10 Types of Scientific Misconduct

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Behavior that would be considered scientific misconduct could occur at all points in a research protocol. You could encounter different types of scientific research misconduct at different stages, right from the origination of different types of scientific studies itself to the publication of the results.

Common Types of Scientific Misconduct

Listed below are the top 10 transgressions that peer reviewers and journal editors look for, incorporating content from both the *World Association of Medical Editors* (WAME), and the *US Office of Research Integrity*:

1. **Misappropriation of Ideas** – taking the intellectual property of others, perhaps as a result of reviewing someone else's article or manuscript, or grant application and proceeding with the idea as your own.
2. **Plagiarism** – utilizing someone else's words, published work, research processes, or results without giving appropriate credit via full citation.
3. **Self-plagiarism** – recycling or re-using your own work without appropriate disclosure and/or citation. Any form of plagiarism can be avoided by using plagiarism checker tools available online.
4. **Impropriety of Authorship** – claiming undeserved authorship on your own behalf, excluding material contributors from co-authorship, including non-contributors as authors, or submitting multi-author papers to journals without the consensus of all named authors.
5. **Failure to Comply with Legislative and Regulatory Requirements** – willful violations of rules concerning the safe use of chemicals, care of human and animal test subjects, inappropriate use of investigative drugs or equipment, and inappropriate use of research funds.

1. **Violation of Generally Accepted Research Practices** – this can include the proposal of the research study, manipulation of experiments to generate preferred results, deceptive statistical or analytical practices to generate preferred results, or improper reporting of results to present a misleading outcome.
2. **Falsification of Data** – rather than manipulate the experiments or the data to generate preferred results, this transgression simply fabricates the data entirely.
3. **Failure to Support Validation of Your Research** – by refusing to supply complete datasets or research material needed to facilitate validation of your results through a replication study.
4. **Failure to Respond to Known Cases of Unsuccessful Validation Attempts** – published research that is found to be flawed should be retracted from the journal that published it.
5. **Inappropriate Behavior in Relation to Suspected Misconduct** – failure to cooperate with any claims of misconduct made against you, failure to report known or suspected misconduct, destruction of any evidence related to any claim of misconduct, retaliation against any persons involved in a claim of misconduct, knowingly making false claims of misconduct.

It's a Question of Integrity

In terms of severity, any misconduct that damages the integrity of the research process, specifically the steps of the Scientific Method, is considered to be a greater

transgression than any subsequent misconduct in the publication of research results. Obviously, falsification of data is a much larger transgression than excluding an eligible co-author.

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However, since many of the instances of misconduct listed above can carry severe penalties, including loss of licensure and imprisonment, every effort must be made to distinguish between honest human error and deliberate intent to defraud.

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