

## *Letter to Editor*

### **A Scientific misconduct and related topics: a letter from Russia**

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The main varieties of scientific misconduct are well known: fabrication, falsification, plagiarism (Fig. 1) and misquoting [1, 2]. Besides, there are many subtypes and borderline violations: biased selection of data or specimens, discarding of "inconvenient" data, selective citation, "second hand" citation without reading the article [1, 3], citation of non-professional publications and commercial editions passing them off as scientific sources [4], publications without approval of the text by all co-authors, gift or honorary authorship, nepotism and companionship with mutual cover-up; violations of the rules of scientific polemics, evasion from constructive discussion and questions at conferences, tangling of scientific texts and presentations, making them incomprehensible.

The topic of scientific misconduct should not be exaggerated as it can throw suspicion on medicine and science in general. As far as reasonably possible, inquiries should be performed inside institutions without excessive publicity. Supposed perpetrators must be heard. Each new case of research misconduct must be investigated [7]. Admittedly, in some regions such as the former Soviet Union, where scientific misconduct has been widespread, excessively rigorous measures would more likely be destructive than constructive. Under these circumstances, the self-criticism with retraction of unreliable publications should be encouraged [8].

Furthermore, it has become usual practice to disregard published criticism in spite of personal communications and debates at conferences. Some scientists seem to make use of the critical comments without citing them, or just continue publications ignoring the criticism [9]. The same scientists continue working sometimes in cooperation with renowned researchers; and it is possible that some later articles are more reliable than earlier ones. However, it is insufficient to hope that reliable papers would be shortly confirmed while forgeries would fall into oblivion. Fake papers are misleading for knowledge and research, costing time and money. Wrong concepts are persisting and resurrecting, which can result in useless experimentation and application of invasive methods without sufficient indications [10-13]. Some scientific writers have perfected themselves in tangling their texts, making evaluation

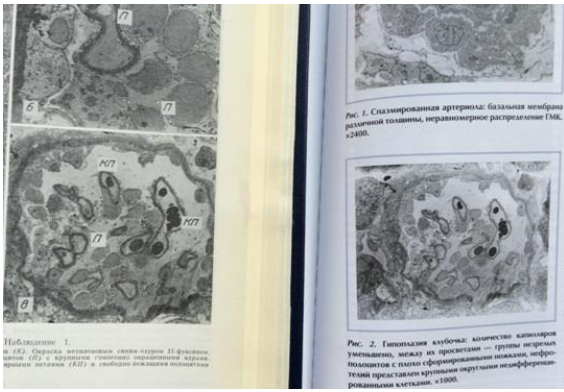
increasingly difficult. Considering the "improvement" of fraudulent skills, researchers, editors, and authorities must jointly act against fraudulence [14].

Scientific misconduct includes measures taken against whistle blowers i.e. persons informing authorities on the fraud or publishing critical comments without sanctions of their superiors. The denunciation has been generally condemned in the former Soviet Union; the fact of denunciation and identity of the informant has sometimes become known to other people including the perpetrators with undesirable consequences for the whistle blower up to a dismissal etc. As for the scientific misconduct, certain experts having criticized forged reports were exposed to mobbing and then dismissed [15]; more details are in the Appendix. Whistle blowers must be protected from retaliation; they need a safe, confidential venue to report misconduct [14].

It is not surprising that dishonest science flourishes under the conditions of corruption and priority of commercial interests over ethics in some doctors and medical functionaries. An important factor contributing to scientific misconduct is a hidden conflict of interest. Forged publications and speculative theories have been used for promotion of certain drugs and dietary supplements without proven effectiveness. Patients can be misinformed not only by the advertising but also by publications supposed to be scientific. Marketing of placebos in the guise of evidence-based medications seems to be on the increase [9, 16].

