2024, for example, acknowledged the difficulty of capturing the contribution that research makes to the economy, as much of it in the long term and in ways that cannot be anticipated.³

In our previous annual statements, the Committee outlined the importance of research integrity. In this statement, we consider how it adds value, shapes research and the research environment, and contributes to the trustworthiness of research, globally and domestically.

We also look at the challenge of sourcing evidence for research integrity. Currently, available data provides only a partial picture of integrity in the UK. In March 2025, we held a roundtable on evidence for the value of research integrity, which determined that existing data sources do not offer an easy mechanism for assessment.⁴ In this statement, the data we consider provides as complete a picture as is currently possible of research integrity across the UK. However, we openly acknowledge its limitations for our purposes and, where possible, suggest areas that require attention to identify practice.

This statement examines contributions to research integrity from across the research lifecycle, from the formation of ideas to the active research process, the presentation of findings and communication to different audiences. The findings demonstrate that many of the people working across the UK research system are actively involved in activities that support, promote, recognise and contribute to a rigorous, thriving and sustainable research system. This includes the actions that influence how research is conducted, as well as the trustworthiness of research outputs.

At a glance

- **Research integrity is vital to the success of UK research, ensuring that investment in research delivers trustworthy, high-quality outcomes that make a difference to everyday lives.**
- **Research informs decisions that impact people's lives. This means that public trust and continued engagement with research are crucial to support ongoing public investment.**
- **The refreshed Concordat to Support Research Integrity, published in April 2025, provides an opportunity to galvanise the research system with a clear framework of principles and responsibilities integral to high quality research and that can apply to use of GenAI.^{5,6}**
- **Integrity is exemplified by a set of practices and mode of working that must be continuously demonstrated throughout all parts of the research community.**
- **Creation and publication of annual statements on research integrity make an important contribution to transparency and accountability of the research system.**



Creating the conditions for research with high integrity

The Committee's role is to understand and build the evidence base on research integrity. This includes both the impact of incentives on the system, as well as the practices of those involved in research.

There are limitations to the data available for the purpose of understanding integrity. However, although available data sources do not provide a complete picture of UK research integrity and how it compares with other countries or regions, they do provide useful insight into how integrity is influenced by and influences the research system.

Our previous analysis of available data related to open research, retractions of research outputs and the views of research community members. It indicated that research integrity remains a topic that receives attention from those working in the UK system, as part of efforts to improve research environments and recognise responsible research practices.^{7,8} In collaboration with the research system, we have now developed a set of potential indicators for research conducted in universities which, when put in place, can create conditions for research with high integrity.⁹ The indicators can also be adopted by industry, government and others who conduct research.

Trust in research and researchers depends on many factors and may look different depending on whether a person works in the research system, funds research, or is a beneficiary of specific projects or research more widely. A study published in January 2025, which looked at trust in scientists across 68 countries, found that trust in scientists is moderately high.¹⁰ The UK ranked 15th of 68 countries and 3rd of the 27 European countries included in the study.

Evidence from the Public Attitudes to Science 2019 report showed that a high trust for the research community existed within the UK at the time of the survey.¹¹ Over 75% of respondents surveyed on this question indicated that they trusted scientists, researchers and engineers in a variety of settings ranging from government to universities. While respondents valued honesty in researchers, they worried about transparency.

Location of research activity also impacted trust, with researchers in universities more trusted to follow professional rules and regulations than researchers in government, private companies, charities or environmental groups. In February 2025, UKRI, Ipsos and the British Science Association launched the latest version of the study into attitudes to science, with findings expected to be released in late 2025.¹²





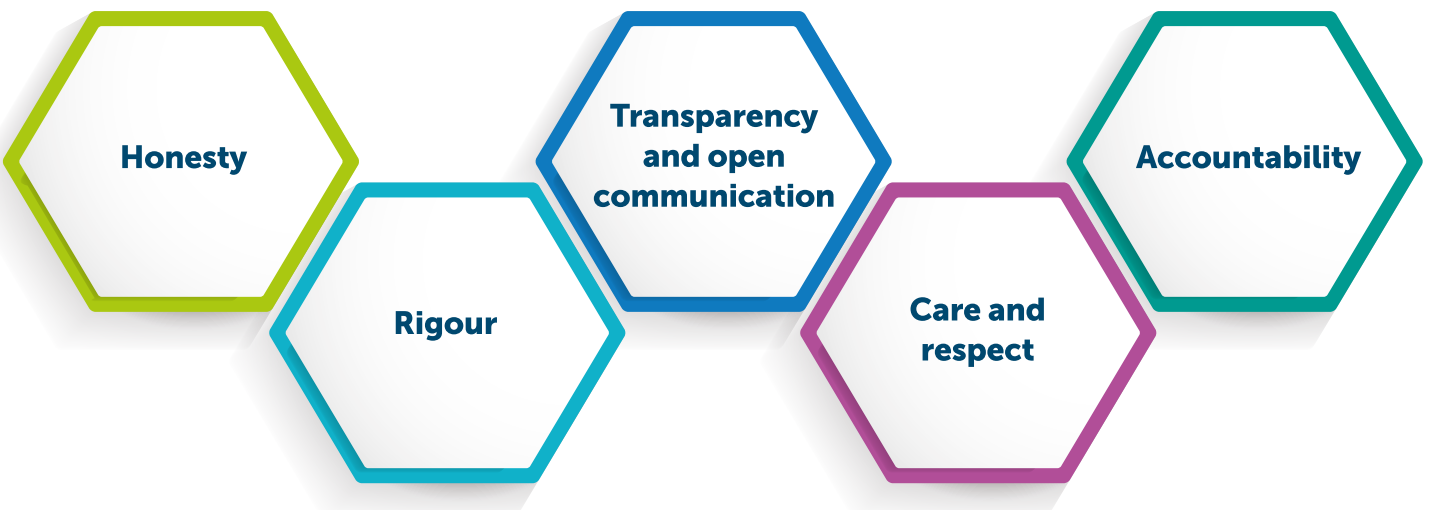
The Concordat to Support Research Integrity

The Concordat to Support Research Integrity (the 'Concordat') is the UK's national framework for promoting high standards of research practice and research governance¹³ Published in 2012 and updated in 2019, the Concordat outlines five core principles that underpin responsible research practices across all disciplines and institutions where research is conducted. It also sets a series of expectations related to upholding these principles through five commitments for the research community, employers and funders of research.



In 2025, a refreshed Concordat to Support Research Integrity was launched in the UK. This recognised the relevance of the principles and expectations to a wider audience, noting the benefits of aligning expectations and improving practice as highlighted during the 2024 consultation.¹⁴ The Government Office for Science has also revised its *Guidance to implement the Concordat to Support Research Integrity within government*¹⁵ and notes the importance of the principles for research undertaken by government departments and professions.

