

Probing scientific misconduct

The editorials in *Curr. Sci.*, and the articles on unethical practices in science¹ make interesting reading. The issue is not whether the US Office of Research Integrity (ORI) has succeeded or not, but whether the US scientific community is willing to face the harsh realities of scientific misconduct, and are willing to do something about it, even if the number of cases, handled by ORI are only the tip of the iceberg.

Perhaps it does not matter what the senior scientists do, but for the fact, that they tend to be looked upon by their junior colleagues, to set proper foundations for the ethics in the practice and management of science. These senior scientists will eventually be known not for what they preach but for what they practice. It also does not help the cause of science for the honest scientists to say that they will not violate such a code, but that it is not their concern to fight for it. The instances that attract public attention may be only the tip of the iceberg in the US, but the fact is that they are not buried, as we tend to do here, but are openly discussed, and remedial action taken, where the misconduct is proven beyond reasonable doubt. As quoted earlier in these columns², 'No cause can triumph, unless there are faithful agents to carry it through'.

But in order to formally set standards in the country for ethics in science, we have to first define what exactly constitutes scientific misconduct. One can do no better than to quote, again from the columns of *Curr. Sci.*³. President Clinton's committee on Federal Policy research misconduct defined research misconduct as 'fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results'. The committee then went on to explicitly define these, and stated that, 'finding of research misconduct

requires that there be a significant departure from accepted practices of the relevant research community; and the misconduct be committed intentionally, or knowingly, or recklessly; and the allegation be proven by preponderance of evidence'. It became effective from 6 December 2001, with the assistance of a National Science and Technology Council Implementation Group (NSTCIG).

The NSTCIG is authorized to investigate charged instances of scientific misconduct, and withhold federal funds to the institutions and the concerned scientists, when the charges are proven beyond reasonable doubt. The scientists employed in federally funded institutions are obliged to comply in writing with an ethical code of conduct for their research. Even consultants working for such agencies are also obliged to sign a similar statement⁴. When it is established beyond reasonable doubt, that a scientist indulged in scientific misconduct, action is taken in no uncertain terms. Though at the outset, these may be only the tip of the iceberg, but most certainly they eventually get chipped away.

The contrast here is striking. It may perhaps be inappropriate to cite specific instances of scientific misconduct among the senior scientists in these columns, but I would like to cite an instance which has serious implications. I stressed the importance of ethics in practice and management of science, while addressing a group of newly recruited scientists in a research agency. While relating their experience, I was told by some of them that their seniors threatened them with dire consequences, if they did not routinely add their names as coauthors of papers, even if they knew nothing about their contents, and that Directors (like me), may come and go, but that their tribe will thrive. Alas, so much for ethical practices in science in our country!

The question that arises then is whether there is any hope in the prevailing circumstances for setting up uniform and healthy foundations for practice and management of science. These are essential if we wish to have a fair chance of joining the cadre of developed nations, with a self-generating, strong and robust high science, high technology base of our own. In the present environment, while certainly there are exceptions; asking the senior scientific community to do something about it (to quote a Russian proverb), is like asking the goat to guard the cabbage patch. It is essential for the government to formally enact as a law, a compulsory code of ethics for compliance by all institutions, and scientists receiving government funds, as the US government has done, through the former US President Clinton's initiative.

Our Prime Minister should also formally create an ORI, as a statutory authority, in the office of the Principal Scientific Advisor to the Government of India to investigate instances of scientific misconduct. Likewise, it is also essential to teach the ethics of science, at an impressionable age at the junior colleges levels. Our ability to join the cadre of developed nations will be seriously compromised if we do not take such an action.

1. Balaram, P., *Curr. Sci.*, 2007, **92**, 1467–1468.
2. Balaram, P., *Curr. Sci.*, 1999, **77**, 621.
3. Balaram, P., *Curr. Sci.*, 2001, **80**, 717–718.
4. Sunder, R., personal conversation; rsunder@vsnl.com

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Accommodate waitlisted candidates from NET exams

There are a large number of candidates who appear for different All India Net exams for fellowships but are not able pass the tests successfully. I presume the names of the candidates who could not make it are maintained in the waiting list. Several funding agencies are at present

appointing candidates who have not appeared for any All India Net exam as JRFs, project assistants, associates, etc. in various research schemes. Instead of making the above appointments a local affair I am of the opinion that waiting list candidates from the All India Net exams

may be called for and selected for the various positions available.

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