

## Scientific Watch November 2023 (n°9)

The scientific watch led this month to the selection of 24 papers. Seven of them address misconduct and questionable research practices [1–7]. Seven focus on scientific publishing [8–14]. Four papers relate to the institutionalisation of research integrity [15–18]. Two of them deal with integrity issues related to new research practices [19], [20]. Finally, two address research evaluation [21], [22], and two look at the definition of research integrity in the context of specific disciplines [23], [24].



### FOCUS OF THE MONTH

#### Imposters among research participants

In the UK, a team of researchers is warning of a new form of fraud being observed in online research, particularly *via* social media [1]. As they state, "*online data collection often relies fully on participant self-reporting without supervision or assistance. Fraudulent (also known as imposter) participants refer to individuals or bots who take advantage of this anonymity by signing up to studies and deliberately giving false responses*" (p. 2). In this way, they can receive the financial compensation associated with their participation. These impostures raise a number of issues for research integrity. They introduce bias, lead to the falsification of results, interfere with the recruitment of participants and affect their possible random distribution - ultimately invalidating the research results. These researchers developed a protocol to counter this type of fraud, having themselves been the victims of two attack campaigns during a study on eating disorders among young people carried out in 2023. The protocol involved five key stages: from identifying irregular answers to the questionnaire to delivering the compensation by post rather than by e-mail. Following this protocol, they were able to determine typical imposter profiles, leading to exclude 95 fraudulent participations – a significant number considering the target cohort of 176 participants. After implementing these various measures, the team did not have to deal with any further attacks.

- [1] M. R. Davies *et al.*, « Management of fraudulent participants in online research: Practical recommendations from a randomized controlled feasibility trial », *International Journal of Eating Disorders*, available online: 3 Nov. 2023, doi: [10.1002/eat.24085](https://doi.org/10.1002/eat.24085).




## MISCONDUCT AND QUESTIONABLE RESEARCH PRACTICES

### Case studies


- [2] E. J. Calabrese and J. Giordano, « Muller letter reveals scientific scandal that discredits evidence used to support LNT », *Chemico-Biological Interactions*, vol. 386, art. 110787, Dec. 2023, doi: [10.1016/j.cbi.2023.110787](https://doi.org/10.1016/j.cbi.2023.110787).
- [3] A. Aviram, « Keepin' it real: research integrity, manuscript trustworthiness, and data reliability », *American Journal of Obstetrics & Gynecology MFM*, vol. 5, n° 1, art. 100786, Jan. 2023, doi: [10.1016/j.ajogmf.2022.100786](https://doi.org/10.1016/j.ajogmf.2022.100786).

### Trends in research on misconduct

Using a scientometric approach, this team examined the major thematic trends in studies on questionable research practices carried out over the last 50 years. The team analysed 341 scientific papers published between 1974 and 2023. They found that these studies were mainly carried out in the United States, the Netherlands and the United Kingdom. Nine main thematic clusters were identified. Two of them – corresponding to the earliest research on the subject – concern the prevalence of misconduct and the regulation of responsible conduct of research. Two other clusters – corresponding to those with the most papers – deal with statistical bias in publications and open science practices as a way to foster research integrity. More recently, studies have focused on the factors that encourage misconduct or on the registration of studies to prevent statistical bias.

- [4] M. J. Y. Neoh, A. Carollo, A. Lee, and G. Esposito, « Fifty years of research on questionable research practises in science: quantitative analysis of co-citation patterns », *Royal Society Open Science*, vol. 10, art. 230677, Oct. 2023, doi: [10.1098/rsos.230677](https://doi.org/10.1098/rsos.230677). 


### Lack of methodological standards

- [5] T. Köhler, A. D. Smith, and T. M. Pieper, « Stop... Just stop! The use and misuse of methodological template prescriptions in qualitative family business research and ways forward », *Journal of Family Business Strategy*, art. 100595, available online: 8 Nov. 2023, doi: [10.1016/j.jfbs.2023.100595](https://doi.org/10.1016/j.jfbs.2023.100595). 




## Over-interpretation of research results (spins)

A researcher from the University of Oxford and her colleagues from the University of Amsterdam studied the presence of over-interpretations of results – also known as spins – in studies on the accuracy of tests used to diagnose infectious diseases. To do so, they analysed 120 studies published between 1 January 2019 and 31 March 2019 – i.e. before the COVID-19 pandemic period. Over-interpretations refer to "reporting practices that make study results appear more favourable, in effect misleading readers into being more optimistic about the study findings" (p. 1045). They detected spins in 53% of the studies analysed, and mechanisms that could lead to spins in all the studies analysed. According to the authors, these questionable research practices are a major source of research waste.