UK Principles of Research Integrity



Concordat commitments

Commitment 1:

Maintaining the highest standards of research integrity – the principles

Commitment 2:

Maintaining the highest standards of research integrity – expectations and compliance

Commitment 3:

Embedding a culture of research integrity

Commitment 4:

Questionable research practices and potential research misconduct

Commitment 5:

Accountability and continuous improvement in research integrity

Awareness of the Concordat

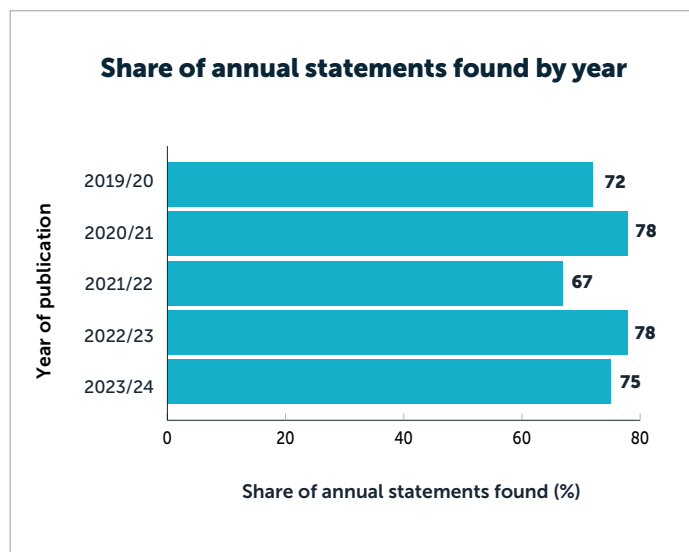
In 2023, Vitae, a non-profit programme with a membership model that champions careers in research, conducted the Culture, Employment and Development of Academic Researchers Survey (CEDARS).¹⁶ The survey found that 23% of respondents had some understanding of the Concordat and 33% knew that it existed even if they did not know it in detail. This suggests there is an opportunity to increase awareness of the Concordat among researchers. Vitae's 2025 CEDARS was launched in March and new analysis is expected later this year.

With our new responsibility as host of the Concordat and its signatories group, we are working to enhance awareness and embed the Concordat's principles and responsibilities across UK research.

Analysis of annual statements on research integrity

Annual statements on research integrity are produced and published by research organisations to outline their progress in meeting the expectations set by the Concordat, including responsibilities set under each of its five commitments, as well as information about research misconduct cases. These statements bring transparency to integrity practices and provide an opportunity to share good practice and evidence of activities across the sector.

In partnership with the Research Integrity Concordat Signatories group, in 2025 the Committee commissioned an analysis of annual statements, including those published by government, independent research organisations and universities.¹⁷ This followed an analysis in 2023, so that we could explore changes to institutional approaches to research integrity.



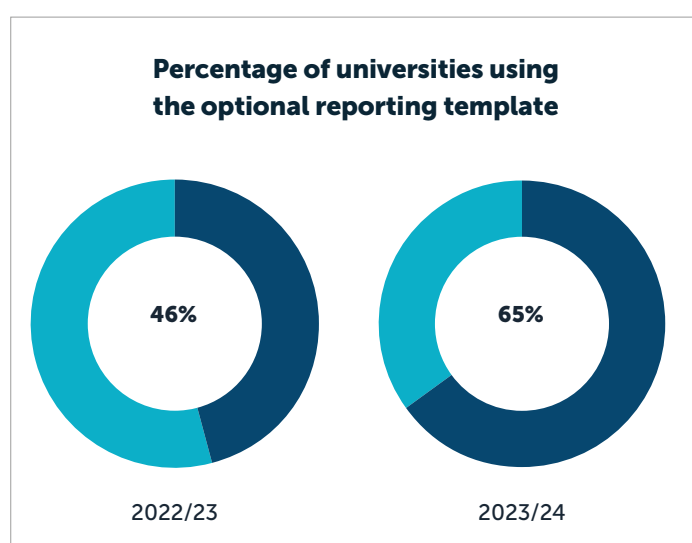
The analysis, conducted by Research Consulting, confirmed there was relative consistency for universities between the observations made in 2023 and those made in 2025.¹⁸

Comparison with the findings of the 2023 analysis

| 2023 report findings (universities) | Reflections from the 2025 analysis (universities) |
|---|--|
| #1 Annual statements describe diverse activities in different institutional contexts | Institutions continue to showcase significant adaptation of provision to their local circumstances and context. |
| #2 Annual statements show evidence of institutions learning from investigations | Lessons learned continue to emerge from annual statements; a vast majority of statements in our dataset include information on misconduct allegations and investigations. |
| #3 Research integrity is part of broader discussions around research culture | Research culture and leadership remain front and centre of annual statements, with significant recognition of their importance and impact. |
| #4 Support and training on research integrity are focused on early career stages | Most statements discuss forms of support and training available across levels of seniority, although coverage continues to focus on new staff and students. |
| #5 The effectiveness of research integrity activities is not formally monitored | The monitoring and assessment of the impact of research integrity activities remains low, but we have identified a set of illustrative examples of how this can be achieved. |

The data show that universities continue to consider research integrity to be a priority, and that high integrity has been and continues to be embedded across institutions, with engagement extending to different roles from researchers to governing bodies. The publication of an annual statement enables universities to showcase activities happening across their institutions that directly, or indirectly, support research integrity. These activities vary widely based on characteristics of the institution, as well as their experience of working on issues related to research integrity and research culture.

Use of the annual statement reporting template introduced in November 2022 has continued to increase, possibly signifying it has been a useful tool to support universities in developing their statements, as well as aiding cross-sector analysis of the statements.¹⁹



Data on misconduct in universities, as defined in the Concordat, suggests some fluctuation in the number of misconduct allegations reported and the number of cases investigated.

Allegations, investigations and outcomes identified in in-scope annual statements

| Category | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|--|--------------|--------------|--------------|--------------|--------------|
| Number of misconduct allegations | 283 | 277 | 197 | 181 | 228 |
| Number of investigations (as percentage of reported allegations in the period) | 183 (65%) | 154 (56%) | 103 (52%) | 139 (77%) | 105 (46%) |
| Number of allegations upheld in full (as percentage of investigations) | 47 (26%) | 86 (56%) | 23 (22%) | 74 (53%) | 52 (50%) |
| Number of allegations upheld in part (as percentage of investigations) | 11 (6%) | 7 (5%) | 8 (8%) | 29 (21%) | 12 (11%) |

The analysis carried out by Research Consulting includes 21 annual statements produced by government bodies. These statements describe actions underway to support high integrity. They demonstrate the diverse purposes and structures across government bodies, which were evident in tailored practice and policies that aligned with each organisation's needs. The following three examples illustrate approaches to transparency taken by different government bodies.

