

Recommendations for Best Practices in Authorship¹² or Who's on First³

1. Authorship hinges upon ongoing communication amongst research team members especially early career faculty, students, staff, consultants, etc. from the time the project is started until submission of manuscript. The PI for the team is responsible for creating and maintaining the environment where all members of the team feel safe to speak up.
2. Authorship to be based on the following 4 criteria⁴
 - a. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; **AND**
 - b. Drafting the work or revising it critically for important intellectual content; **AND**
 - c. Final approval of the version to be published; **AND**
 - d. 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, discussed, and resolved.
3. Objective guidelines
 - A. Authorship- means having a fundamental role in the project or made substantive intellectual contributions
 - a. Conceptualization (problem statement, conceptual framework and research questions)
 - b. Literature review
 - c. Research Design
 - d. IRB determination
 - e. Data Collection (instrumentation, data collection and quality control)
 - f. Data analysis
 - g. Data interpretation
 - h. Creation of manuscript (presentation and documentation, and presentation of results)
 - i. Writing an introduction section
 - ii. Writing a methods section
 - iii. Writing results section
 - iv. Writing discussion section
 - v. Writing conclusive summary
 - vi. Writing limitations of the study
 - vii. Writing future directions of the study
 - viii. Managing citations and references based on journal requirements
 - i. Review of all drafts for accuracy and fidelity

¹ <https://www.aje.com/en/arc/ethics-manuscript-authorship/>

² https://projects.iq.harvard.edu/attribution_workshop

³ Dance, A. Authorship: Who's on first? *Nature* **489**, 591–593 (2012). <https://doi.org/10.1038/nj7417-591a>

⁴ <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html>

- j. Managing submission process (Agreement to submit, responding to reviewers' feedback and resubmission)

- B. Authorship order: the authorship order should be determined solely by the magnitude of contribution to the project rather than the status or power in the group EXCEPT where the group to which the manuscript is submitted requires specific orders (like ALPHA).
- C. Honorary/guest authorship: conferred out of respect or gratitude are discouraged and in some cases considered research misconduct. (refer back to #2)
- D. Acknowledgment: those whose contribution does not rise to the level of authorship (who have not met the all 4 of the above criteria)
 - a. Procuring funding
 - b. Approve and support the project (Dept. Chair or other leadership position)
 - c. Commenting on manuscript and suggesting edits
 - d. Gathering and or cleaning data
 - e. Technical support, simulation support, etc.
 - f. Administrative task (transcription, proofreading, submission of manuscript and associated documentation on journal website)

Authorship Contribution and Determination Record

Instructions: This record should be reviewed at the start of a project to confirm the participation of individuals on a collaborative project. It may also be used to document ongoing contributions and determine authorship. Authorship is defined as having a fundamental role in the project or making substantive intellectual contributions.¹ Contributors should complete this collaboratively and revisit throughout the project, perhaps monthly or at project team meetings. You may add rows for Project Activities and columns for additional Contributors. This record was not designed to evaluate the relative value of participation but can be adapted to assign weights to activities to create a scorecard to determine authorship and order of authorship.²

Project Title: _____

Project Activity	Contributor Initials			
ICMJE criterion 1				
Conceptualization (problem statement, conceptual framework and research questions)				
Literature review				
Research design				
IRB determination				
Data collection (instrumentation, data collection and quality control)				
Data analysis				
Data interpretation				
ICMJE criterion 2				
Creation of manuscript (presentation and documentation, and presentation of results)				
Writing an introduction section				
Writing a methods section				
Writing results section				
Creating Tables/Figures				
Writing discussion section				
Writing conclusive summary				
Writing limitations of the study				
Writing future directions of the study				
Making edits in the draft				
Managing citations and references based on journal requirements				
ICMJE criterion 3				
Review of all drafts for accuracy and fidelity				
Managing submission process (Agreement to submit, responding to reviewers' feedback and resubmission)				

Note: This table was adapted from the APA Authorship Determination Scorecard available here: <https://www.apa.org/science/leadership/students/authorship-determination-scorecard.pdf> and the AAMC Academic Medicine Checklist of Review Criteria for Research Manuscripts available here: <https://journals.lww.com/academicmedicine/Documents/RCRMChecklist.pdf>

References:

1. International Committee of Medical Journal Editors. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. <http://www.icmje.org/recommendations/browse/roles-and-responsibilities/defining-the-role-of-authors-and-contributors.html#two>. Updated December 2019. Accessed April 15, 2020.
2. Mavis B, Durning SJ, Uijtdehaage S. Authorship Order in Medical Education Publications: In Search of Practical Guidance for the Community. *Teaching and learning in medicine*. 2019 May 27;31(3):288-97.

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