Duplicate submissions and publications are also regarded as scientific misconduct. However, these acts are not related to the distortion of scientific truth and misappropriation of achievements. This "smaller evil" can be unavoidable thanks to editors, who are shelving important articles for long time, giving to the author no notice whether the manuscript would be published or not. Formally, first submission must be withdrawn prior to a second submission of the same material, but it can be a suboptimal solution if the goal is a rapid publication and maximum resonance for the sake of scientific truth and public benefit. A delay can range from months to infinity. Certainly, it can be always objected that a review process

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**Figure 1** The same image published 25 years apart by different authors [5, 6]. Translation of the caption: glomerulus with singular capillary loops and freely lying podocytes X 1100 [5]. Comment: this is probably a tangential section of a normal renal glomerulus.

needs time. The responsibility may be with a reviewer delaying his or her comments (reviewer tardiness) [17, 18] or with an author of a commented article, who delays a reply to a letter to the editor. A considerable delay of a decision on a manuscript of potential significance for science or public health can be seen as a justification for a duplicate submission.

Unfair practices in the publication process committed by authors (plagiarism, misquoting, ghost or honorary authorship, hidden conflicts of interest, duplicate publication/submission) are well known. Less frequently discussed are overt or disguised unfair practices on the part of the editors. Among other things, editors should select competent and unbiased reviewers assuring that the decision about publication would be based solely on scientific qualities of the paper. Confidentiality must be maintained throughout the review process [18]. Violations of these principles are difficult to prove, although suspicions that a reviewer is biased sometimes arise.

Another problem is the copyediting of accepted manuscripts performed by some editors. Admittedly, the copyediting may improve the grammar and style; but in some cases the copyediting distorts the original meaning and imparts awkwardness, thus indirectly discrediting the author and/or the message of his or her article. How should the author react? If an accidental error seems to be probable, the matter can be discussed per e-mail and corrections carried out. If there are reasons to suspect malicious intent, a discussion might be both embarrassing and useless. Having momentarily no other possibilities to publish an important paper, an author might agree to a modified version, or make only essential corrections disregarding clumsiness of the copyedited text [19]. Finally, publication of unserious abstracts in proceedings of international meetings should be mentioned, some of them commented in [9]. In the author’s opinion, the publication process and motives behind decisions should become more transparent.

The response to misconduct in medical research and practice needs national and international bodies to provide leadership and guidelines [14], while international cooperation is of particular importance. In Russia, there is

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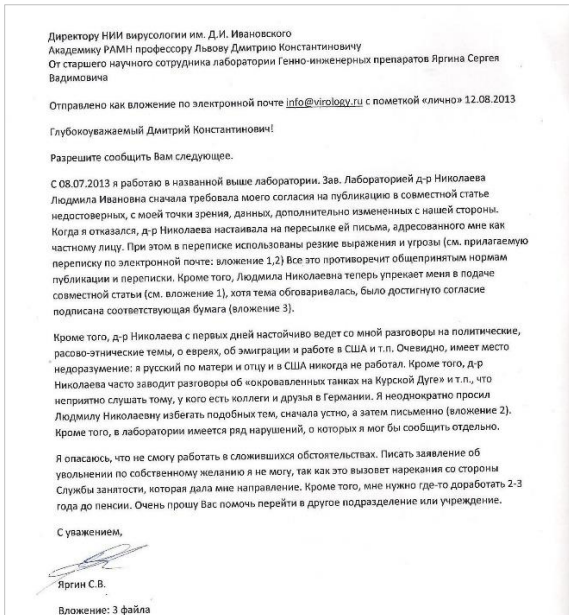
**Molecular Pathology**

