

Responsible Authorship and Publication Practices

A panel and audience discussion co-sponsored by the International Academy of Toxicologic Pathology (IATP) and the Society of Toxicologic Pathology (STP) at the STP Annual Meeting in Denver in June 2011 generated some lively dialogue. The theme of the ninety-minute session was “Responsible Authorship and Publication Practices.” Following some general introductory comments related to the ethics of publication, audience and panel discussion was prompted by presentation of case scenarios related to authorship and publication practices. This review summarizes some of the discussion points and includes additional information and practical guidelines for publication ethics.

CRITERIA FOR AUTHORSHIP

According to the Uniform Requirement for Manuscripts and guidelines promulgated by the International Committee of Medical Journal Editors (<http://www.icmje.org/>), accepted criteria for authorship include substantial intellectual contributions to all three of the following study aspects: (1) study conception and design, acquisition of data, or analysis and interpretation of data; (2) participation in substantively drafting and/or revising the manuscript; and (3) giving final approval of the version submitted for publication. To confirm the legitimacy of authorship, some journals have a policy of requesting a statement from the corresponding author regarding the exact contribution of each co-author on the submitted manuscript. In some situations, such as providing pathology diagnostic support for a research project, a substantial contribution from a specialist may represent just one component of the work to be published. For that contributor to be listed as an author, he or she must be confident of the contributions of the other authors and be thoroughly familiar with the individual with responsibility for the submitted work as a whole.

What generated much interest and discussion were the questions regarding “what does not constitute authorship” or “who should not be a co-author.” The latter includes individuals providing general overall supervision of a research group, the general acquisition of funding for the laboratory, administrative approval of manuscript submission for organizational

accounting purposes, or simply collecting or providing data without providing analysis or interpretation. Although automatic honorary or obligatory inclusion of these individuals may be common practice in some organizations, when they have not actively participated in the study being submitted for publication, including them as authors is not advisable within the available guidelines. There was some concern expressed about research papers on which a larger than usual number of authors appears in an effort to give credit to all study participants, regardless of the magnitude of their individual contributions. If each individual author has made a substantial contribution, then this practice is perfectly defensible, but where there may be some cultural reasons for this practice, honorary, guest, admiration, or coercion authorship is discouraged. All authors should qualify for authorship based on the quantity and quality of their substantial contribution to the research and to their willingness to take public responsibility for, and the ability to defend, their contribution to the publication. Individuals who do not qualify for authorship but who may have provided critical scientific advice, manuscript review, technical support, or other material input into the work should always be considered for formal acknowledgment (see below).

One of the scenario examples presented to the audience involved a limited amount of input from a pathologist and from a statistician on a molecular biology research submission. The lead research scientist financially contracted for the services of pathology and statistical analysis at a contract research organization (CRO). The pathology findings came back as no lesions present, that is, the tissues were normal. The statistical analysis was routine, and the statistician provided some sentences for inclusion in the Methods section of the paper. Neither the pathologist nor the statistician was listed as an author. Based on the journal peer review of the submitted manuscript, additional comment and explanation were required from the pathologist. The reviewers’ questions related to pathology were answered by the CRO pathologist. The principal questions raised in this scenario example were whether the pathologist should initially have been an author and, based on additional input following the peer review, whether the pathologist should now be listed as an author. Although many felt the pathology was critical and that the absence of lesions was an important finding, not everyone agreed that the pathologist should have

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been a co-author. Some argued that the CRO pathologist was a "pathologist for hire," was not involved in study design, did not help write the manuscript, was not even acquainted with the author, and, thus, did not qualify for authorship. Given that the audience was primarily pathologists, it is not surprising that many opined that the pathologist should have been listed as an author, should have been involved in study design, and was responsible for one critical aspect of the study. The fact that the CRO pathologist was paid for the work should not have been a deciding factor in assigning authorship, since in-house pathologists in academia and government are also "paid" for their diagnostic contribution and are typically listed as authors on manuscript submissions. Thus, there is definite potential for inconsistency in how the pathologist's contribution is handled in situations in which pathology is a component of a manuscript with a nonpathology focus. The argument was made that pathologists, no matter what their affiliations, are professionals and therefore their contributions (if substantial) should not be viewed as a "service," but rather as a collaboration. The same potential inconsistency in assigning authorship is applicable to other specialized contributions such as analytical chemistry and statistical analysis. It was noted that pathologists are commonly asked to give a diagnostic opinion on a couple of slides for a scientific co-worker as a professional courtesy. This process generally involves a few minutes of time, and authorship on a subsequent publication is generally not expected.