- In its application of the principle of open and transparent communication, the Ministry of Defence 2022-23 statement notes that the department "must be as open and transparent as possible with publicly funded research, which should be free to access wherever possible, and released promptly and in a way that promotes public trust."²⁰
- The Department for Levelling Up, Housing and Communities (now the Ministry of Housing, Communities and Local Government) statement describes the department's policy to publish details of externally commissioned research.²¹
- The National Police Chiefs' Council makes, whenever possible, all of its research findings and the data on which they are based openly available.²²

Case study:**A tailored approach to an annual statement**

The Cabinet Office has identified the need to introduce new internal guidance and processes in relation to research transparency, ethical research and supporting quality research. For example, their annual statement includes plans for implementing processes to support regular clearance for publication of research plans before research commences and of publishing research findings promptly on completion.^{23, 24}

Annual statements produced and, when possible, published by government bodies provide a rich resource for increasing knowledge and understanding of how government contributes to and promotes the five principles of research integrity. Their publication also facilitates collaboration between government and other research organisations and provides members of the public with information about how research integrity is upheld.

Analysis of annual statements produced by other research organisations, such as those found in the public sector, included nine statements from 2022/23 and 10 from 2023/24. As with the statements published by government bodies, these indicated diverse contexts, purposes and approaches to research integrity. Recurring themes included the use of policies and procedures to encourage good research practice, provision of training and development activities, and emphasis on the importance of a positive research culture to enable research integrity.

The analysis of annual statements provides a snapshot of the contributions that UK universities, government bodies and other research organisations make to research integrity. The findings do not suggest that practice across the UK is perfect, however, they do demonstrate there is concerted effort within organisations to support, improve and maintain high integrity research practices.

Encouraging annual statements from all research organisations

The Committee would like to see all research organisations create and publish an annual statement. We will be working with the Research Integrity Concordat Signatories Group to increase knowledge of the Concordat and why it matters. We will seek to understand why eligible employers of researchers have not published an annual statement and will work with them to establish processes that improve adherence with the Concordat reporting requirement.



The Integrity of Research Outputs

The integrity of research outputs is paramount to trust in research. In this section, we explore the integrity of published research and consider the importance of public confidence in research.

The increasing use of generative artificial intelligence (GenAI) tools as part of the research process has raised questions about the integrity of research outputs, so we also examine the intersection between GenAI and research integrity.

Evidence is from three datasets:

- University open access publications assessed in the Leiden Rankings Open Edition.
- Retraction of outputs after publication as reported in the Retraction Watch database.
- Assessment of the integrity of UK research using citation rates, identified by Clarivate's Highly Cited Researcher processes.



We have included trends in the proportion of publications from universities that are open access. We have also included the rates of retractions of UK authored publications compared with the rest of the world. Put simply, a retraction is the removal of information, such as a research article, that has been published. The Committee on Publication Ethics (COPE) has retraction guidance for editors that states the purpose of retracting information is to correct the literature and alert readers that the information should not be relied upon.²⁵

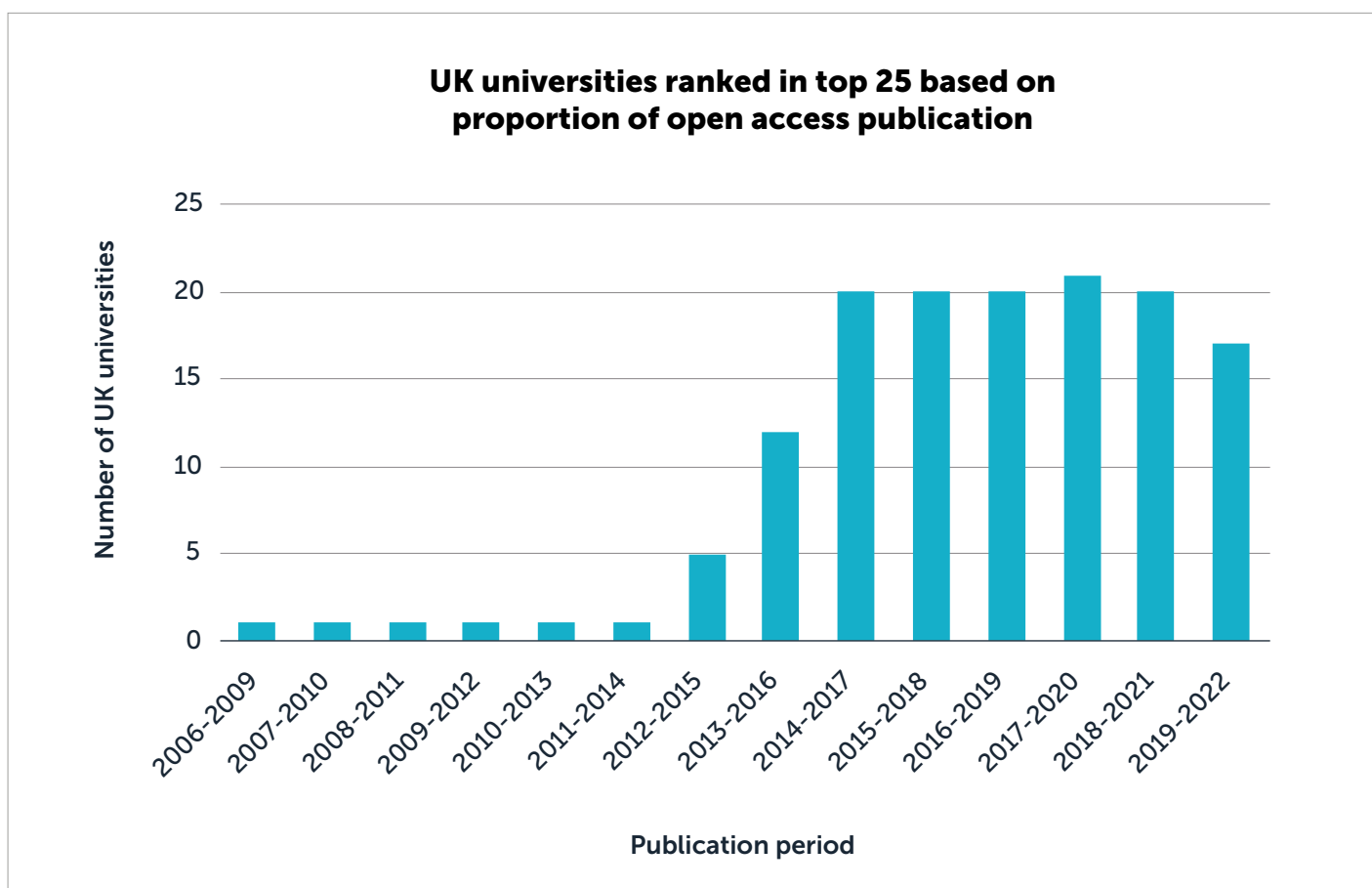
There are several reasons why a publication might be retracted, ranging from an honest error noticed immediately by the authors, to intentionally falsified data that are only picked up when research users or data experts closely assess a publication or shared research output. Retractions do not identify intent, and rankings are not indicators of integrity, but information from them can inform thinking about the integrity of research outputs.

