



# Authorship

When doing any collaborative work, discussing research plans and expected contributions early and frequently is essential to avoid problems down the road. This is particularly the case when doing interdisciplinary research, as different fields have different vocabularies, norms about authorship and sets of target journals.

## General Guidelines

1. The following are the minimum standards to qualify for authorship:
  - a. **Contribute meaningfully to the research:** All authors should have contributed substantially to the reported research. This can be understood broadly, as per [Nature's guidelines](#), where authors are expected to contribute:
    - To the conception or design of the work;
    - To the acquisition, analysis, or interpretation of data; or
    - To the creation of new software.
  - b. **Contribute to the writing of the manuscript:** Authors should also all participate in the drafting and editing process. The extent to which a given author should be expected to contribute is up to the discretion of the first author. Researchers who contribute meaningfully to the research but who do not contribute to the writing process should be listed in the Acknowledgement section.
2. Be inclusive! Err on the side of including contributors as authors. When you make your writing plan, think about how where each prospective author could be expected to contribute and how to engage them in the writing process. If they decline, drop out of touch, or actively ask to not be included for authorship, then remove them from the author list. And it's bad practice to drop an author without a discussion among the entire team (including the potentially dropped author).
3. Papers are dynamic until they are submitted, and the scope of a manuscript is likely to evolve from first outline to final draft. As a result, the author list is never truly final until the paper is ready to be submitted. Authors may be added or dropped as needed, but as with the previous point, it is good practice never to drop an author without a discussion with all authors.