CHAPTER 8
COIN OF THE REALM: PRACTICAL PROCEDURES FOR DETERMINING AUTHORSHIP

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Like a coin, authorship has two sides: credit and responsibility. One receives professional credit from his/her publications and takes responsibility for their contents.

Biagioli et al. (1999, p. 2)

INTRODUCTION

Authorship credit is conceivably the most important and least understood area of professional life for members of the scientific community. Because promotion, prestige, and productivity are judged largely by publication activity, authorship credit has become the 'coin of the realm' in the scientific marketplace (Wilcox 1998). Beyond the value of authorship to individual investigators, the assignment of individual credit to a publication implies certain ethical and scientific imperatives that are of tremendous importance to the scientific enterprise. These imperatives include the certification of public responsibility for the truth of a publication and the equitable assignment of credit to those who have contributed in a substantive way to its contents.

The need for clear and consistent procedures for the determination of authorship credits comes from two considerations. First, many journals are now demanding that papers be prepared in a way that is consistent with the principles of responsible authorship. Second, a clear consensus about the conditions governing authorship decisions would make the work of individual authors much easier.

Numerous professional organizations (e.g., American Psychological Association 2002), expert panels (International Committee of Medical Journal Editors 1991; 2003), and individual commentators (Rennie et al. 1997) have developed policies and procedures dealing with individual, group, and corporate authorship. In this chapter, we review some of these guidelines from both the practical and ethical perspectives, in an attempt to develop workable procedures that authors can follow during the course of preparing and publishing a scientific article. In addition, we consider authorship problems that sometimes arise in the course of a publication cycle.

These problems seem to be occurring with increasing frequency (Wilcox 1998) and include failure to involve potential collaborators; failure to credit collaborating authors; undeserved authorship credits; relaxed policies for students, research assistants and post-docs; and excessive numbers of co-authors. Although these are all serious problems, the pervasiveness of some of them in the publication process is suggested by the extent to which most scientific readers can be amused by the satirical humor epitomized in the 'Ode to multi-authorship' quoted in Box 8.1.

Box 8.1 ODE TO MULTI-AUTHORSHIP: A MULTICENTRE, PROSPECTIVE RANDOM POEM (Quoted from Horrowitz, et al., 1996)

All cases complete, the study was over
the data were entered, lost once, and recovered.
Results were greeted with considerable glee
p value (two-tailed) equaling 0.0493.
The severity of illness, oh what a discovery,
was inversely proportional to the chance of recovery.
When the paper's first draft had only begun
the wannabe authors lined up one by one.
To jockey for their eternal positions
(for who would be first, second, and third)
and whom 'et aled' in all further citations.
Each centre had seniors, each senior ten bees,
the bees had technicians and nurses to please.
The list it grew longer and longer each day,
as new authors appeared to enter the fray.
Each fought with such fury to stake his or her place
being just a 'participant' would be a disgrace.
For the appendix is piled with hundreds of others
and seen by no one but spouses and mothers
If to 'publish or perish' is how academics are bred
then to miss the masthead is near to be dead.
As the number of authors continued to grow
they outnumbered the patients by two to one or so.
While PIs faxed memos to company headquarters
the bees and the nurses took care of the orders.
They'd signed up the patients, and followed them weekly
heard their complaints, and kept casebooks so neatly.
There were seniors from centres that enrolled two or three
who threatened 'foul play' if not on the marquee.
But the juniors and helpers who worked into the night
were simply 'acknowledged' or left off outright.
'Calm down' cried the seniors to the quivering drones
there's place for you all on the RPU clones.
When the paper was finished and sent for review
six authors didn't know that the study was through.
Oh the work was so hard, and the fights oh so bitter
for the glory of publishing and grabbing the glitter.
Imagine the wars when in six months or better
The Editor's response, 'please make it a letter'.

RPU = repeating publishable unit; PI=principal investigator

CONVENTIONS IN ASSIGNING ORDER OF AUTHORSHIP

One of the difficulties in determining the criteria for authorship comes from the different traditions and practices that have been used to distribute authorship credits. Box 8.2 provides definitions of common authorship terms and ethical issues, some of which are also discussed in Chapter 4. Authors are sometimes listed in alphabetical order to avoid controversy about the relative contributions of different authors, especially when the contributions have been fairly equal. A related convention is to list authors in reverse alphabetical order, presumably to avoid the preference given to persons whose surname begins with a letter that appears early in the alphabet.