It is important to emphasise that these sources do not provide a complete picture. Nevertheless, collectively, they begin to provide insight into matters of integrity in relation to UK research publications.

Leiden University Rankings

The Leiden Rankings Open Edition provides information about how universities perform across a variety of indicators including scientific impact, collaboration and open access.²⁶ We used these rankings to explore how UK universities compared with major universities worldwide on the proportion of open access publications from a university [PP(OA)] using a minimum publication output of 1000.²⁷

For the 2012-2015 period, there was an increase in the number of UK universities ranked in the top 25 of universities worldwide (20% of spots in 2012-2015 compared with 4% in 2011-2014). The number of UK universities in the top 25 has remained high since the initial increase in the 2012-2015 period. While open access does not guarantee that work is reliable or reproducible, it can be an indicator of a commitment to transparency and open communication, which is a key principle of integrity in the UK.





Case study: The London School of Hygiene and Tropical Medicine

The London School of Hygiene and Tropical Medicine (LSHTM) is the only university to be represented on the Leiden Rankings between time periods 2006-2009 and 2011-2015.

A small, specialist university, its mission is to “improve health and health equity in the UK and worldwide; working in partnership to achieve excellence in public and global health research, education and translation of knowledge into policy and practice”.²⁸ The university achieves this through its four values: act with integrity, embrace difference, work together and create impact.²⁹

LSHTM promotes open access and believes it sits firmly within its mission to improve health equity. Using its values to guide activities, LSHTM takes a variety of approaches to instil open access across the university. The university embedded an open mindset across the organisation using available resources. With a forward-thinking approach, it created new initiatives, such as launching an open access press, with the desire for equitable partnerships and access foremost in its endeavours.

As a comparatively small university, LSHTM’s Library, Archive & Open Research Services (LAORS) team was able to establish conversations with senior academic

staff and wider faculty groups to inform and support them in open access publishing and related open science topics. Early on, the team worked with strategic research, research operations and others professional services to map the research support workflow, fostering a joined-up approach to research support.

The LAORS team makes information accessible by providing it in different formats, from information on the LSHTM intranet to road shows about new requirements. It also works closely with academics to help them recognise the value of research assets (data, code, etc.) that underpin their work and prepare selected outputs for sharing in a form that is findable, accessible, interoperable and reusable (FAIR). LSHTM and LAORS were recognised for their open research work in the 2023 Times Higher Education Awards.

LSHTM is embedding recognition and reward of open practices into the academic pathway. Working across the organisation with HR and Talent Development teams, the university is looking at activities it is keen for academics to undertake. From 2025, all performance development reviews will include a section on open research practice which is intended to lead to promotion pathways.

Retraction Watch

In 2010, two journalists launched Retraction Watch, a website and database to report on retracted publications worldwide.³⁰ Retraction Watch is the most comprehensive dataset of retractions available, providing valuable information on rates of, and reasons for, retractions.³¹ Over the years, the database has grown and has now been acquired by Crossref to be run as a public resource.³²

Retractions of research papers (articles) are an important part of a healthy publishing system that corrects honest mistakes. Retractions also act as an indicator of poor practice or research misconduct. Examining trends in the number of retractions in relation to the overall number of publications, may indicate whether researchers and publishers are aware of issues affecting the research system. Examining reasons for retractions can shed light on new challenges, such as the use of GenAI tools in research writing.

Analysis of Retraction Watch data over the course of our last two annual statements revealed the proportion of UK retractions has not changed. It also showed certain reasons for retractions of published research papers are increasingly common internationally, including:

- paper mills (bogus publications that have increasingly been found in the research record)
- concerns/issues with peer review
- fake peer review
- randomly generated content³³