- [6] S. Bramer, H. Y. Cheung, W. Do, and M. M. G. Leeflang, « Over-interpretation of findings in diagnostic accuracy studies of infectious diseases », *Clinical Microbiology and Infection*, vol. 29, n° 8, p. 1045-1055, Aug. 2023, doi: [10.1016/j.cmi.2023.03.006](https://doi.org/10.1016/j.cmi.2023.03.006). 


## Intimidation and harassment, factors leading to misconduct?

- [7] P. Manuel, G. H. Tang, A. Weyand, P. James, and M. Sholzberg, « Academic Bullying in Science and Medicine: The Need for Reform », *Research and Practice in Thrombosis and Haemostasis*, art. 102270, available online: 20 Nov. 2023, doi: [10.1016/j.rpth.2023.102270](https://doi.org/10.1016/j.rpth.2023.102270). 


## SCIENTIFIC PUBLISHING

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### Retraction


- [8] M. C. Ferraro et al., « Characteristics of retracted publications related to pain research: a systematic review », *PAIN*, vol. 164, n° 11, p. 2397-2404, Nov. 2023, doi: [10.1097/j.pain.0000000000002947](https://doi.org/10.1097/j.pain.0000000000002947).
- [9] P. Sebo, J. Schwarz, M. Ahtari, and C. Clair, « Women Are Underrepresented Among Authors of Retracted Publications: Retrospective Study of 134 Medical Journals », *Journal of Medical Internet Research*, vol. 25, art. e48529, Oct. 2023, doi: [10.2196/48529](https://doi.org/10.2196/48529). 

### Article Processing Charges (APC)


- [10] W. E. Nwagwu, « Nature and characteristics of global attention to research on article processing charges », *The Journal of Academic Librarianship*, vol. 49, n° 6, art. 102808, Nov. 2023, doi: [10.1016/j.acalib.2023.102808](https://doi.org/10.1016/j.acalib.2023.102808).
- [11] L.-A. Butler, L. Matthias, M.-A. Simard, P. Mongeon, and S. Haustein, « The Oligopoly's Shift to Open Access. How the Big Five Academic Publishers Profit from Article Processing Charges », *Quantitative Science Studies*, p. 1-33, Nov. 2023, doi: [10.1162/qss\\_a\\_00272](https://doi.org/10.1162/qss_a_00272). 



## Peer Review

- [12] P. Parmanne, J. Laajava, N. Järvinen, T. Harju, M. Marttunen, and P. Saloheimo, « Peer reviewers' willingness to review, their recommendations and quality of reviews after the Finnish Medical Journal switched from single-blind to double-blind peer review », *Research Integrity and Peer Review*, vol. 8, art. 14, Oct. 2023, doi: [10.1186/s41073-023-00140-6](https://doi.org/10.1186/s41073-023-00140-6). 
- [13] F. M. Kusumoto *et al.*, « Challenges and Controversies in Peer Review: JACC Review Topic of the Week », *Journal of the American College of Cardiology*, vol. 82, n° 21, p. 2054-2062, Nov. 2023, doi: [10.1016/j.jacc.2023.08.056](https://doi.org/10.1016/j.jacc.2023.08.056).

## History of scientific publishing


- [14] D. Daling, « "On the ruins of seriality": The scientific journal and the nature of the scientific life », *Endeavour*, vol. 47, n° 4, art. 100885, Dec. 2023, doi: [10.1016/j.endeavour.2023.100885](https://doi.org/10.1016/j.endeavour.2023.100885). 

## INSTITUTIONNALISATION

### Analysis of codes of conduct

- [15] J. Ambrosj, H. Desmond, and K. Dierickx, « The value-free ideal in codes of conduct for research integrity », *Synthese*, vol. 202, n° 5, art. 133, Oct. 2023, doi: [10.1007/s11229-023-04377-y](https://doi.org/10.1007/s11229-023-04377-y).
- [16] R. C. Pleus, « Standards, guidelines, and toxicity testing », in *Encyclopedia of Toxicology (Fourth Edition)*, P. J. Wexler, Éd., Oxford: Academic Press, 2024, p. 691-698. doi: [10.1016/B978-0-12-824315-2.00773-9](https://doi.org/10.1016/B978-0-12-824315-2.00773-9).