Box 8.2 FORMS OF AUTHORSHIP

Coercion authorship	Is a gift authorship that is demanded rather than voluntarily awarded
Contributorship	Advocates listing the contributions of each person involved in the project, and avoiding the attribution of authorship entirely
Corporate authorship	Lists the name of a project as author, along with a separate acknowledgement describing the contributors and the corresponding author (as an alternative to long author lists in multi-authored reports)
Corresponding author	The first author listed on an article, assumed to be the main researcher and writer of the article and responsible for corresponding with the journal editor. In some cases the corresponding author is not listed first when the writing and corresponding functions are divided.
Ghost authorship	The failure to include as co-author of a work a person who satisfies the criteria for authorship (e.g., a science writer employed by a drug company)
Gift authorship	Awards authorship credit because of a person's power or prestige rather than for substantial contribution to the work
Guarantor	The person who takes responsibility for the contents and integrity of the work as a whole
Honorary authorship	See 'gift authorship'
Mutual admiration authorship	Occurs when two or more researchers agree to list each others' names on their own papers despite the others' minimal involvement.
Mutual support authorship	See 'mutual admiration authorship'

Another convention is to list the laboratory director, center director, or other prominent person last. As noted in other parts of this chapter, this convention is not ethical unless that individual has made a substantial contribution to the publication and is not being listed merely to flatter the powerful or to add to the prestige value of the authorship list.

The convention followed most frequently in the addiction field is to list authors according to their relative contributions, with the first author assumed to be responsible for writing the paper, corresponding with the journal editor, and making the most substantive contributions. The first author in such a system is sometimes called the corresponding author. In some cases a senior researcher who is not the first author is designated as corresponding author to facilitate the progress of the manuscript through the peer review process. This practice is not acceptable if the main purpose is to take advantage of the influence and prestige of the corresponding, rather than his or her publishing experience.

Although the main-author-first convention is assumed to be based on the equitable distribution of authorship credits, the relative ordering of authors is often dependent on the first author's judgment of others' contributions. In the absence of conducting an inventory of contributions, effort, and follow through, it is likely that some contributors will receive more credit than they deserve, and others less, because of the ambiguity and arbitrariness of the process.

With the growth of multi-center clinical trials and other 'big science' collaborative projects, corporate authorship has also increased. This convention lists a team name as the author, with a footnote or acknowledgement describing the contributors and the corresponding author. One reason for this convention is to make citations and referencing more efficient in cases where there are large numbers of contributors. Corporate authorship may also help to avoid the difficulties associated with determining who contributed what to a multi-authored paper, and how much credit each author should receive. Some journals require contributors to formally name at least one person in the masthead, however (e.g., Alexander Bloggins for the Addiction Research Group).

Because of the problems associated with determining who merits authorship credit, one editor (Smith 1997) proposed the concept of 'contributorship'. This involves listing the contributions of each person involved in the project, and avoiding the attribution of authorship entirely. Although some journals now request all contributing authors to list their contributions when an article is submitted, and some publish a summary in a footnote or acknowledgement, this convention has not been adopted by any journal in its pure form (probably due to the problems it causes with referencing).

In summary, a variety of conventions have been used to arrange the names of individual contributors in multi-authored papers. Some conventions are used more than others, with the 'main author first' convention used most often. Other conventions (e.g., corporate authorship) tend to be used in special situations as the case demands. The purpose of these conventions, particularly more recent variants, is to assure that proper credit is assigned so that individual responsibility for a publication can be inferred by the reader.

PUBLICATION POLICIES AND PUBLICATION MISCONDUCT

Over the past 25 years, journal editors, research administrators, and funding agencies have devoted increasing attention to the ethical and practical issues of scientific authorship. Concern about authorship has been heightened by a number of events and situations that have at times compromised, and at other times embarrassed, the entire scientific enterprise.

