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# Safeguarding Good Scientific Practice - a Pan-European initiative

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Several recently published cases of the scientific misconduct (1) are bitter experiences for the whole scientific community. They are not only severe violations of the basic ethical principles of science, but also may destroy the confidence of scientists in each other. Moreover, any case of scientific misconduct is a grave danger to science itself, since it undermines the trust that exists between science and society. It is agreed in the scientific community worldwide that the need to rebuild and regain this trust is of utter importance. This aim can be achieved only by development of best scientific practices within the science system and between scientists. In addition, the system must regulate and safeguard itself; otherwise, the public trust in science may be lost.

Ever since this need had been recognized, various institutions of science - universities, independent research institutes, learned societies and funding organizations - have started to develop control mechanisms for quality assurance and safeguards against the scientific dishonesty. Many European institutions of science have already published guidelines of good scientific practice (2-5); in our country, two independent research institutions - Institute for Oncology and Radiology of Serbia and Institute for Medical Research, Belgrade - have formulated and published the ethical codex of science (6,7). Among our scientific journals, only *Archive of Oncology* has clearly stated (in Instructions for Authors and also in several editorials) that it is committed to best international practice (8-10).

However, as stated by the 23 Member Organizations of the European Science Foundation (ESF), it is vital that such ethical codes of science should be more widely adopted by the European institutions of science (3). In the ESF statement that follows, a call for future actions in this direction is emphasized. The republication* of the ESF document is the contribution of *Archive of Oncology* to implement pan-European initiatives.

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## REFERENCES

1. Vučković-Dekić Lj. Good Scientific Practice. Arch Oncol 2000;8 Suppl1:3-4.
2. Schneider C. Safeguarding Good Scientific Practice: New institutional approaches in Germany. Science Engin Ethics 2000;6:49-56.
3. European Science Foundation. Good Scientific Practice in research and scholarship. Available from: http://www.esf.org
4. Available from: http://www bbsrc.ac.uk
5. Available from: http://dfg.de
6. Institute for Oncology and Radiology of Serbia. Good Scientific Practice - Ethical codex of science. January 26, 2001.
7. Institute for Medical Research, Belgrade. Good Scientific Practice - Ethical codex of science. February 2001.
8. Instructions to the Authors. Arch Oncol 2001;9(1).
9. Vučković-Dekić Lj. Archive of Oncology makes it clear that it is strictly committed to Good Scientific Practice (Editorial). Arch Oncol 2001;9:1.
10. Vučković-Dekić Lj. The Journal's Ombudsman: Are we ready for it? (Editorial) Arch Oncol 2001;9:77.

## ESF STATEMENT

Good scientific practice in research and scholarship is essential for the integrity of science. It sets internationally valid benchmarks for quality assurance, which enable replication and further studies by other scientists. And it provides safeguards against scientific dishonesty and fraud. Good practice, thus, nurtures trust within the scientific community and between science and society, both of which are necessary for scientific advance.

Several European Science Foundation (ESF) Member Organisations and some individual research institutions and universities have already published guidelines, or codes, for good scientific practice across the full range of the natural and social sciences, engineering and the humanities. However, to be fully effective, such codes have to be more widely adopted by European universities and research institutions, observed by all researchers and scholars and monitored for compliance. Both institutional and individual commitments are prerequisites.

Procedures for investigating allegations of scientific misconduct complement codes of good scientific practice. Such investigations are commonly carried out at local (institutional) level, with guidance and oversight by national bodies. Some countries, how-

ever, prefer to carry out investigations at national level.
To achieve full compliance, and thus demonstrate effective self-regulation, the various players - national academies and research funding agencies, universities and research institutions employing scientists and the scientists themselves, each has distinctive advisory, managerial or regulatory responsibilities.
ESF, with its two sets of stakeholders firstly, (its membership drawn from funding agencies, national research organisations and academies of sciences and letters and, secondly, the research community at large) is uniquely placed to play a significant role in promoting the highest levels of scientific integrity and better self-regulation across Europe. At a strategic level, there is a need for more commonality in codes of good scientific practice, in the effective managing and monitoring of those standards and in developing transparent procedures for investigating allegations of scientific misconduct. Pan-European progress in these areas would improve quality assurance, strengthen the self-regulation of science and help reinforce public trust in science. Therefore, ESF believes that the following conclusions and recommendations set out a basis for further action at European level on this important topic:
Both the globalisation of science, with its extensive inter-organisational and international collaborations, and current public concerns about self-regulation underline the need to extend and harmonise codes of good scientific practice and procedures for investigating allegations of scientific fraud.
European scientific institutions are responding, though somewhat unevenly, to these pressures and are addressing the moral issues of scientific ethics and integrity and the more practical matters associated with self-regulation.
With its extensive membership in 23 countries, the ESF is uniquely placed to play a Pan-European role in promoting common approaches amongst its Member Organisations for managing and regulating good scientific practice.
The current debate about a European Research Area introduces a favourable political dimension and creates a window of opportunity for action.
At a strategic level, there are several possible initiatives, which need to be taken at a European level, to strengthen approaches to scientific integrity and good scientific practice across Europe. Some of those listed below are purely advisory; others require a more active intervention.

**ESF commits itself:**
to support and promote vigorously the concepts and principles of good scientific practice in research and scholarship; and
to promote the principle that the selection of scientists by academic institutions should be transparent, based primarily on criteria of scientific quality, creativity and promise, without discrimination on grounds of sex, race, political opinions or cultural backgrounds.
ESF considers that a number of other actions are necessary. In taking action, it is vital that the approach is inclusive and sensitive to what has already been achieved by many of the ESF Member Organisations and other European organisations and by relevant international developments carried out by International Council of Scientific Unions (ICSU) and other similar bodies. Real progress will require linkages with these initiatives. And it is important that the goal of harmonising policies and procedures on the basis of best practice should be achieved without compromising the principle of subsidiarity in matters of executive action.

**Therefore it is recommended that:**
ESF Member Organisations that are national academies should draw up national codes of good scientific practice in research and scholarship, where these do not yet exist; and
ESF Member Organisations that are national academies should initiate discussions on the most appropriate national approach to procedures for investigating allegations of scientific misconduct (where this has not yet been done), whether by means of an independent national body (as in Denmark), formal procedures in each university and research institution, or by other means.
ESF Member Organisations that are research-funding agencies should consider ways of making an institutionís eligibility to apply for research grants conditional on that institution having adequate policies for good scientific practice and procedures for investigating scientific misconduct.
ESF Member Organisations that employ scientists should act as responsible employers with clear, fair and robust guidelines for good scientific practice, coupled with effective and transparent management procedures for implementing these guidelines and for investigating allegations of scientific misconduct.
Finally, it is important to consider whether there is a need for any pan-European structures to reinforce national arrangements, for example, by maintaining a college of eminent scientists who might serve on local or national committees investigating scientific misconduct, or by setting up an Ombudsman system to provide a third party for counselling "whistleblowers" in the scientific community. Consideration of such issues will need to involve not only ESF and its Member Organisations but also other relevant European organisations, including those representing the universities.