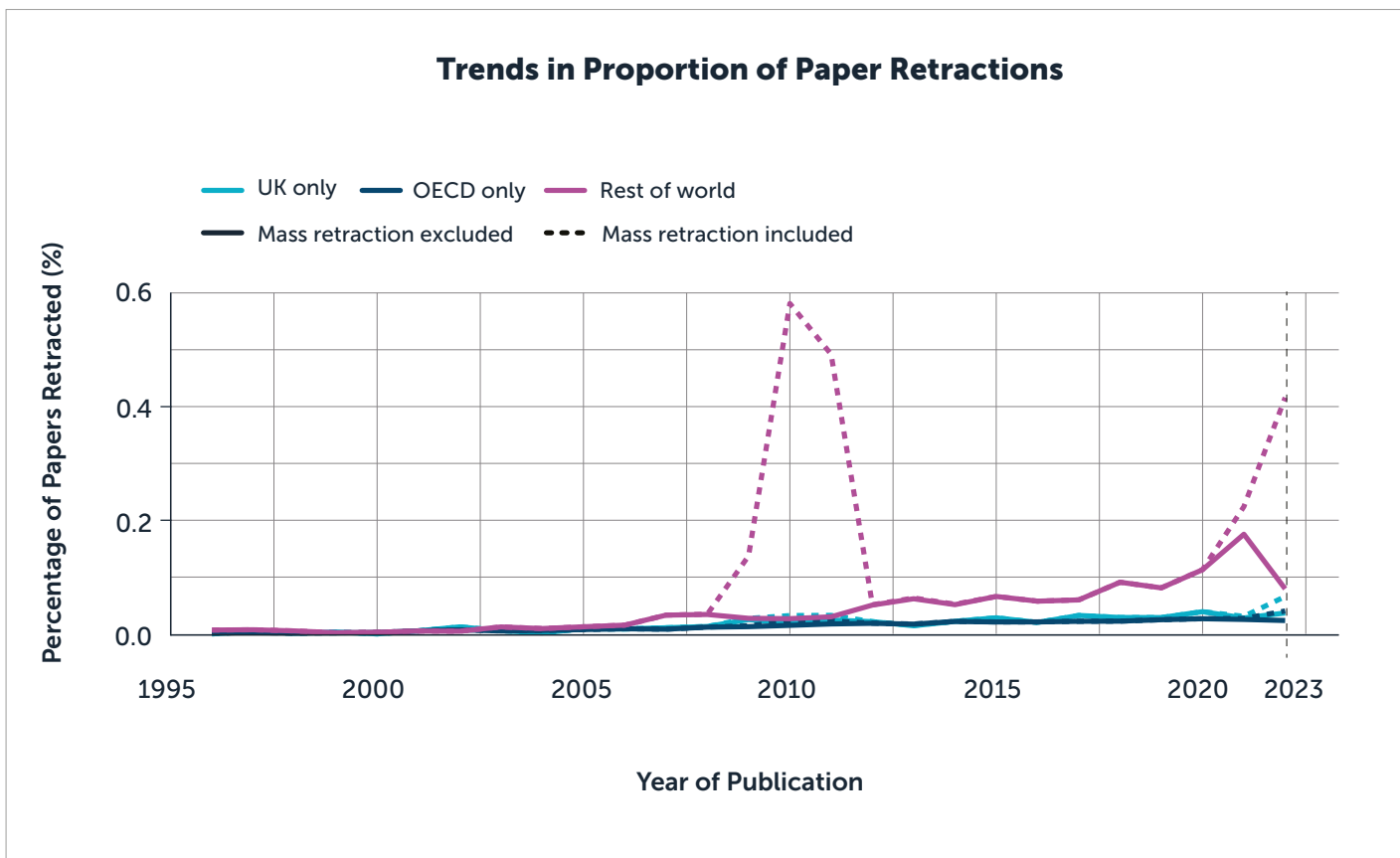
2025 analysis of retractions

To identify any changes in these trends, we examined an analysis of the updated Retraction Watch dataset. Based on this secondary analysis, we suggest additional strategies that could enable new analyses of retraction data.

To ensure comparability over time, we examined only retractions of papers published prior to 2023 that occurred within two years of publication, which form the majority of retractions. Retraction Watch relies on manual identification and crowdsourcing, meaning there may be retractions that have occurred within this window that have not yet been reported and are therefore not included in this analysis.

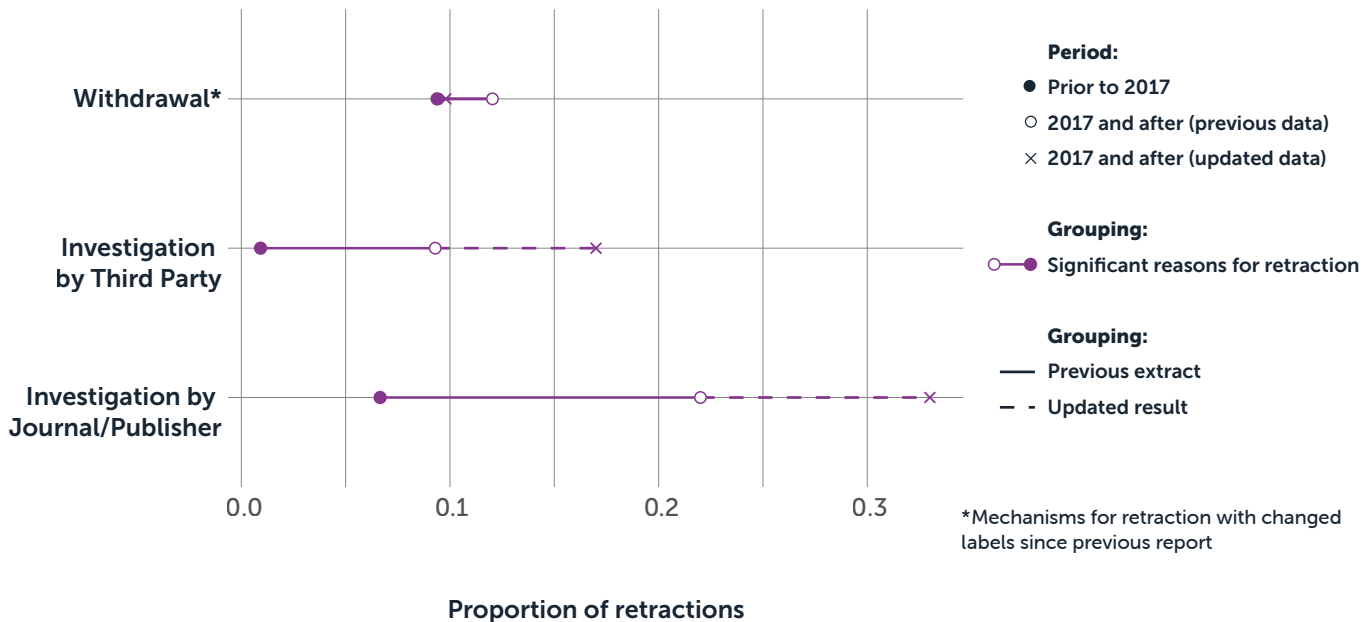
In our analysis, publications were classed as coming from the UK when they have at least one co-author registered at a UK institution. Although “Reason for Retraction” categories within Retraction Watch are continuously monitored and updated, to ensure comparability with our 2024 statement, our analysis retained the previous classifications, which include the majority of reasons for retraction. Total publications by country are defined as total citable documents, as reported by Scimago Journal & Country Rank (SJR).³⁴ In 2024, the UK published 211,490 such documents, ranking 4th in the world, compared with 1,190,419 by China, which was 1st.