**PP1-240**  
**WHAT HAS CHANGED IN RUSSIAN PATHOLOGY SINCE THE FIFTIES?**  
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The question can be answered by the example of the Department of Pathological Anatomy of Moscow Medical Academy. This Department has been leading in our country. All main textbooks have been created here. Professor A. I. Strukov was Head of the Department in 1953-72. In spite of his support of Lysenko-affaire, Strukov was known as a highly educated pathologist and good practical specialist. Under his guidance much attention was given to the autopsy technique; trainees were taught to perform autopsy correctly and in detail. Histological laboratory was staffed with qualified technicians, numerous histological stains were performed routinely. Professor V.V. Serov, perfect lecturer and specialist in autopsy, was Head of the Department from 1973 to 1990. During this period, autopsy partly lost its academic profoundness. Post mortem diagnoses were sometimes adapted to a preconceived idea and formulated without sufficient evidence. Biopsy diagnostics was performed by experienced specialists individually. Discussions of biopsy cases at the departmental conferences were seldom; much more time was given to research and autopsy. Trainee pathologists were taught biopsy diagnostics only sporadically. Technique of gross examination remained primitive. For example, in case of mastectomy or gastrectomy, only 2-3 lymph nodes were usually embedded. Immunohistochemistry and other modern methods were available only for research and were not used on biopsy material. For making successful career, candidate's and doctoral theses and regular publications have been needed. Limited technical possibilities and access to foreign literature made global newness of research hardly possible. Nonetheless, global newness and practical significance were officially required from theses. This alone forced researchers towards strained interpretations and biased presentation of facts. Researchers often planned their results in advance and tried to formulate conclusions accordingly. Along with studies having value of review or compilation, numerous useless reports were published. Many scientists compiled their reference lists by means of Current Contents or reference lists from other articles. False quotation and incorrect statistical assessment could be encountered. Plagiarism from foreign sources was not infrequent. By the end of the eighties a new phenomenon became apparent: young functionaries, predestined for high positions, published and defended as theses largely fabricated papers, containing provable manipulations of statistics etc.

**Figure 2** The text of the abstract [22].

Higher Attestation Commission, generally known as VAK, the main purpose of which is maintenance of the high level of scientific research. The VAK awards or approves of all academic degrees. Nevertheless, there are dissertations with detectable trimming of data, manipulations with statistics, misquoting, etc. [15]. Official requirements to a doctoral thesis are difficult to comply with: it must be a "new large-scale scientific achievement or solution of a big scientific problem" (according to the governmental ordinance on the order of awarding of scientific degrees issued in 2002). In the former (1995) version of the ordinance there was a formulation: "considerable contribution to the acceleration of scientific and technological advance". Such requirements can move researchers towards strained interpretations at least. Other requirements applied both to doctoral and candidate dissertations are global novelty and, in medicine, practical significance, which may be conducive to unfounded recommendations for the practice. Another ingrained habit is the so-called "raisin": modern methods expected to be applied in medical theses. As a result, modern methods are sometimes used without much practical or scientific relevance, to enable claiming a "modern scientific level".



