

## Ethics and Research Compliance in Scientific Writing

### Authorship Considerations

- The author list and acknowledgments should be determined early in the process
- Conflicts of interest that any author has may bias the work and must be disclosed
- The specific roles of the authors and any sponsors should be disclosed

### Criteria for Authorship

The International Committee of Medical Journal Editors (ICMJE) recommends that authorship be based on the following 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

All persons designated as authors should meet all 4 criteria for authorship, and all who meet the 4 criteria should be identified as authors. Those who do not meet all 4 criteria should be thanked in the acknowledgments.

More information can be found at the following link: <http://www.icmje.org/>

### Plagiarism and Copyright Infringement

- Learn about US laws and standards regarding publications (plagiarism, copyright infringement, fair use), which may differ from the laws and practices in other countries
- Avoid the various forms of plagiarism
  - *Direct plagiarism*: copying a section of someone else's work word for word without using quotation marks or attributing the source
  - *Mosaic plagiarism*: borrowing phrases without using quotation marks, or using synonyms in place of the author's words while keeping the same structure and meaning

- *Unacceptable paraphrasing*: making only superficial changes to original text
  - *Insufficient acknowledgment*: piecing together a mix of ideas, quotations, or paraphrases while providing only partial attribution
- Do not use the exact wording from another paper in your paper—even when you cite the source; rewrite the content in your own words
- Use quotation marks when you borrow text, but avoid long direct quotes
- You can use plagiarism-detection software to check manuscripts before submitting them. Be aware that journals often use such software when reviewing manuscripts

### Research Compliance

Requirements for studies involving human subjects:

- Institutional review board (IRB) approval
  - IRBs review all clinical (research) investigations that include human subjects, as regulated by the US Food and Drug Administration
  - IRB approval is required for all research manuscripts involving human subjects (prospective studies, clinical trials, and retrospective database reviews)
  - For more information about how to obtain IRB approval for your clinical study, e-mail [clinicalresearch@texasheart.org](mailto:clinicalresearch@texasheart.org)
- Consent must be obtained from the patient for case reports in which the patient can be identified

Requirement for studies involving animals:

- Institutional Animal Care and Use Committee (IACUC) approval
  - IACUCs oversee animal use in biomedical research to ensure adherence to federal regulations
  - IACUC approval is required for all research protocols involving the use of animals
  - For more information, contact Melissa Moon (832-355-7339; [mmoon@texasheart.org](mailto:mmoon@texasheart.org)), THI Cardiovascular Lab, Animal Care