The UK rate of retraction is comparable to the OECD, a group of comparable high-output academic countries. This year’s analysis also highlighted the major impact of the Institute of Electrical and Electronics Engineers (2009-11)³⁵ and Hindawi (2021-22) mass retraction events.³⁶



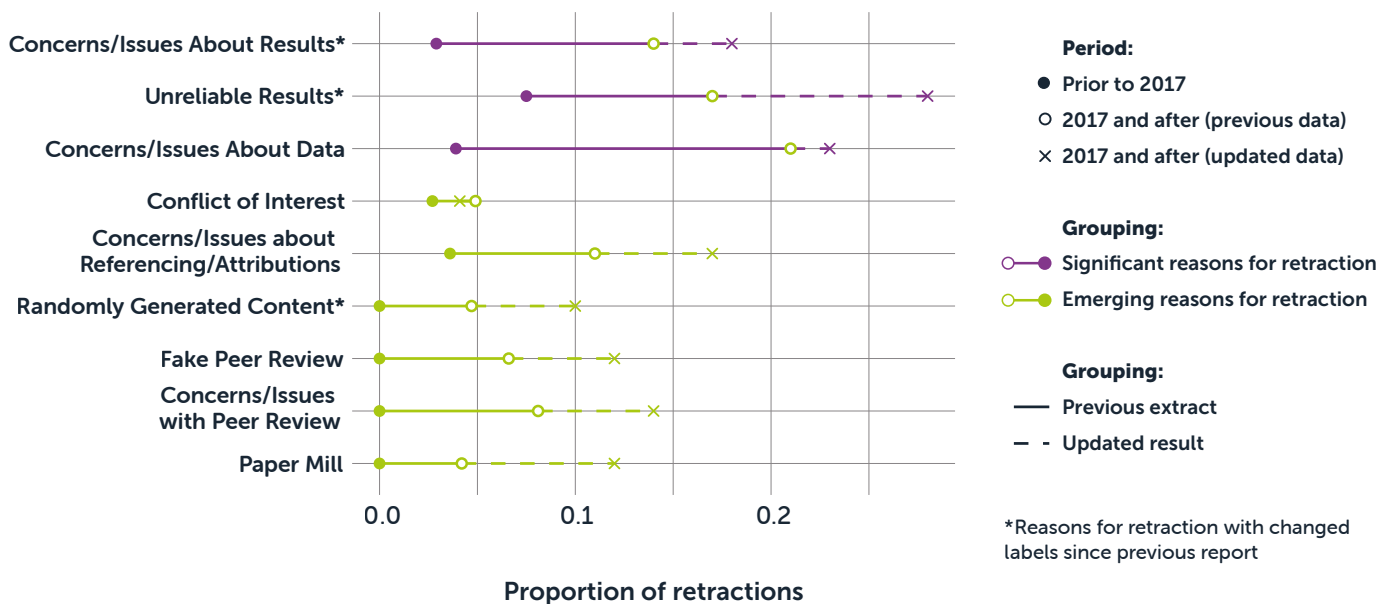
Change in mechanisms for retractions

United Kingdom



Change in reasons for retractions

United Kingdom



Mechanisms and reasons for retractions

In our 2024 annual statement we identified:

- common mechanisms for retraction
- common reasons for retraction
- emerging reasons for retraction

This year, we compared last year's time period with retractions added since May 2024 for UK Retraction data. Labels are used to explain reasons for retractions, and it is possible for an article to be assigned more than one label.³⁷ Therefore, changes in labelling practice were captured alongside changes in frequency of reasons. Apart from 'conflict of interest' and 'withdrawal', all common reasons have increased as a proportion of all retractions. The increase in 'investigation by journal/publisher' and 'investigation by third party' may imply increased ability and/or need to correct the academic record. The highest growth by proportion includes 'paper mill' and 'randomly generated content', which remain low in absolute terms but require continued monitoring for their potential as an emerging challenge.

Limitations

As retraction numbers have grown over time, so have the number of reasons for retraction that are recorded in databases. However, retraction notices do not always provide sufficient information to determine if the error in the research has resulted from honest error or deliberate misconduct. Therefore, reasons for retraction should be understood solely as a series of labels that relate to the accuracy of the research record.

While the majority of retractions occur within the first few years after publication, the delay between the date of original publication and the date of retraction introduces a lag in the data. In addition, delays between the date when retraction notices are posted and notification to Retraction Watch make it difficult to accurately assess the most recent retractions. Standardisation of retraction notices and mechanisms for publishers to register retractions may be useful in the future. Stakeholders, including funders, research institution, and publishers, should consider whether principles of findable, accessible, interoperable and reusable (FAIR) data should be applied to retraction notices.

Clarivate Highly Cited Researchers list

Recent developments in commercial bibliometric analysis demonstrate increased focus on integrity by commercial providers of data about research publications and their citations. These data sources provide information about the status of publication integrity in much of the UK's research base, with a focus on fields featured in the Web of Science citation database. The Committee does not normally consider citation metrics in its statements, however careful analysis of article-level metrics provides some additional insight into integrity.

One example is the international 'Highly Cited Researchers' list produced annually by the Institute for Scientific Information™ at intelligence and analytics company Clarivate. Candidate researchers for the list are identified through citation analysis of their publications in the Web of Science Core Collection™.³⁸ We consider the inclusion and exclusion of UK authors when compared with other countries. Careful analysis considering the size of the UK research system and the low exclusion rate of UK researchers due to integrity related concerns might add value to discussions about the strength of the UK's research integrity; the Committee is not suggesting that only those authors who have been highly cited uphold integrity.

Identification of highly cited researchers for the list takes several steps combining quantitative and qualitative analysis, and expert assessment.^{38, 39}

Inclusions

Internationally and across many disciplines, thousands of researchers are included in the list each year. It is important to note that mathematics has been removed from this list. In 2024, 6,636 individuals were included, of whom 563 were from the UK.⁴⁰ In 2024 and consistent with previous years, the UK was the country with the third largest share of highly cited researchers; notable because we are relatively small compared with other countries listed in the top ten:⁴¹

- United States: 2,507
- Mainland China: 1,405
- United Kingdom: 563
- Germany: 332
- Australia: 131
- Canada: 206
- The Netherlands: 185
- Hong Kong SAR: 134
- France: 126
- Singapore: 108

Exclusions

In 2016, Clarivate began to assess research integrity as part of their process to identify individuals for the Highly Cited Researchers list.⁴² They began to exclude researchers for potential breaches of integrity and other reasons.

In 2024, integrity-related reasons for exclusion of researchers from the highly cited list included:

- excessive self-citation
- strategic co-authorship or group citation rings
- hyper-authorship
- external evidence of breaches in research integrity⁴³

Since the introduction of research integrity screening, the number of researchers removed from the candidate list identified by initial quantitative analysis has risen. Internationally, the number of exclusions for research integrity-related reasons has risen most recently from 300 (4.5%) in 2021 to 2,045 (23%) in 2024.^{44, 45}

In 2024, exclusions for reasons relating to integrity were:

- UK: 33 (5.2%) UK candidates were excluded
- OECD:
 - Including UK
 - 453 (8.2%) OECD candidates were excluded
 - 14.8% of OECD candidates were excluded, on median across countries
 - Excluding UK
 - 420 (8.5%) OECD candidates were excluded
 - 15% of OECD candidates were excluded, on median across countries

The data from inclusions and exclusions are, like data from many sources, not complete indicators of research integrity. Even so, the calculated UK rates of exclusions are lower than the calculated OECD rates of exclusion. These comparative calculated rates are perhaps indicative of the overall relative strength of research integrity in the UK research system, but they are not reliable enough for us to draw firm conclusions. However, we are confident that the relatively high number of UK researchers included on the list, given the UK's size, and the relatively low number excluded due to integrity concerns, indicates a commitment to integrity in UK research.