### In Chinese institutions

- [17] F. Wang and C. Zhu, « Statistical analysis of research integrity construction in 466 Chinese universities with medical programs », *Humanit Soc Sci Commun*, vol. 10, art. n° 776, Nov. 2023, doi: [10.1057/s41599-023-02208-6](https://doi.org/10.1057/s41599-023-02208-6). 


### Proposal for guidelines

- [18] A. Sammy, A. Baba, T. P. Klassen, D. Moher, and M. Offringa, « A Decade of Efforts to Add Value to Child Health Research Practices », *The Journal of Pediatrics*, vol. 265, art. 113840, Feb. 2024, doi: [10.1016/j.jpeds.2023.113840](https://doi.org/10.1016/j.jpeds.2023.113840).




## NEW RESEARCH PRACTICES

### Generative artificial intelligence systems, such as *ChatGPT*

- [19] N. Aiumtrakul *et al.*, « Navigating the Landscape of Personalized Medicine: The Relevance of ChatGPT, BingChat, and Bard AI in Nephrology Literature Searches », *Journal of Personalized Medicine*, vol. 13, n° 10, Art. n° 1457, Oct. 2023, doi: [10.3390/jpm13101457](https://doi.org/10.3390/jpm13101457). 

### Citizen science

- [20] N. Purtova and R. L. Pierce, « Citizen scientists as data controllers: Data protection and ethics challenges of distributed science », *Computer Law & Security Review*, vol. 52, art. 105911, Apr. 2024, doi: [10.1016/j.clsr.2023.105911](https://doi.org/10.1016/j.clsr.2023.105911). 


## RESEARCH EVALUATION

### Considering misconduct in the evaluation of Chinese institutions

- [21] W. Shen, Y. Liu, G. Wan, J. Shi, and W. Liu, « Performance evaluation considering academic misconduct of China's higher education institutions », *Socio-Economic Planning Sciences*, vol. 91, art. 101752, Feb. 2024, doi: [10.1016/j.seps.2023.101752](https://doi.org/10.1016/j.seps.2023.101752).

### Transparency of criteria for the Highly Cited Researchers list

These researchers from the University of Freiburg in Germany provide a detailed description of the criteria used by Clarivate to build the list of Highly Cited Researchers.<sup>1</sup> For them, the company should provide more information on the analyses or the data used to develop this list. In particular, Clarivate does not publish the list of excluded authors, nor the reasons why they were excluded – for example, in the case of papers retracted for research misconduct. They suggest that science performance indicators should respect the same level of transparency and reproducibility that is expected for research. This would make it possible, among other things, to check for potential errors, mitigate gender bias and enable researchers to understand why they have not been included.


- [22] A.-M. Klein and N. Kranke, « Some thoughts on transparency of the data and analysis behind the Highly Cited Researchers list », *Scientometrics*, vol. 128, n° 12, p. 6773-6780, Dec. 2023, doi: [10.1007/s11192-023-04852-w](https://doi.org/10.1007/s11192-023-04852-w). 

<sup>1</sup> For more information on the list of *Highly Cited Researchers*, see bulletin n°7 : [https://www.ofis-france.fr/wp-content/uploads/2023/10/Highlycitedpapers\\_ScientificWatch\\_n7\\_Ofis\\_2023.pdf](https://www.ofis-france.fr/wp-content/uploads/2023/10/Highlycitedpapers_ScientificWatch_n7_Ofis_2023.pdf)



## DEFINITION

### Best practice and scientific integrity in two specific fields

- [23] S. R. Miller, F. Moore, and L. Eden, « Ethics and international business research: Considerations and best practices », *International Business Review*, vol. 33, n°1, art. 102207, Feb. 2024, doi: [10.1016/j.ibusrev.2023.102207](https://doi.org/10.1016/j.ibusrev.2023.102207). 
- [24] A. M. Tsatsakis and E. I. Iatrou, « Ethics: Ethical issues in toxicology », in *Encyclopedia of Toxicology (Fourth Edition)*, P. J. Wexler, Éd., Oxford: Academic Press, 2024, p. 423-429. doi: [10.1016/B978-0-12-824315-2.01184-2](https://doi.org/10.1016/B978-0-12-824315-2.01184-2).