FACTSHEET Authorship

Naming authors on a scientific paper ensures that the appropriate individuals get credit, and are accountable, for the research. Deliberately misrepresenting a scientist's relationship to their work is considered to be a form of misconduct that undermines confidence in the reporting of the work itself.¹

While there is no universal definition of authorship, an "author" is generally considered to be an individual who has made a significant intellectual contribution to the study.

According to the guidelines for authorship established by the International Committee of Medical Journal Editors (ICMJE), "All persons designated as authors should qualify for authorship, and all those who qualify should be listed."

Four criteria must all be met to be credited as an author:²

- Substantial contribution to the study conception and design, data acquisition, analysis, and interpretation.
- Drafting or revising the article for intellectual content.
- Agreement to be accountable for all aspects of the work related to the accuracy or integrity of any part of the work.
- Approval of the final version.

The following are some general guidelines, which may vary from field to field:

- The order of authorship should be "a joint decision of the coauthors".²
- Individuals who are involved in a study but don't satisfy the journal's criteria for authorship, should be listed as "Contributors" or "Acknowledged Individuals". Examples include: assisting the research by providing advice, providing research space, departmental oversight, and obtaining financial support.^{2,3}
- For large, multi-center trials, the list of clinicians and centers is typically published, along with a statement of the individual contributions made. Some groups list authors alphabetically, sometimes with a note to explain that all authors made equal contributions to the study and the publication.^{1,2}

Three types of authorship are considered unacceptable:

- "Ghost" authors, who contribute substantially but are not acknowledged (often paid by commercial sponsors);
- "Guest" authors, who make no discernible contributions, but are listed to help increase the chances of publication;
- "Gift" authors, whose contribution is based solely on a tenuous affiliation with a study. 1,3,4

When not appropriately addressed, authorship issues can lead to dispute. Some disputes are based on misconduct (such as lying about one's role); some stem from questions of interpretation, such as the degree to which a person's contribution can be considered "substantial," and if authorship is justified.¹

Other potential issues could include: being involved in a study, but not listed as an author or contributor; someone taking your idea and publishing a paper claiming full authorship; and finding your name on a publication without your permission.

If a complaint is filed over a dispute, an investigation may be conducted with the journal editor and author's institution to reach a resolution.

Because of the potential for ambiguity and confused expectations, it is strongly advised that before the research begins, a meeting take place to document how each person will be acknowledged.¹

Issues around authorship can be complex and sensitive. Early career researchers who encounter such situations may fear they will jeopardize their reputation and career if they speak up. Take the time to fully understand each journal's guidelines for authorship, and industry requirements. If you find yourself in a challenging situation that you are not sure how to handle, consult with a trusted mentor or supervisor.

Guide to Authorship Disputes and How to Prevent Them*

Action	What is it?	Is it unethical?	What should you do?
Misrepresenting a scientist's relationship to their work	Listing names of people who took little or no part in the research, omitting names of people who did take part, ¹ or the 'ordering of a byline that indicates a greater level or participation in the research than is warranted'. ³ This includes submitting a manuscript without the permission of an author/contributor. ¹	Yes. According to ICMJE: "All persons designated as authors should qualify for authorship, and all those who qualify should be listed.". Misrepresentation also includes "ghost," "guest" and "gift" authors. ²	 Review the journal's Instructions for Authors before submitting a paper and be forthright about all contributors. This includes "substantial" contributions, paid writers, and any others who contributed to the study. To avoid disputes, set clear expectations from the outset about who is doing what and how authorship will be handled. If you feel you have been treated unfairly in regards to authorship, seek the counsel of a trusted advisor.
Ghost Authorship	This usually refers to professional writers (often paid by commercial sponsors) whose role is not acknowledged. Unattributed contributions to data analyses may also constitute ghost authorship. ³	Yes. Not acknowledging a writer's contribution is considered dishonest.	 Professional writers who participated only in drafting of the manuscript and did not have a role in the design or conduct of the study or the interpretation of results should be identified in the acknowledgements section along with information about potential conflicts of interest, including whether they were compensated for the writing assistance and, if so, by which entity(ies).³ Consult the authorship guidelines of the journal. Consult other helpful resources including: ICMJE,² World Association of Medical Editors (WAME),⁴ European Medical Writers Association (EMWA),⁵ and the American Medical Writers Association (AMWA).^{6,3}
Gift and Guest Authorship	This usually refers to professional writers (often paid by commercial sponsors) whose role is not acknowledged. Unattributed contributions to data analyses may also constitute ghost authorship. ³	Yes. Guest and gift authors make no discernible contributions. ³	 Any "gift" and "guest" contributions should be vetted prior to submitting a paper. If in doubt about whether a contribution is acceptable or not, consult the authorship guidelines of the journal and the editor.

^{*}When in doubt, always consult with your professor, advisor, or someone in a position of authority who can guide you to the right course of action.

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