

Funding of investigator-initiated research projects in India: the case for moving from a proposal-based to a performance-based evaluation process

In seeking to compare two alternative modes of funding for investigator-initiated research projects (proposal-based or performance-based), I shall begin by sharing my experience as a member of the fellowships evaluation committee of the DBT-Wellcome Trust India Alliance (referred to hereafter as the Alliance), located in Hyderabad, that decides on the award of the prestigious Senior and Intermediate Research Fellowships of the Alliance to individual investigators. The Alliance was registered as a Trust three years ago, with equal funding from both the Government of India and the Wellcome Trust, to provide research support to accomplished investigators undertaking biomedical research in this country.

Proposals submitted to the Alliance by applicants are quite detailed, and the assessments received from reviewers chosen from around the world are also equally so (several pages long). The oral presentations and discussions thereafter are substantive, with each applicant being specifically pre-assigned to two committee members, who come prepared to grill the applicant on all aspects of the proposal. On a full day, the committee examines no more than seven or eight applicants.

Two other features stand out in the process: confidentiality and dealing with conflicts of interest. Committee members are restricted from access to any/all information on the applications from individuals from their own institutions, including the reviewers' comments and the discussions during the presentations; it is the averment of the Alliance that this is done as much to protect the interests of the committee members as to safeguard the impartiality of the decision-making process. Strict confidentiality, encompassing the reviewers' comments as well as the discussions, is also demanded of and enforced upon the members, who are required not to entertain any questions or clarifications from the applicants at any time other than during their oral presentations.

Those amongst us who are familiar with the review processes of research proposals by other developed-country agencies such as the National Institutes of Health, USA, will recognize that they are no different from those of the Alliance, and that this is therefore the accepted international norm. We are also aware that manuscripts submitted to international journals are subjected to similarly rigorous peer review.

When one compares the current experience and practices of the different research funding agencies in the country with those of the Alliance described above, the shortcomings of the former are many and obvious. I would argue that these shortcomings are inherent to a system in which the science base is not large enough to sustain a strong and rigorous peer-review system, and therefore that the problem does not lend itself to any simple fix or solution.

One way of describing the shortcomings of our current system is to note that none of the participants in the process is satisfied with it. Thus, the principal investigators are unhappy with the delays and the lack of transparency; the grants officers in the funding agencies grumble about the lack of sufficient detail in the proposals and the recalcitrance of the reviewers; and the reviewers (who are, of course, themselves principal investigators on other proposals) often find that they are required to assess proposals well outside their own domains of expertise. It would be fair to say about the work of any of our principal investigators that, of perhaps around 500 scientists around the world who may be competent to evaluate it, there are three or less in this country itself.

If, notwithstanding the shortcomings mentioned above, the present system has been reasonably successful in identifying and funding the projects of good quality in the country, I suspect that this is because reviewers and committee members alike have taken their decisions on the basis of the records of publications of the principal investigators. Therefore, my

suggestion is to make *de jure* that which is at present *de facto*, in other words to adopt a system of research funding which, at least in part, is performance-based instead of proposal-based.

A simple rationale for adopting performance-based funding is that past performance is by far the strongest predictor of future success in research. Even in the developed world, performance-based funding arguably is a viable alternative to proposal-based funding, and is or has been used by several agencies including the UK Medical Research Council, the Howard Hughes Medical Institute and the Max Planck Society. In the case of developing countries, performance-based funding would definitely be superior to proposal-based funding given the disadvantages of the latter cited above. At least one South European country has consciously adopted this policy for the funding of investigator-initiated research.

The purpose of this note has been to argue for a move in principle to a performance-based system for allocation of research funds in this country. If accepted, the details need to be worked out, including importantly, the methods to determine qualities of performance in different disciplines, the quantum of funds to be provided to investigators on the basis of their past performance, and the provision of start-up money for investigators who are yet to establish their track record. Finally, this new scheme is envisaged primarily for investigator-initiated research projects and not for mission-mode programmes or service-related research activities that are expected to meet well-defined goals and objectives.

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