

# NC STATE UNIVERSITY

## Authorship Guiding Principles

NC State, its faculty, staff and students are dedicated to the pursuit of knowledge and its preservation and propagation<sup>1</sup>. To contribute to the propagation of knowledge, scholarly activities must be published. Authorship is critical for determining credit and responsibility and should be arrived at thoughtfully and with intention. The principles included here apply to all scholarly activities at NC State and are intended to serve as a guide to assist in addressing authorship. When possible, err on the side of inclusivity.

**Guiding Principle 1: Establish Expectations** - In order to avoid disputes later, discussions of authorship should occur early in the scholarly collaboration process. Authorship inclusion and order should be a joint decision of all co-authors.

**Guiding Principle 2: Pay Attention to Power Differentials** - Collaborators should be cognizant of power differentials, particularly when students and postdocs are involved. All advisors of graduate students should discuss authorship traditions with them during the first year of their program. Other collaborations including mentors, undergraduates and postdocs should meet early in the collaboration to discuss authorship expectations.

**Guiding Principle 3: Communicate Clearly and Transparently** - While establishing expectations of authorship and acknowledgement early is important, collaborations may evolve and change over time. It is critical to approach those changes frankly and transparently. If changes affect the legitimacy of the planned authorship and acknowledgements, the collaborators should revisit them with each other.

**Guiding Principle 4: Follow Authorship Traditions Accepted within Disciplines** - Academic disciplines typically have well established traditions for determining authorship and those should be followed. When collaborations involve individuals from different disciplines, the team should discuss how the specific collaboration should be handled.

**Guiding Principle 5 - Appropriately Acknowledge All Contributions<sup>2</sup>** - Authorship should be based on criteria including but not limited to the following:

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

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<sup>1</sup> [POL 10.00.02 – Research Policy](#)

<sup>2</sup> Authorship criteria listed in this guidance are based on the International Committee of Medical Journal Editors (ICMJE) recommendations, but apply to other publications. [ICMJE - Authorship](#)

- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.
  - Subject to specific journal policies, Artificial Intelligence tools cannot bear this accountability and should not be credited as authors. Use of AI may, however, be appropriate to acknowledge within the manuscript.

**Note:** For many Journals, Large Language Models (LLMs), such as ChatGPT, do not currently satisfy authorship criteria. Attribution of authorship carries with it accountability for the work, which cannot be effectively applied to LLMs. Use of an LLM should be properly documented in the Methods of the manuscript itself. (for more details: see <https://www.nature.com/nature-portfolio/editorial-policies/ai>)

[Appendix A](#) provides recommended criteria for determining authorship.

## **Principles for Resolving Authorship Disputes**

### **Appendix A - Recommended Criteria for Determining Authorship**

International Committee of Medical Journal Editors [ICMJE](#)

#### **1. Why Authorship Matters**

Authorship confers credit and has important academic, social, and financial implications. Authorship also implies responsibility and accountability for published work. The following recommendations are intended to ensure that contributors who have made substantive intellectual contributions to a paper are given credit as authors, but also that contributors credited as authors understand their role in taking responsibility and being accountable for what is published.

Because authorship does not communicate what contributions qualified an individual to be an author, some journals now request and publish information about the contributions of each person named as having participated in a submitted study, at least for original research. Editors are strongly encouraged to develop and implement a contributorship policy. Such policies remove much of the ambiguity surrounding contributions, but leave unresolved the question of the quantity and quality of contribution that qualify an individual for authorship. The ICMJE has thus developed criteria for authorship that can be used by all journals, including those that distinguish authors from other contributors.

## 2. Who Is an Author?

The ICMJE recommends that authorship be based on the following 4 criteria:

- Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- Drafting the work or revising it critically for important intellectual content; AND
- Final approval of the version to be published; AND
- Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. In addition, authors should have confidence in the integrity of the contributions of their co-authors.

All those designated as authors should meet all four criteria for authorship, and all who meet the four criteria should be identified as authors. Those who do not meet all four criteria should be acknowledged—see Section II.A.3 below. These authorship criteria are intended to reserve the status of authorship for those who deserve credit and can take responsibility for the work. **The criteria are not intended for use as a means to disqualify colleagues from authorship who otherwise meet authorship criteria by denying them the opportunity to meet criterion #s 2 or 3.** Therefore, all individuals who meet the first criterion should have the opportunity to participate in the review, drafting, and final approval of the manuscript.