The use of generative AI tools in research

GenAI and research integrity: enabling trust and innovation

The use of generative artificial intelligence (GenAI) in research is becoming widespread and the technology is advancing rapidly. While its benefits are considerable, the evolving risks are also significant and require the active involvement of researchers and professional bodies to evaluate and help shape standards and norms. GenAI is profoundly affecting the research system, performing tasks such as reviewing literature and analysing data, while also being used by researchers to develop concepts and build predictive models. This has led to improvements in productivity, but also raised concerns in the research community about rigour, honesty, care and respect, transparency and accountability of research.

Through engagement across the sector and a review of rapidly evolving guidance and literature, we identified and published seven key themes of how research integrity might intersect with GenAI.⁴⁶



SEVEN KEY THEMES

- Sector: Governance
- People: Roles and responsibilities of those working in or enabling research
- Skills and training
- Public understanding and expectations with regards to trust and trustworthiness
- Attribution and ownership
- Reliability and quality of data inputs and models
- Research on research integrity

Widespread interest in the application and use of GenAI tools as a normal part of conducting research is being undermined by a lack of consistency in approach. More caution about the abilities of these tools is needed.

Our work suggests that while the principles of research integrity are applicable when GenAI is used as part of the research process, more coherent and easily accessible guidance and training is needed. Areas that came up in our engagement included a need for more information on assessing and dealing with bias, transparency in GenAI use at each stage of the research process, and the need for evaluation of its use and impact.

GenAI tools are being used to formulate research questions, perform research-related tasks, and in writing.⁴⁷ Novel uses of these tools will be identified as the technology changes and the research community's understanding of it advances. Therefore, declarations of GenAI use and attribution are vital in complying with the spirit of research integrity, particularly with regards to transparency. In a fast-moving environment, a static standard may be out of date before it has been embedded, which is why we are calling for more coherence in the approach to using GenAI tools, such as dynamic guidelines for best practice.

A continuing dialogue between the research and technology development sectors is essential for addressing the challenges posed by GenAI in research while also identifying the potential it has for supporting the research process.

Case study: University of Strathclyde's approach to GenAI, developed from their annual statement⁴⁸

In November 2023, the University of Strathclyde's Research and Knowledge Exchange Committee met to discuss the use of GenAI in research. The committee explored current and future uses of GenAI in research and research management, highlighting challenges such as bias and inequality. It also noted a growing division between researchers that embrace GenAI and those that avoid it.

A working group was established, with members from across disciplines and Research and Knowledge Exchange Services, to establish a clear position for the university on GenAI in research, supporting its responsible use and development for researchers, including appropriate training.

The group developed recommendations for the university's GenAI strategy, centred on adopting the European Research Area Forum's Living Guidelines for responsible AI use in research. Based on the

European Code of Conduct for Research Integrity and the guidelines on trustworthy AI, these evolving guidelines ensure the university is aligned with international (EU) requirements from funders and collaborators.

To embed the guidelines, the group further recommended:

- Communication strategies, such as referencing the guidelines in the Research Code of Practice and developing a SharePoint page for rapid update of guidance.
- Aligning with existing university processes, such as embedding questions about GenAI in ethical reviews of research.
- Integrating GenAI guidance into existing training, such as Responsible Research and Innovation staff training, and in the PGR research practice development module.



Poor and questionable research practices, and research misconduct

The Committee established a cross-sector working group on poor research practice and research misconduct to consider how the research system could and should respond to breaches of integrity.

We commissioned RAND Europe⁴⁹ to explore how UK universities currently examine research integrity breaches, how international systems for managing research misconduct in universities work, and what lessons, if any, can be extrapolated from these systems. The commission is also exploring how misconduct is managed in other UK sectors, including those adjacent to research.

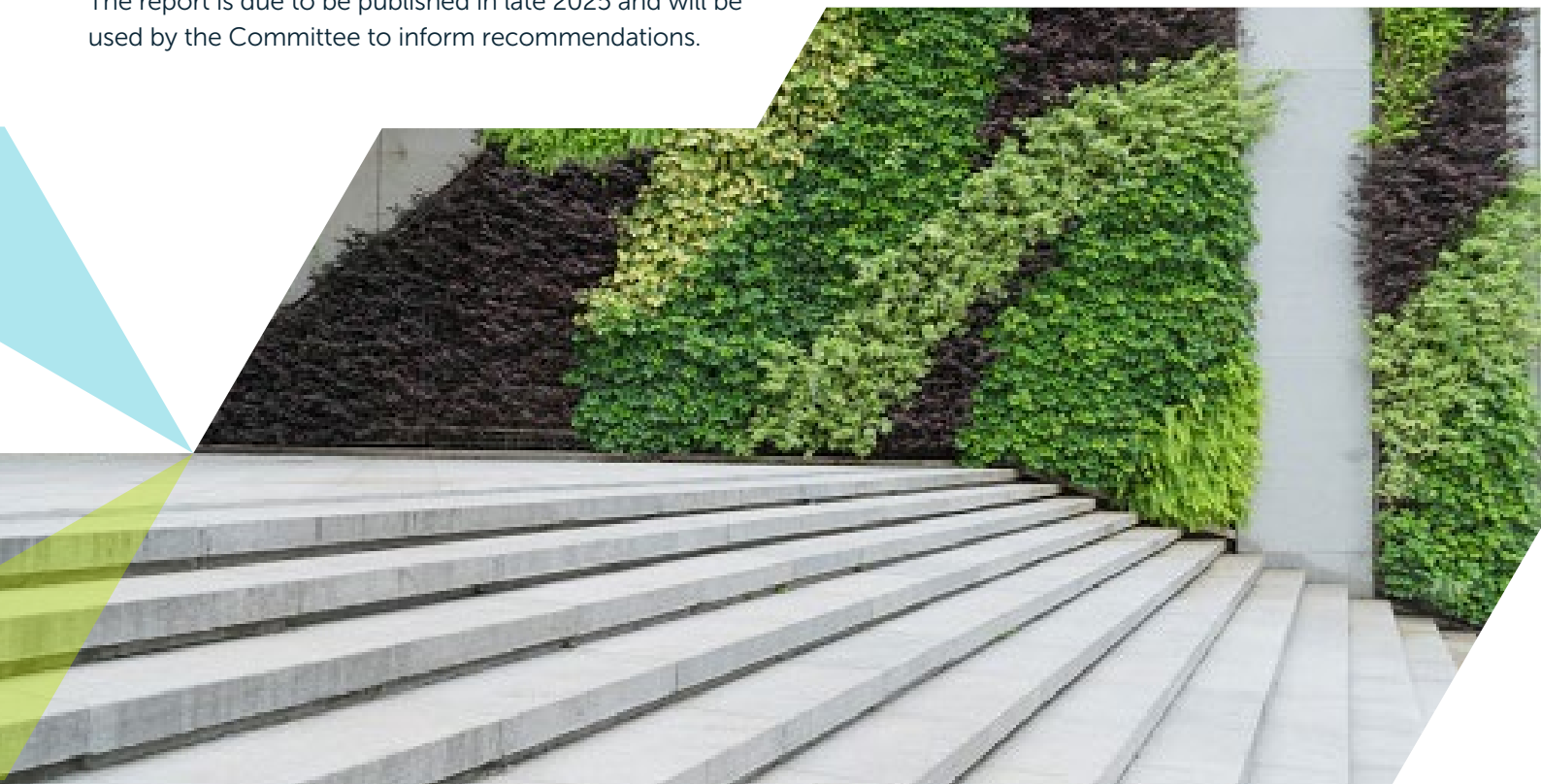
This commission is important for deepening our understanding and knowledge about how the university research system functions, and what more could be done to support it and, where necessary, improve practice. The system by which poor and questionable research practices are investigated must also be expected and enabled to act with integrity. Fair and effective processes support both public trust and the trust of those participating in investigations. Trustworthy research further ensures that university-led research is as useful as possible for industry and charity partners.

