

## EDITORIAL

### The Importance of Peer Review

The article by William G. Schulz in the April 10, 2006, issue of *Chemical & Engineering News* titled “Journals Grapple with Ethics Issues” describes the various ethical violations in scientific publishing. These issues go beyond plagiarism. These issues include scientists being named as coauthors without their permission, the submission of papers that have already been published, simultaneous submission to two or more journals, and self-plagiarism and/or incremental reports.

In 2005, the *Journal of Agricultural and Food Chemistry* Editor received nearly 3500 manuscripts from all over the world to be considered for publication. Of those, fewer than 1% were singled out for ethical problems. The vast majority of the papers met the ethical standards set by the American Chemical Society. However, the small number of manuscripts that present ethical problems consumes a disproportionate amount of the time and effort of Editors and peer reviewers. The *Journal of Agricultural and Food Chemistry* relies heavily on the peer review process, editorial judgment, and reader vigilance to ensure the accuracy and quality of the papers published.

Peer review is not a perfect process, but it is one of the best ways of ensuring the quality and originality of a paper. The review contains an evaluation of the scientific merit, comments on clarity of presentation, and an appraisal of the paper’s originality and the quality of the science presented therein. Peer reviewers are scientists, often in a specialized field of study, and are the most qualified to judge the merits of a particular paper. They are also familiar with the literature and can often spot previously published works, outright plagiarism, and other ethical issues as well. This responsibility of a reviewer, to assess the quality and suitability of a paper for publication, is at the heart of the *Journal of Agricultural and Food Chemistry’s* ability to maintain the highest quality of papers published.

The decision to accept a manuscript for publication is based on a complex set of processes. Because it requires reviewers and Editors to make judgments and to evaluate and criticize the work of their peers, the Editors carefully choose reviewers using the following criteria:

- They must have appropriate expertise.
- They must be fair and objective.
- They must be conscientious and review the paper in a timely fashion with the goals of helping the author(s) improve their work and ensuring the quality of the papers published.

When a reviewer agrees to evaluate a paper, she/he is making a significant commitment of time and intellectual energy. The reviewer usually reads the manuscript two or more times before making an assessment. Reviewers check references, evaluate the figures and tables, and scrutinize the methods used and the results described. Only then can a reviewer start to write her/his evaluation. The majority of the reviews are very thorough and extremely helpful to the author(s) and Editor. Often the authors of a manuscript that is rejected benefit most from these peer reviews that describe shortcomings and approaches to resolving them. The reviewers are not expected to edit the paper, but will sometimes suggest that the authors need editorial assistance. It is the authors’ responsibility to make certain that their manuscripts are written correctly before submission and carefully take into consideration the reviewers’ comments during the revision process. Many authors express great appreciation for the review comments and feel that their manuscripts are much improved as a result.

So the Editors of the *Journal of Agricultural and Food Chemistry* are grateful to our colleagues, who understand the responsibility they have accepted to ensure the quality, originality, and clarity of the works published. The scientific enterprise depends on the judgment and integrity of authors, reviewers, and Editors. It is to our collective credit that the overwhelming majority of scientists are conscientious in meeting their responsibilities in ensuring the high quality of the science that ultimately is published in peer-reviewed journals.

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