There was an associated discussion regarding adding to, or changing, the listing of authorship upon resubmission of a paper following an initial peer review by a journal. This step is acceptable in situations where there is further work on manuscript revision in response to peer reviewers' questions and comments or in situations in which individual authors are no longer readily available to provide additional contributions and someone else is required to play a major role in resubmitting the manuscript. When changing authorship or author order upon resubmission, the corresponding author should inform the co-authors and journal editor of the reason(s) for the change.

The topic of the sequence or order for listing multiple authors on publications such as position papers, final recommendations from workshops, special symposia, and other large collaborative group efforts was raised for discussion. Typically the chairperson for the group effort is the first author and the remaining participants are listed either in order of the magnitude of their contribution or alphabetically.

It was proposed that one way of establishing the authorship listing would be to agree to it at the outset of the research program, experiment, or large multi-author collaborative effort so that possible future conflict or disagreements could be forestalled.

ACKNOWLEDGMENTS

Listing names in the Acknowledgments section is a means to give credit to those who, for example, provide technical contributions or who facilitate the publication by their overall supervision of a large group, by acquisition of funding for the

research, or for their encouragement and insightful discussions centered on the research and its presentation in publication form. Formally acknowledging individuals to gain credibility and adding individuals without their prior consent is not acceptable publication practice. Acknowledgment of funding sources such as pertinent grants or industry-sponsored funding is actively encouraged to maintain transparency and is required by many journals as one important way of avoiding the criticism of concealing potential "conflicts of interest." Alternatively, some journals require a categorical financial statement separate from the acknowledgment section. Given that the audience for this IATP discussion session was largely composed of pathologists, it was mentioned that acknowledging technical support from the necropsy team and histology laboratory was a means to give credit to these important contributions.

ABUSES OF PUBLICATION PRACTICES

Several abuses of publication practices were raised. One example was the simultaneous submission of manuscripts to multiple journals with the intent to withdraw the manuscript as soon as one of the journals indicates acceptance. This was unanimously understood as being an inappropriate publication practice. Regarding the use of previously published material in a subsequent journal submission, redundant or duplicate publication is typically not acceptable except when previously published data is needed to adequately communicate the intent of the research being presented. A guideline in that situation might be that at least 80% of the data presented in the paper should be new and not previously reported and that any overlap with work that was previously published should be clearly documented in the manuscript submission and appropriately acknowledged in a literature reference. However, the actual amount of previously published data that is allowed is dependent upon the specific journal's guidelines. Previous presentation of data in a scientific meeting as a platform presentation or scientific poster is generally not considered a previously published work, even if an abstract has been printed for distribution or published within a journal (Graf et al. 2007).

There was lively discussion regarding plagiarism, and self-plagiarism in particular. Plagiarism is an inappropriate publication practice and can be readily detected with relatively inexpensive software at the disposal of journal editors and associate editors. Opinions on self-plagiarism were more polarized. When an author has previously used and published just the right words to characterize and explain a research finding, a pathological lesion, or a clinical presentation or has crafted a terse explanation to capture the background literature in a prior publication, some felt that one should be able to use some of their own sentences in a subsequent publication submission. On the flip side of the coin, others felt that all sentences should be created from scratch and that using sentences from even a personal and publically available PowerPoint presentation in a new manuscript submission should be discouraged. A conservative approach would be to start from scratch and reference

earlier publications instead of repeating details or exact wording. Whereas avoiding plagiarism of any sort is the responsibility of the authors, journal editors should have the tools to routinely screen for plagiarism.

