# Multiauthorship and False Authorship: Why Worrying About This?

Ljiljana Vučković-Dekić
Academy of Medical Sciences, Serbian Medical Society, Belgrade, Serbia

**SUMMARY**
Authorship and authorship abuse are in the focus of interest of all main actors in the publication game – authors, reviewers and editors of scientific journals. Along with the steady rise of the number of publications, the number of coauthors in multiauthored papers raises even more, some of them being undeserved authors. Because publication is the main way for evaluating scientists, authorship is prone to abuse, and thus the false/undeserved/gift authorship emerges. This dilutes the responsibility and damages the publication enterprise, thus initiating a constant struggle of scientific community against this type of scientific dishonesty. In this paper, several prevention and corrective measures with the aim to diminish such a dishonest behavior of authors are described.
**Keywords:** scholarly publications; multiauthorship; authorship misuse; evaluation

## INTRODUCTION

Since 1990s until today, a huge amount of literature on the authorship has been written in international [1-16] and domestic journals [7, 8]. I personally have also published several articles on authorship in journals and in monographs [9-14]. Then, why to write again on this topic? Because I am aware that the authorship is a constant source of misunderstandings and disputes among investigators, which inevitably damages the creative atmosphere of a research team, without which the work is affected negatively [15, 16, 17]. Unpleasant events related to authorship happen everywhere [18, 19, 20], our scientific environments being no exception [21, 22, Milenković P, personal communication]. Since publications are the main way to evaluate the work of scientists and a gateway to promotions and other academic and professional incentives [23], the authorship issue is of the great importance to everyone of them [24, 25]. A constantly increasing pressure to publish at any cost (Publish or Perish syndrome) leads, not only to overpublishing [26], but also tempts some researchers to accept undeserved, gift authorship, even though they might be aware that they do not meet the authorship criteria.

## ORIGIN OF THE PROBLEM

Until the end of 19$^{th}$ century, most scientific articles were signed by one person; during the 20$^{th}$ century, along with the increasing number of publications, the average number of authors per publication has been, and still is, constantly increasing ("Author inflation") [27-30]. This is because the modern science is a multidisciplinary and multiprofessional entertainment, and often a large and complex research, mainly multicentric clinical trials, is signed by several dozens, or even several hundreds of persons.

There is nothing wrong with this: the multiauthorship is now the reality, and fully legitimate. The problem arises when the authorship is ascribed to persons that do not deserve it ("Poliauthoritis giftosa") [31]. It is estimated that the number of published papers is constantly rising in a linear manner ("publishing mania"), while the number of coauthors per paper is rising exponentially [32]. However, with the number of coauthors in the byline rises the number of undeserved authorship [33, 34]. There is no such an investigation for the Serbian Archive of Medicine; however, even a cursory survey of the list of authors who publish in this journal (case reports in particular) shows that the number of authors per article is surprisingly high, thus arising the suspicion that at least some of them are undeserved authors.

Why this phenomenon worries the whole scientific community? This is because the increased number of authors per paper correlates with an increased number of false authorships [8, 33-37]. Thus, both credit and, even more, responsibility become obscured and diluted. Moreover, false authors receive undeserved credit and often get promoted at the expense of honest, true authors. And vice versa, if any kind of misconduct is uncovered in the publication, the guest author may be blamed equally, although they might be unaware of any dishonest behavior made by the violator (usually the first author) [38].

## FALSE AUTHORSHIP – WHAT TO DO?

The question who is, and who is not an author of scientific publication has been clarified sev-

**Correspondence to:**
Ljiljana VUČKOVIĆ-DEKIĆ
Academy of Medical Sciences
Serbian Medical Society
Džordža Vašingtona 19
11000 Belgrade
Serbia
**ljiljanavd@gmail.com**

eral times in associations of editors of biomedical journals. The most renown is the document issued by the International Committee of Medical Journal Editors (ICMJE), so-called the Vancouver Document [39]: the ICMJE recommends that authorship be based on the following 4 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.

The Vancouver Document also explains: "All persons designated as authors should qualify for authorship, and all those who qualify should be listed". In addition, this document explains what does not constitute authorship: "Acquisition of funding, collection of data, or general supervision of the research group alone does not constitute authorship". This document clearly explains what are wrongful inclusions and exclusions. It is assumed that anyone listed as an author should meet all ICMJE criteria, as emphasized in the instructions for authors of many journals including the Serbian Archives of Medicine (SA) [40].

However, although the Vancouver criteria for authorship are published many times, still many journals do not have any authorship policies [41]. In addition, although many editors including SA require that all coauthors of submitted manuscripts sign that they met these criteria, it is evident that the criteria are either insufficiently known, or misunderstood, or neglected, or though unimportant, or over-restrictive.