The most flagrant examples involve scientific misconduct. In a number of well-publicized cases (Broad and Wade 1984), investigators have published scientific papers that have been retracted because the data were fraudulent or the contents plagiarized from other sources. What is remarkable about many of these cases is that in addition to the person directly involved in scientific misconduct (e.g., John Darsee, who was the lead author on numerous fraudulent articles), there have typically been a number of co-authors who apparently had no idea that the senior author was fabricating data or copying others' ideas. This implies that in some cases, co-authors are not in a position to take public responsibility for the contents of a scientific report, which is now considered to be one of the main criteria for authorship credit. In its updated statement on authorship standards for submissions to biomedical journals, the International Committee of Medical Journal Editors (2003) indicated that some journals now request that one or more authors, referred to as 'guarantors', be identified as the persons who take responsibility for the contents and integrity of the work as a whole.

Extreme cases aside, the abuse of scientific authorship has been suspected in an even greater number of cases where the scientific misconduct is much more subtle. Examples include the addition of authors to curry favour, conferring co-authorship by virtue of status or power, rewarding students or junior faculty with co-authorship to advance their careers, and adding a prominent name to a list of co-authors to receive a more sympathetic editorial review. Related to these problems and to the ever-growing importance of 'research productivity' are disturbing trends toward the proliferation of authorship credits attached to publications, a growth in the number of mediocre quality publications ('paper inflation'), and the multiplication of reports using the 'least publishable unit' (LPU) in order to maximize the output from a single study (see Lafollette 1992).

In part to prevent these kinds of problems, many journal editors and other individuals in scientific publishing have promoted policies designed to both detect misconduct and prevent the more blatant forms of authorship abuse. These policies include the requirement that all authors sign a statement of authorship responsibility, descriptions of the criteria for scientific authorship, limitations on the number of authors listed on the masthead, and requests that co-authors provide a written explanation of their individual contributions to a publication.

How does all of this apply to individual authors? Even if most authors in the addiction field have never encountered an instance of data fabrication or plagiarism, they are likely to encounter the more subtle forms of irresponsible authorship and publication

misconduct, such as 'gift authorship' and 'ghost authorship' (Flanagin et al. 1998). Honorary or gift authorship consists of awarding authorship credit because of the person's power and prestige, rather than for time, effort, and substantial contributions to the work. When someone demands (and receives) an honorary authorship, it is sometimes called a coercion authorship (Claxton 2005). Closely related to gift authorship is mutual admiration or mutual support authorship, in which two or more researchers agree to list each other as authors despite little involvement in each other's papers, usually as a means to expand their individual publication histories (Claxton 2005). Ghost authorship refers to the failure to include as co-authors those who satisfy the criteria for authorship (Sheikh 2000). This happens most often in the publication of pharmaceutical company trials where an industry-paid scientific writer drafts the article but is not listed as a co-author to avoid the perception of conflict of interest.

In the remainder of this chapter, we review guidelines that have been developed to deal with publication misconduct before describing some practical steps that can be taken by individuals, project teams, centers, departments, and professional organizations to ensure responsible authorship.

FORMAL GUIDELINES

In order to develop a more coherent, equitable, and ethical set of guidelines for addiction journals, various policies and procedures have been set forth in the recent scientific literature. These policies include the guidelines recommended by the Council of Science Editors (Biagioli et al. 1999), the Sigma Xi standards for responsible authorship (Jackson and Prados 1983), the statement of the International Committee of Medical Journal Editors (2003), and a variety of proposals from individual commentators (e.g., Fine and Kurdek 1993; Broad and Wade 1984). Box 8.3 describes the general guidelines developed by the American Psychological Association (2002). These have been the subject of a considerable amount of interpretation and discussion in the psychological literature, and some attempts have been made to develop operational definitions of the specific criteria.

In an interesting variant of the APA guidelines, Winston (1985) developed a system in which points are earned for various professional contributions to the scholarly publication, with research design and report writing assigned the most points. A certain number of points must be earned to qualify for authorship credit, and the individual with the highest number is granted first authorship.

One of the most cited sources on authorship is the 1985 consensus statement of the International Committee of Medical Journal Editors (ICMJE 1985). The statement indicated that only those in a position to take public responsibility for the work could claim authorship. Although this definition would preclude gift authorship and help to minimize ghost authorship, there were problems with these criteria, such as the requirement that all authors be prepared to take public responsibility for its contents and the definition of a 'substantial' contribution (see Yank and Rennie 1999). In addition, there was a problem with the distribution of recognition to collaborating

Box 8.3 AUTHORSHIP GUIDELINES PROPOSED BY THE AMERICAN PSYCHOLOGICAL ASSOCIATION

Psychologists take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have substantially contributed. Principal authorship and other publication credits accurately reflect the relative scientific or professional contributions of the individuals involved, regardless of their relative status. Mere possession of an institutional position, such as department chair, does not justify authorship credit. Minor contributions to the research or to the writing for publications are acknowledged appropriately, such as in footnotes or in an introductory statement. Except under exceptional circumstances, a student is listed as principal author on any multiple-authored article that is substantially based on the student's doctoral dissertation. Faculty advisors discuss publication credit with students as early as feasible and throughout the research and publication process as appropriate.