Additional responsible publication practices were briefly discussed. These practices include the author's responsibility to read the original papers that are cited in the submitted manuscript rather than using reference citations based on someone else's review article. When using figures from prior publications, obtaining permission from the publisher, or copyright holder, is required and, as a courtesy, informing the original author is encouraged. Republishing one's own publication in another language needs to be carefully considered in order to avoid loss of fidelity of the meaning in the translation. Republishing of another's manuscript in an alternative language needs even more care and should always involve the original authors with appropriate full approval and support of the editor of the second journal.

CONFLICT OF INTEREST

As part of the desire for transparency, signed conflict of interest statements are typically required from all authors prior to actual publication. These articles include review papers and commentaries, and the statement is typically published as a footnote in the printed publication. The concern present within the scientific community centers on the potential for introduction of bias based on financial or personal considerations that might influence how the study results are presented or interpreted. Financial disclosure includes place of employment, consultancies, payment for expert opinions, and receipt of honoraria related to the submitted work. In the interest of complete transparency, full disclosure may go beyond documentation of potential conflict of interest in identifying funding sources and be extended to the authors providing full access to all study data.

RESPONSIBILITIES OF JOURNAL EDITORS, ASSOCIATE EDITORS, AND REVIEWERS

It is noted that real or potential conflict of interest issues also apply to individuals associated with the journal peer review process. Given that managing and associate editors typically assign manuscript reviews to subject matter experts or to authors of papers actually cited in the manuscript under consideration, the potential for reviewer bias based on personal opinion or competitive issues is of concern. Obviously, the confidentiality of the submission is to be safeguarded. For some journals, the identity of the journal reviewers is made known to the submitting authors, but for most journals peer review is anonymous. The trick for the journals is to identify

experts to review the submission while avoiding conflict of interest. Invited reviewers should recuse themselves from any requested review that might be a real or perceived conflict of interest. Also of importance is the responsibility of the journal editor and associate editors to carefully scrutinize reviewers' comments to ensure objectivity and to ensure that any criticism is objective and directed at the work rather than at the authors. A reviewer's recommendation for rejection of a manuscript should be specific and based on criteria clearly delineated in the reviewer's commentary and fully reviewed by the appropriate associate editor or editor-in-chief. In the event of a rejection, the author should have the opportunity for clear and open dialogue with the journal editor as part of a grievance procedure. In dealing with manuscript submissions and obtaining peer review, it is the editor's responsibility to ensure confidentiality while maintaining sufficient transparency to allow authors the opportunity to challenge decisions.

A responsibility shared by author, editor, and reviewers is to avoid situations where the reported work is parsed out to get two publications when a single, more comprehensive publication is warranted. A published paper that provides some data but does not tell a sufficiently full story may be considered a "least publishable unit," and a telltale indication is a statement, usually in the Discussion section, that additional details will be presented in a subsequent submission. "Least publishable units" should be discouraged.

The discussion session ended with ongoing dialogue in the hallways. A copy of the PowerPoint presentation used for this panel and audience discussion can be downloaded from the IATP Web site (iatpfellows@verizon.net). One issue not discussed, because of limited time, was the ethics of figure adjustment using image adjustment software. This topic is being considered for discussion at the next annual meeting of the Society of Toxicologic Pathology.

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REFERENCE

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- Panel Members: Robert R. Maronpot, Chair (Maronpot Consulting LLC, USA); John R. Foster, Editor-in-Chief, *Toxicologic Pathology* (AstraZeneca Pharmaceuticals, UK); Susan A. Elmore, Editorial Board, *Toxicologic Pathology* (National Institute of Environmental Health Sciences, USA); Takanori Harada, Editorial Board, *Toxicologic Pathology* (Institute of Environmental Toxicology, Japan); Stephanie Dickinson, Managing Editor, *Toxicologic Pathology* (Toxicologic Pathology Editorial Office, USA); Wolfgang Kaufmann, Editorial Board, *Experimental and Toxicologic Pathology* (Merck Serono Research and Development, Germany); Sabine Francke-Carroll (United States Food and Drug Administration).

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