Fortunately, the personal integrity of most authors is the most important preventive measure against the so-called grey zone of misconduct, which self-restraints them from any form of misconduct including authorship misuse. However, the system cannot rely only on the honest people. It is obvious that a certain number of authors do not adhere to the principles of publication ethics. Many blame the Publish or Perish syndrome (that is, the pressure to publish at any cost) for these violations of high standards of publication ethics [18, 31, 32]. It may be so, and it is understandable, since the number of publications is an objective, quantifiable criterion in the evaluation of a scientist. Thus, the struggle to be included put into the byline is a very strong motivation. However, it must be kept in mind that taking credit for publication, the responsibility should be taken too. Every author should know that either giving or acceptance of false authorship may ruin his/her reputation – and compromise the scientific writing as well.

Since the editors of scientific journals are gatekeepers of scientific record, they play the most important role in promotion of good publication practice including the authorship issue [42, 43]. Although false authorship is impossible to eliminate, several steps to diminish it can and must be undertaken.

Firstly, all editors of scientific journals should include the authorship criteria in instructions for authors. Although many doubt that any guideline could solve the problem of false authorship, nevertheless the journal policies on authorship "…should further in spelling out the responsibilities of co-authors, and in requiring an implicit acceptance of them" [44]. Editors should also insist that all coauthors sign that they meet authorship criteria. In order to ensure that the authorship is attributed appropriately, they may require that authors not only sign, but also specify their contributions, e.g. who did what. Both measures can be used, and indeed they are used by several journals. But does it help? An interesting research revealed that, when signed authors of submitted manuscripts were asked why they thought they should be the author on this manuscript, only 15.6% satisfied all ICMJE criteria [45]. Therefore, it seems that the editors' requirement for signed statements is not effective in terms of reducing false authorships.

Many think that editors should limit the number of persons in the byline [2, 46]. However, it is not always possible, particularly in the case of large clinical trials, and this proposal was not largely accepted. Similar was the fate of the proposal to use the word "contributorship" instead of "authorship".

Another approach may be more effective, the system change of evaluating scientists, since the current system has become inappropriate [46]. The practice of giving coauthors equal credit (now common in our Ministry of Science) [47], contributes greatly to the too long lines of coauthors, a certain part of which do not deserve such a place. Perhaps an effective way to discourage authors to bestow (and accept) undeserved authorship is to evaluate the contribution of a coauthor differentially, according to the place in the byline. For example, the first author merits 0.6 points, the second 0.3, and all others 0.1 point. Or, each next in the line gains half of the points of the previous one. Dividing points equally to all coauthors (1/n) might be also very effective; it is highly unlikely that the first authors would agree to minimize their credit by dividing it with too much of added coauthors. Implementation of all three combined scientometric parameters on the occasion of evaluation of an individual scientist gives much more realistic picture than the current practice of evaluation [48].

It is agreed that the best preventive measure is education, particularly of younger investigators, who must be informed about good publication practice including the authorship issue [32, 42, 49, 50, 51]. My experience with PhD candidates showed that before a short lecture on publication ethics they did not think that gift authorship is an unethical issue. However, after explanation how false authorship can damage not only the publication enterprise but also someone's own career, they changed their previous, to some extent opportunistic attitude towards authorship abuse [52]. Still, they qualified gift authorship much less damaging than denied authorship [53].

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## CONCLUSION

The problem of false authorship is far from being solved. It is obvious that we should not rely solely on the personal honesty of investigators, but correcting and preventing the unethical behavior related to publication should be the duty of all academic institutions. Perhaps we cannot solve the problem, but certainly we can diminish it.

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## Мултиауторство и лажно ауторство – има ли разлога за бригу?

Љиљана Вучковић-Декић

Академија медицинских наука, Српско лекарско друштво, Београд, Србија

**КРАТАК САДРЖАЈ**

Ауторство и лажно ауторство су значајни за све главне учеснике публиковања – ауторе, рецензенте и уреднике научних часописа. Истовремено с повећањем броја објављених радова повећава се и број коаутора који потписују публикацију, а с порастом тог броја расте и проценат лажног ауторства. Та појава новијег датума штети кредибилитету научне публикације, па се води стална борба читаве научне заједнице да се ова штетна појава умањи, ако већ не може да се сасвим искорени. У овом раду описане су неке превентивне и корективне мере које се предузимају да би се обесхрабрили аутори да поклањају или прихватају незаслужено ауторство.

**Кључне речи:** научне публикације, мултиауторство; злоупотреба ауторства; вредновање

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