Source: Section 8.12, American Psychological Association (2002)

investigators who band together on a project in order to take advantage of expertise that is unlikely to be concentrated in one individual. These problems were corrected in a 2003 revision to this statement (see http://www.icmje.org/). ICMJE now indicates that 'each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content', and that one or more authors ('guarantors') should take responsibility for the integrity of the work as a whole, from inception to published article. In addition, all authors must have made substantial contributions in each of the following areas: 1) conception and design, or acquisition of data, or analysis and interpretation of data; 2) drafting the article or revising it critically for important intellectual content; and 3) final approval of the version to be published. Additional changes were made by ICMJE to deal with contributors who do not meet the authorship criteria, such as people who provide technical help or writing assistance, or general support for a project. These individuals and their contributions should be listed in an acknowledgements section. To the extent that a listing of such persons could be interpreted as an endorsement of the data or conclusions, all persons listed must provide written permission to be acknowledged.

PRACTICAL STEPS TO DETERMINE AUTHORSHIP

The foregoing discussion of conventions, problems, and policies suggests that authorship of an article or paper is first and foremost a social process that requires a considerable amount of negotiation, influence, and persuasion. If there is a general perception that the current procedures for attributing authorship credits are inadequate and ineffective (see Yank and Rennie 1999), then it may be because the social nature of authorship has not been taken into account in the design of policies and procedures for responsible authorship. Most guidelines focus on individual accountability in relation to abstract ethical principles, with bureaucratic controls and punitive sanctions

emphasized instead of practical guidance about what to do at the level of the group where real influence and control are concentrated. In this section we describe a model process to demonstrate how many of the helpful suggestions provided in the literature on scientific authorship can be implemented in a practical, systematic and open way. The process is based on the assumption that because authorship on a multi-authored article is a social process, responsibility, accountability, and the equitable distribution of credit reside in the group of individuals most responsible for conducting the research and writing the article. This process can be easily implemented by an external agency or even within an institution, department, or research centre. It needs to be conducted in an open, democratic, and ethical way so that all collaborating investigators agree to accept the basic values of scientific integrity.

As in any group process, one or more individuals need to take a leadership role. There is general agreement in the scientific community that the person most closely associated with the project should take responsibility for drafting the paper and being first author. Exceptions to this rule are possible, such as when the investigator who conceived and directed a project cedes responsibility to a junior investigator who made special contributions and who is capable of carrying the written report to a successful conclusion. A critical skill that should be taken into account in the choice of one or more leaders for a scientific publication is familiarity with the authorship issues described in this chapter. If the person has had no formal training in research ethics, the papers cited in the reference section of this chapter should be reviewed, giving special attention to several key sources (e.g., International Committee of Medical Journal Editors 2003; Fine and Kurdek 1993).

To avoid conflict, misunderstandings, and publication misconduct, both the leader and the group should be guided by generally accepted procedures that are characterized by openness and transparency. In the following paragraphs we provide an outline for such a model that can be modified to fit the needs of a project team.

The model requires the completion of specific tasks at each of three stages in the publication process. As described below, periodic discussions about authorship and accountability should be conducted at the planning stage, the drafting stage, and the finalization stage of a publication. According to Lafollette (1992, p. 107), 'The issue is absolutely clear. Who did what and how much? Answering those questions early on - and continuing to ask them as projects change - can help to prevent disputes or embarrassment later'.

PLANNING STAGE

The planning stage of the publication process begins when a scientific investigation or other project (e.g., a review paper) has advanced to the point where it is likely that a scientific article is appropriate or warranted. This decision is usually made by the project leader, who either takes direct responsibility for the direction of the publication or designates one or more individuals to initiate the publication planning process. The following tasks and activities are suggested:

- One or more senior members of the research or writing team take responsibility for developing an outline of the paper, a timetable for the completion of the article, and a list of potential co-authors, based on actual contributions to date and expected contributions in the future. The outline is distributed to all prospective authors, with the understanding that authorship will depend on substantive contributions, as well as effort and follow-through, as described in relevant policies and publications (including this chapter).