The report is due to be published in late 2025 and will be used by the Committee to inform recommendations.

Research into research misconduct

Although the currently available data on research integrity are not perfect, we should continue and strengthen action and opportunity to support those that conduct or enable research.

The Committee encourages the provision of better and additional data sources to help us understand research integrity in the UK. The research community needs to continue to share and better communicate current initiatives, learning and progress. It should offer more opportunities to share actions that support, promote and recognise high integrity practices, such as including case studies within annual statements of research integrity, and participating in cross-organisational and sector events on areas like research culture and metascience.



Case study: Research into research integrity

Across the UK, Europe and internationally, new initiatives are advancing evidence-informed approaches to research integrity practice. For example, BEYOND, a project coordinated by the University of Oslo and funded by the EU and UKRI, is advancing both individual and institutional responsibilities, with a focus on prevention of research misconduct.⁵⁰

Background

In recent years, efforts to address research misconduct have often centred on the 'bad apples' perspective, which attributes poor research practices primarily to a few individuals.

The BEYOND project takes a systemic, behavioural, and evidence-based approach to addressing research misconduct, moving beyond the simplistic 'bad apple' theory, which attributes misconduct solely to individual researchers. Instead, BEYOND focuses on understanding the individual, institutional and contextual factors that influence research behaviour. It emphasises prevention of research misconduct through targeted guidance, educational tools, and systemic support. An integral part of BEYOND's strategy is the involvement of the Stakeholder Advisory Board, which ensures that the project's results are co-created with stakeholders and are reflective of the needs and values of the broader research community. The project supports the broader European initiative to cultivate a research culture rooted in the highest standards of ethics and integrity, promoting evidence-based approaches to addressing research misconduct—moving beyond punitive responses and focusing on building public trust in science.

BEYOND's key objectives:

- **Investigating** systemic and individual causes of research misconduct.
- **Developing robust methodologies** to measure the effectiveness of training in ethics and integrity.
- **Creating and enhancing training materials** that have real impact on researcher attitudes and behaviours.
- **Designing informed interventions** to address misconduct and promote best practices.
- **Supporting the broader research ecosystem** through evidence-based tools including best-practice manuals, guidelines, and a strategic roadmap for institutional change.

Project implementation

BEYOND's goals are executed through structured work packages (WPs),⁵¹ which include foundational research (WP1), public consultations (WP2), behavioral interventions (WP3), measuring the impact of RE/RI training (WP4), development of training materials and tools (WP6), and the creation of best-practice manuals and guidelines (WP5).

Impact and key achievements

The BEYOND project is delivering a comprehensive and multi-layered response to research ethics and integrity through a combination of foundational research, knowledge base development, practical policy recommendations, and the creation of training manuals and guides particularly focusing on early career researchers.

This foundational research examines the systemic factors that enable research misconduct and explores its socio-economic impacts, thereby expanding the literature on research integrity and the consequences of misconduct. Complementing this, the training materials are designed to be practical, reflective and inclusive, emphasising mentorship as a key strategy for institutions to strengthen and embed research integrity within their research culture.

Conclusion

The UK requires and expects trustworthy research that contributes to knowledge, supports the economy and provides benefits to society.

As a national framework, the Concordat to Support Research Integrity provides the foundation for UK research integrity. The Concordat brings together the research community, employers and research funders under a common set of commitments and lays out the responsibilities that they must deliver to consistently promote integrity and drive best practice. Analysis of annual statements published by research organisations demonstrates their ongoing commitment to integrity and makes their efforts visible. We want all research organisations to produce and publish annual statements.

Throughout this statement, we have drawn on our analysis of available evidence sources. The evidence we have included suggests that the UK research system is rigorous and trustworthy. As a dynamic system, there are and should be discussions about research practice. However, simplified messages that seek to assign blame to one part of the research system risk undermining opportunities to continue to learn and evolve. Instead, as a sector that works in detail and on the basis of robust evidence, it is important that actions taken to enhance integrity respond to the best available evidence, considering nuance and context. Doing so will enable the UK system to conduct, assess and fund research that places integrity at its core.

The evidence provided in this statement demonstrates how various parts of the research system are working with high integrity. Organisations and individuals are developing and taking part in initiatives and activities that support and promote high integrity practice, and they are willing to raise concerns when issues arise. Taken together, this supports the view that the UK is a good place in which to conduct research with integrity. Nevertheless, there are gaps in the data that warrant further attention. These include limited data about the effectiveness of policies and training, as well as insufficient evidence about the impact, cost and harm to the research record caused by poor and questionable research practices.

There are major pressures on the UK research system, notably affecting universities but also across the system. Despite these, everyone working in the research system is responsible for contributing to good practice. While there will always be areas for improvement, whether at organisational or individual levels, there is a wealth of activity that should be properly recognised and made more visible.

The UK Committee on Research Integrity will now work in partnership with the research community to develop the future infrastructure needed to sustain our trustworthy research system.



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- The London School of Hygiene and Tropical Medicine
- The Research Integrity Concordat Signatories

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