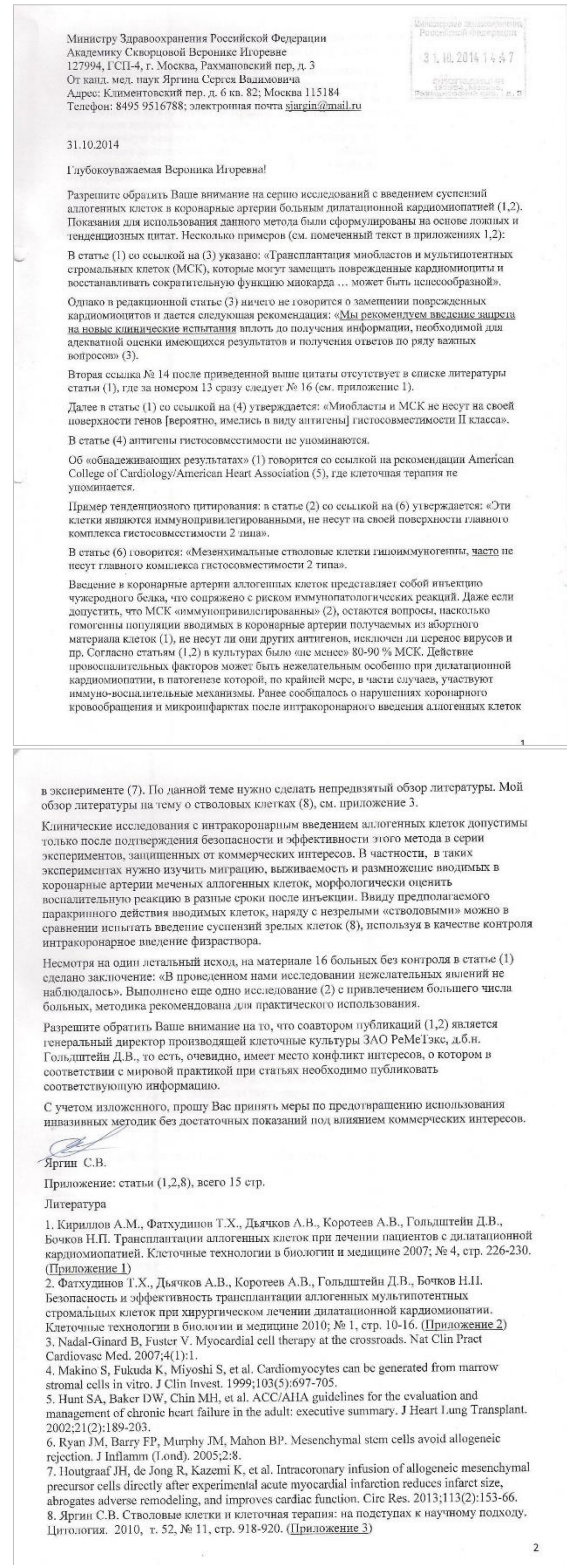
**Figure 3** Mobbing applying provocative talks on political topics at the workplace on the part of the department head and her associate [24] reported to the head of the institution.

Another requirement to the doctoral dissertation is that main results must be published in peer-reviewed journals or editions officially acknowledged as equivalent to them. As a result, journals are overloaded with articles of questionable value, while other manuscripts have to wait longer. Some functionaries have not enough time to make their theses and order them, or at least the literary reviews, from businesspeople offering such services. This is probably the cause of misquoting found in some dissertations [15, 20]. In conclusion, quality of research and hidden conflicts of interest should be taken into account deciding which studies are to be included into reviews and meta-analyses.

**Appendix**

The head of the department asked S. to assist Kitty in her research. After the research had been accomplished, S. went abroad and practiced there for about 5 years. Having returned to Russia, there was a lot of modern knowledge to share. Some criticism was inevitable, which was not welcomed by certain functionaries. S. visited his former institution for consultation; and Kitty was also there. She motivated him to criticize, informed about forged scientific works with participation of some functionaries, plagiarism and manipulations with statistics in medical research. S. publicly criticized, at conferences and in publications [8-13, 15, 21]. Kitty did not consent to co-authorship with singular exceptions [22] (Fig. 2), presented at the 21st European Congress of Pathology in Istanbul; however, this and another [23] posters were stealthily removed, which was reported in writing to the President of the Congress. We haven't seen but suspect who it was; hopefully, there were cameras in the poster hall.

In the beginning, scientific misconduct seemed to be a heritage from the past, but it has been spreading like infectious disease. The economic situation is changing;



**Figure 4** A letter to the Russian Ministry of Health reporting invasive procedures performed without clinical indications and non-disclosure of a conflict of interest.

some experts from abroad would probably find reasons to move to Russia. They should be warned: what is awaiting them is mobbing, threats, compliance training, etc., if they do not collaborate in everything including participation in dubious publications or sharing with superiors their private

e-mail correspondence e.g. with foreign editors. It happened to researchers and lecturers in Moscow, which ended with dismissals [15, 21] (Fig. 3).

### Conflict of Interest

The author declares no conflicts of interest and no financial support.

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