- It is explained that there will be a periodic reassessment of the contributions of the research team throughout the planning, drafting, and finalization stages. If it is found that previous expectations are not being met, then assignment of authorship credit may have to be modified, based on the actual contributions at the completion of the publication.

- Relevant policies and publications (including copies of this chapter) are distributed to prospective authors along with the outline.

- A meeting is called to discuss the proposed publication and the distribution of responsibilities for its completion. Assignments are made for data analysis and writing sections of first draft. A timeline of key tasks should also be distributed and discussed.

DRAFTING STAGE

After the first draft of a paper is completed, or as relevant sections are finished, the drafting author(s) circulate the article for comments. At this stage potential authors again need to be reminded not only about their rights to possible authorship, but also about their responsibilities.

A crucial task at this stage is the process of identifying who qualifies for formal authorship credit according to generally accepted criteria for responsible authorship. One way to accomplish this task is to ask all potential contributing authors (including the lead author) to describe their contributions to the project. Box 8.4 provides a checklist of possible contributions that prospective authors should be asked to complete by the lead author in order to determine eligibility for authorship at this stage in the process. Disclosure checklists like this one have been found to be feasible and to provide important information that is relevant to the determination of authorship credit (Yank and Rennie 1999).

Once the checklist is completed, the lead author calls a meeting to discuss authorship and other matters related to the proposed publication. At the meeting, each person is asked to describe his or her contributions to the project to date. In such a setting, individuals often reveal contributions that others were not aware of, and in other cases describe activities that may not be considered substantial in comparison to those of others. At this time it is important to discuss generally accepted criteria for authorship, such as those listed in Box 8.4, to make sure that everyone agrees on the standards to be used to determine who should be listed on the paper and in what order the names

Box 8.4 CHECKLIST FOR CONDUCTING AN INVENTORY OF MAJOR AND MINOR CONTRIBUTIONS TO A SCIENTIFIC PAPER

Instructions: Use the checklist to describe your contributions to the project to date. Under each item you have checked, describe the nature of your contribution, the amount of effort you put into it (e.g., hours, days, months), and whether your contribution fulfilled all of the requirements for that task or some of the requirements (e.g., in collaboration with others you wrote part of the paper, or collected part of the data).

Conception (planning meetings, drafting of research proposal, etc.)
Review of literature
Obtained funding or other resources
Assembling the project team
Coordinated study (5) by assigning responsibilities and tasks
Training of personnel
Supervision of personnel
Human (or animal) subjects approvals
Design of methodology or experimental design (2)
Advised on design or analysis (9)
Writing the research protocol
Collection of data (4), including follow-up data
Clinical analysis or management (6)
Performed randomization or matching
Statistical analysis of data (8)
Interpretation of data (3)
Economic analysis of data
Managed data (10)
Provision of technical services (coding questionnaires, laboratory analyses (7), etc.)
Provision or recruitment of patients
Provision of materials or facilities
Present and defend findings in a public forum
Writing draft of paper
Writing final version of paper (1)
Submitting report for publication
Responding to reviewers' comments
Other activity or service (describe)

Note: numbers in parentheses refer to the top 10 overall categories of contribution identified by Yank and Rennie (1999) in a content analysis of articles according to the most frequently mentioned contributions to authorship.

should be arranged. To provide authority to the process, it may be advantageous to mention that most journals now require a similar process of asking authors to sign a statement attesting to the fact that they have met minimal criteria for authorship, and

some journals (e.g., *Lancet*, *British Medical Journal*, *American Journal of Public Health*) require authors to describe their individual contributions in a footnote that is published along with the article.

One of the most difficult decisions in the assignment of authorship credit is the distinction between major (or substantial) and minor contributions.