The individuals who conduct the work are responsible for identifying who meets these criteria and ideally should do so when planning the work, making modifications as appropriate as the work progresses. We encourage collaboration and co-authorship with colleagues in the locations where the research is conducted. It is the collective responsibility of the authors, not the journal to which the work is submitted, to determine that all people named as authors meet all four criteria; it is not the role of journal editors to determine who qualifies or does not qualify for authorship or to arbitrate authorship conflicts. If agreement cannot be reached about who qualifies for authorship, the institution(s) where the work was performed, not the journal editor, should be asked to investigate. The criteria used to determine the order in which authors are listed on the byline may vary, and are to be decided collectively by the author group and not by editors. If authors request removal or addition of an author after manuscript submission or publication, journal editors should seek an explanation and signed statement of agreement for the requested change from all listed authors and from the author to be removed or added.

The corresponding author is the one individual who takes primary responsibility for communication with the journal during the manuscript submission, peer-review, and publication process. The corresponding author typically ensures that all the journal's administrative requirements, such as providing details of authorship, ethics committee approval, clinical trial registration documentation, and disclosures of relationships and activities are properly

completed and reported, although these duties may be delegated to one or more co-authors. The corresponding author should be available throughout the submission and peer-review process to respond to editorial queries in a timely way, and should be available after publication to respond to critiques of the work and cooperate with any requests from the journal for data or additional information should questions about the paper arise after publication. Although the corresponding author has primary responsibility for correspondence with the journal, the ICMJE recommends that editors send copies of all correspondence to all listed authors.

When a large multi-author group has conducted the work, the group ideally should decide who will be an author before the work is started and confirm who is an author before submitting the manuscript for publication. All members of the group named as authors should meet all four criteria for authorship, including approval of the final manuscript, and they should be able to take public responsibility for the work and should have full confidence in the accuracy and integrity of the work of other group authors. They will also be expected as individuals to complete disclosure forms.

Some large multi-author groups designate authorship by a group name, with or without the names of individuals. When submitting a manuscript authored by a group, the corresponding author should specify the group name if one exists, and clearly identify the group members who can take credit and responsibility for the work as authors. The byline of the article identifies who is directly responsible for the manuscript, and MEDLINE lists as authors whichever names appear on the byline. If the byline includes a group name, MEDLINE will list the names of individual group members who are authors or who are collaborators, sometimes called non-author contributors, if there is a note associated with the byline clearly stating that the individual names are elsewhere in the paper and whether those names are authors or collaborators.

### 3. Non-Author Contributors

Contributors who meet fewer than all 4 of the above criteria for authorship should not be listed as authors, but they should be acknowledged. Examples of activities that alone (without other contributions) do not qualify a contributor for authorship are acquisition of funding; general supervision of a research group or general administrative support; and writing assistance, technical editing, language editing, and proofreading. Those whose contributions do not justify authorship may be acknowledged individually or together as a group under a single heading (e.g. "Clinical Investigators" or "Participating Investigators"), and their contributions should be specified (e.g., "served as scientific advisors," "critically reviewed the study proposal," "collected data," "provided and cared for study patients," "participated in writing or technical editing of the manuscript").

Because acknowledgment may imply endorsement by acknowledged individuals of a study's data and conclusions, editors are advised to require that the corresponding author obtain written permission to be acknowledged from all acknowledged individuals.

## **Authorship Guidelines for Interdisciplinary Journals**

While many journals follow the authorship guidelines recommended by ICMJE, some interdisciplinary journals have slightly adapted these criteria to accommodate different types of research methods and reporting conventions across diverse disciplines. For example, most PLOS journals transitioned in May 2023 to follow the authorship guidance discussed in McNutt et al. (2018). For PLOS journals other than PLOS Medicine, authors must satisfy all of the following requirements:

Substantial contributions to one or more of the following: conception or design of the work; acquisition, analysis, or interpretation of data; creation of new software used in the work; drafting or substantially revising the article

AND

Approved the submitted version (and any substantially modified version that involves the author's contribution to the study)

AND

Agrees to be personally accountable for the author's own contributions AND to ensure that questions related to the accuracy or integrity of any part of the work are appropriately investigated, resolved, and the resolution documented in the literature