I have a few suggestions to overcome this problem.

(1) All science fellowships should have an option of contributory 'pension fund', i.e. equal contributions from the funding agency and fellowship money should form a 'principal' out of which the 'interest' should become pension money. Thus, scientists after 10–15 years of fellowship will get a reasonable pension for life. They can, of course, encash the entire money on getting a job. (2) All RAs and Pool Scientists who are having 5 years or more of post-doctoral research without any job should be provided with 'Maintenance Allowance' and be attached to National Labs/Central or State Universities. The position which they occupy should be comparable with Lecturer/Reader grade. (3) The service commissions and other recruitment bodies should have 'age relaxation' for the above categories of post-doctoral scientists. (4) For dedicated brilliant scientists having continuous international publications, some kind of scheme may be started in which the upper age limit may be up to 55 years with a provision of promotion at 10 years' interval.

The above welfare scheme will give meaning to 'Jai Vignan' being added by our Prime Minister to the national slogan.

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# Initiatives to nurture basic science

The editorial 'Visions and nightmares' (*Curr. Sci.*, 2000, **78**, 5–6) could not have come at a more appropriate time, highlighting the decreasing efficiency of science administration of the country in discharging its duties of nurturing science. Basic science, by nature, is individualistic and it has to be supported at the individual level after the necessary peer review.

Without going into the jargon that has become fashionable and even mandatory to elicit attention, India would be doing great service to the cause of science if it is seen that the fate of any submitted project proposal is decided in about 6–8 months by funding agencies and that the first installment for the approved projects is released for the first two years. I would like to submit that this *is possible* if the scientists themselves cooperate and finish their review job in a week. It is possible if most of the committee deliberations are done through electronic media. It is possible if the role and responsibilities of Finance Officers in various agencies are redefined.

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# 'Mediocre' research on the rise

Apropos the editorial 'Footsoldiers of science' (*Curr. Sci.*, 1999, **77**, 1225–1226), I have a few additional comments based on my personal experience. First I must wholeheartedly support the editor's view that progress of science depends on post-doctoral research contributions. Research can at best aspire to be mediocre unless the questions asked have an element of daring in them. Invariably, the risk of failure is also greater. With the graduate student as the main workforce, two options emerge: eschew all risk and settle for 'mediocre' research or be brave and risk disenchantment amongst your graduate students who are emotionally and technically not mature enough to handle the trauma of failure.

In my view, the tendency to eschew risks and settle for the safe Ph D programme has been on the rise not least because the modern-day student is more aware of his/her career options and is able to exercise them. Clearly, the best will not choose a career in science if the risks associated with scaling the first hurdle are significant.

Another reason and this applies to research in industry as much as in academia, is that when venturing on a particularly ambitious target, the leader does not want to be burdened with the responsibility of tending to the longer-term career aspirations of the team members (which is the case if all the team members were permanent employees). Such concerns would not only circumscribe the ambition but may well lead to suboptimal choice of the plurality of disciplines one may need for effective execution of the project.

From the perspective of the postdoc, it is important to use this opportunity to develop a key competence – working independently. The four levels of work in science are: to carry out instructions, to work independently, to work through others and to do direct research.

The most productive and critical phase for the young researcher is the period of learning to work independently. It is trivial to comment that if during this period all that he/she learns is how to secure a permanent job, one can only pray for the future of science.

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