

AUTHORSHIP, PEER REVIEW, AND PUBLICATION

KEY CONCEPTS

There are four common criteria for granting scientific authorship:

- I. Making substantial contributions to either (a) the conception or design of the scientific work or (b) the acquisition, analysis, or interpretation of the data;
- II. Drafting or critically revising the work for important intellectual content;
- III. Giving final approval for the work of the version to be published; and
- IV. Agreeing to be accountable for all aspects of the work—ensuring that questions related to the accuracy or integrity of the work be investigated and resolved.

This four-criteria-based pattern for granting scientific authorship follows a policy that was established by the **International Committee of Medical Journal Editors (ICMJE)** in 1985. It was then picked up and adopted by many other scientific organizations and entities. The template recommends that *all and only* those who meet all four of these criteria be granted authorship.

TEXTBOOKS & REPORTS

- *Introduction to the Responsible Conduct of Research* (Steneck 2007)

ASSOCIATED ARTICLES

- Fontanarosa, Bauchner, & Flanagin's (2017) "Authorship and Team Science" *JAMA* 318(24): 2433–2437.
- Faulkes' (2018) "Resolving authorship disputes by mediation and arbitration" *Res Integr Peer Rev* 3: 12.

DISCUSSION QUESTIONS

1. How do potential authorship issues arise most commonly or significantly for scientific work in your laboratory or research setting?
2. Do you and other members of your research team establish (and then honor) a plan for granting authorship *before* commencing work?
3. How should cases of gift authorship be handled?
4. Do you think that the peer review process in your scientific field is generally fair and meritocratic?
5. Have you ever published a scientific work which you expect won't get much in the way of citations? Should such work be published at all?

POLICY & REPORTING

It is becoming ever more common for research institutions to provide a statement, make recommendations, or offer guidelines for establishing authorship on research papers. This is at least in part because authorship disputes are a recurring form of conflict at US research institutions.

Following the ICMJE pattern for granting authorship is one readily-available option for avoiding trouble. But authorship disputes may still arise—say, if collaborating parties have different understandings of what constitutes a *substantial* contribution, a *critical* revision, or *important* intellectual content. Alternative authorship arrangements can also be made—as long as the terms of authorship are stated explicitly, up-front, and known to all relevant parties. Putting an **Authorship Policy (AU)** into place *in advance* can help to avoid conflict, disappointment, and misunderstanding. Note that the ICMJE also recommends that those who meet some, but not all, of these criteria be acknowledged in publication though not listed as authors.



FINE PRINT

In 1992–3, the National Academy of Sciences (NAS) published a pair of reports on *Responsible Science* (Vol. 1–2), and those reports ushered in an era of ethical oversight centered around the concept of the Responsible Conduct of Research (RCR) at federally-funded American research institutions across the nation. By 2009, the National Institutes of Health (NIH) had mandated that "all trainees, fellows, participants, and scholars receiving support through any NIH training, career development award (individual or institutional), research education grant, and dissertation research grant must receive instruction in responsible conduct of research" (NOT-OD-10-019). The National Science Foundation (NSF) recommends—though does not require—something similar. Both agencies suggest that satisfactory RCR instruction tends to cover: research misconduct; conflict of interest; human subjects research; animal subjects research; collaboration and interdisciplinarity; data acquisition and management; authorship, peer review, and publication; mentoring and being mentored; and the relationship between science and society.

This handout introduces the topic of **authorship, peer review, and publication**.