EDITORIAL

Professional Ethics and Publishing

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We are all troubled by ethics violations we see in the newspaper and other media outlets. Are there similar areas of concern in the sciences and in poultry science? Recently there have been a number of cases in some of the most prestigious scientific journals, including *Science*, of papers being withdrawn because the results were not replicable due to scientific misconduct or fabrication of results (reviewed by LaFollette, 2000). The extent of the ethics problem has not been examined quantitatively but, whatever the level of scientific misconduct, it is totally unacceptable. The essence of scientific fraud is the *intent to deceive*. An unprincipled scientist may commit fraud due to blind ambition or career pressure, sloppiness, laziness, malice, or even greed. Irrespective of the underlying motive, those who commit scientific devalue or destroy the careers of their students and collaborators, bring discredit to the field and to science itself, defraud sponsors and the public, and mislead colleagues throughout the world. The reason for this editorial is that it is our responsibility as editors to attempt to prevent scientific misconduct (Office of Research Integrity, 2000).

What Constitutes Professional Ethics in Publishing?

Professional ethics in publishing means not committing scientific fraud and seeking the highest standards of responsible authorship. We are all aware of

- Fabrication (the overt concocting or manufacturing of data that are deliberately false);
- Falsification (the deliberate changing of data; this includes the selective inclusion or exclusion of data); and
- Plagiarism (the copying or paraphrasing of another’s work; that is, taking credit for someone else’s work).

**Fabrication or Falsification = Fraud!**

**Plagiarism = Theft!**

Plagiarism goes beyond simply copying someone else’s work. It includes appropriating someone else’s ideas or concepts without attribution. Thus, plagiarism includes citation plagiarism—the failure to cite the work of others. Falsification includes distortion of the literature. There are other citation issues related to selectively, rather than comprehensively, reviewing the literature. Among citation issues that constitute falsification are deceptively citing others’ or one’s own work and excluding references to work that refutes the author’s hypothesis or viewpoint.

Deceptive citation may be a conscious act or viewed simply as “sloppiness.” The latter is exemplified by the “second- or third-hand citation.” We read a paper and finding interesting or supporting data, methods, or conclusions cited from other, original work. We then cite that reference in our own work without reading the original research. This is so easy when using electronic information retrieval—*so easy, but so wrong!* Irrespective of the motivation, deceptive citation is falsification.

Responsible authorship goes beyond avoiding fabrication, falsification, and plagiarism. It includes, but is not limited to, the following: 1) the responsibility of authors on collaborative projects; 2) missing key citations; and 3) citing abstracts.

The responsibility of all authors on a paper is to assure that the contents do not include fabrication, falsification, or plagiarism and that the paper meets the highest standard of responsible authorship. It is also critical that each author has made a meaningful contribution to the work to justify his or her inclusion as an author. There should be no such thing as courtesy authorship. Responsible authorship requires that the literature is adequately reviewed and that key citations are not missing. In these days of electronic search engines such as PubMed (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi), there is no excuse for not knowing of a key reference. Citing abstracts is also problematic because abstracts are not peer reviewed. Moreover, there is a lack of complete data or even information on the methods employed. Other breaches of responsible authorship include the following:

- Failing to ensure that all animal experimentation meets the highest standards of animal care and use and approval by the Institution Animal Care and Use Committee (IACUC).
- Failing to obtain informed consent and approval by an Institution Review Board (IRB) for studies in which people are surveyed or used as subjects in the experimentation.
- Failing to comply with copyright law by not seeking permission to reproduce previously published figures or tables.
- Failing to include a statement that one or more authors have a financial stake in the research; e.g., when an author is a consultant to the sponsoring company.
- Engaging in *ad hominem* attacks on other scientists.
We have a responsibility to prevent scientific misconduct and to ensure adherence to the highest standards of responsible authorship. We have a responsibility to our colleagues, to our students, to our department and university, to our industry, to science, to the people of our country and the world, and to ourselves.

REFERENCES