A major contribution usually involves the independent development or interpretation of ideas that are critical or essential to the advancement of a scientific study or scholarly article. It may also involve the use of special skills to perform a complex task without which the project could not have been done. The emphasis in these definitions is more on quality than quantity. All persons making major contributions should receive authorship credit, provided that they also participate in the writing of the article and any revisions required by the editor. Such individuals should also be capable of taking public responsibility for both general and specific aspects of the publication, recognizing that opinions differ as to what this means. Although the checklist provided in Box 8.4 was compiled from a variety of sources, we borrowed heavily from Yank and Rennie (1999), who distinguished between 'major' and 'partial' contributions, and also reported the 10 major contributions that were observed in a content analysis of articles where authors provided a description of their roles in the publication process. A major contribution meant that the contributor fulfilled a majority of the activities for a given category. A partial or minor contribution refers to a more limited role, presumably in terms of time, effort, or substance.

According to Yank and Rennie (1999), examples of major contributions that fulfill their 'lenient' interpretation of the ICMJE criteria (ICMJE 1991) for authorship are: a) conception of the idea for the study or article; b) design of the study; c) statistical analysis or interpretation of data; d) laboratory analysis; e) management or analysis of clinical aspects; and f) performance of field work or epidemiology. Anyone who wrote or revised the paper (even sections) fulfilled the second part of the criteria (i.e., drafted the paper or revised it critically for important intellectual content).

In considering the relative importance of major contributions, we believe two additional factors should be taken into account by the leader and the group. These factors are effort and follow-through. Effort pertains to the amount of time spent on the particular contribution. Follow-through involves active participation at various stages throughout the project. For example, if a person has participated in a study in a minor way, or has made a major contribution that involves minimal effort (e.g., the development of an idea for the study, or a novel hypothesis) and/or follow-through, this does not necessarily entitle the individual to authorship if other persons have made greater contributions with respect to effort and follow-through.

Non-substantive considerations should not determine the order of authorship or whether or not to include an individual as an author. Examples of non-substantive factors include rank or status, need for publication credits to justify advancement, involvement in the project as a consequence of routine duties for which the individual is paid (e.g., collecting lab samples), or ability to provide access to experimental

subjects. The person who is named as the principal investigator (PI) of a project or a grant for adminstrative reasons may not qualify for authorship under these circumstances if she or he had no role in the design and conduct of a particular project (e.g., the secondary analysis of data collected for another purpose).

Members of a research team also need to recognize that individuals will be expected to contribute to projects in a collegial fashion without necessarily receiving credits in all publications from that project. In some cases it may be justified to award authorship to individuals who have made minor contributions to several papers, but who may not qualify as having made a substantive contribution to all of them. And, as noted in Chapter 4, the group may want to give consideration to the special situation of students and post-doctoral fellows. Taking all of this information into account, it should not be difficult in most cases to reach consensus about who qualifies for authorship, and what the most equitable relative ranking of contributions should be. When contributions are discussed in an open forum in relation to generally accepted criteria and ethical principles, secondary (nonsubstantive) considerations tend to be difficult to defend, especially when there is a written record of each individual's perceived contributions. If there are discrepancies between what an individual perceives to be his or her contributions, and the perceptions of others, these differences often can be resolved through open discussion.

FINALIZATION STAGE

Before an article is formally submitted to a journal, there is a need to designate a corresponding author. This person is usually the first author, but sometimes it is also the senior project leader in cases where the first author is young or inexperienced. A prominent or senior co-author should never be designated as corresponding author solely to influence the review process. If there is general agreement about the order of the contributing authors, this can be reviewed at the final stage to determine whether the process of preparing and revising the paper altered the relative order of the contributions enough to require further changes.

CONCLUSION

Intellectual honesty is a fundamental ingredient of scientific integrity, and this extends to the need for complete accuracy and transparency in representing contributions to research reports and other scientific writing. The contributions of colleagues and collaborators need to be recognized in all scientific publications, but authorship must be assumed or awarded only on the basis of substantive contributions to an article and the ability of its authors to take public responsibility for its contents, or at least for major parts of the contents. Decisions regarding authorship should be seen as part of a process that begins with the development of a publication plan and ends with the final revision of an accepted paper. In between, it is best to have all potential contributors to a publication participate in an open process of stating their perceived contributions to a given project in the context of generally accepted criteria for authorship. Such a process is likely to prevent publication misconduct as well as misunderstandings and conflicts. To the extent that authorship credit continues to be seen as the 'coin of the realm' in addiction science, both sides of the coin (credit and responsibility) need to be valued.

ACKNOWLEDGEMENTS

The authors would like to thank Ian Stolerman for his helpful comments and suggestions.

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