

nature cell biology

Investing in the future

“In the future, there must be more effort everywhere to build an infrastructure which encourages young scientists to take on difficult and original projects, rather than playing it safe”

Young scientists making the transition from senior postdoctoral fellow to independent laboratory director face many challenges. As well as defining a scientific niche for themselves and establishing a new laboratory — hiring technicians, graduate students and postdoctoral fellows — young investigators must often apply for (and receive) funding and fulfil teaching commitments. What is being done to ensure that this process goes smoothly? After speaking with several departmental chairmen and young investigators in Europe and the US, we conclude that the answer is ‘not enough’. Universities and research institutes make a significant investment of time and money into recruiting junior faculty members, but few seem to follow it through with training and support programmes.

Many universities operate a mentoring programme, whereby a senior faculty member acts as an advisor, offering guidance and support to a new group leader when necessary. Although this system is often satisfactory, its usefulness varies widely and is entirely dependent on the commitment of the advisor. Other universities operate informal seminar series that address issues of interest to senior postdoctoral fellows and new faculty members, and a few institutes offer formal training courses. University College London, for example, offers a six-month course entitled “leading and managing a research team”, which covers topics such as team-building, interviewing, appointing and motivating staff, dealing with conflict, finance, and managing a research project. These types of course can be very useful in helping young researchers to begin thinking of themselves as ‘leaders’ and in alerting them to legal issues, such as prejudice in the workplace. But sometimes these programmes also have the drawback of not being aimed specifically at biomedical research scientists. Therefore, some issues — such as how the pressure to publish affects team-building — are not taken directly into account.

Clearly more can and should be done to provide support for junior faculty, but perhaps the senior postdoctoral fellowship period is the most important time for providing training. Teaching postdoctoral fellows to make the transition to the next level should effectively be a 3–4-year course that begins at the same time as the postdoctoral fellowship. Most advisors require senior postdoctoral fellows to write their own papers and apply for their own funding. But an advisor’s role should go further than this. Elaine Fuchs (University of Chicago) takes her mentoring role seriously. She feels that “the postdoctoral period should be an apprenticeship for professorship”. She stresses the importance of teaching, requires her postdoctoral fellows to take part in interviewing new laboratory members, and takes an active interest in their career development by helping them with seminar preparation and job searches. Mike Sheetz (Duke University) says that “advisors who advise more than direct will produce postdocs better prepared for independent survival”. This focus on independence at an early age is most prevalent in the US. We are frequently told that, in Europe, the problems relate to “too few jobs and lack of real independence for young scientists”.

What more can be done to improve the lot of young scientists? First, we advocate the implementation of more long-term funding packages (such as the Wellcome Senior Fellow grants, which guarantee 7–10 years of funding), so that new group leaders can avoid grant-writing and teaching while they try to develop interesting scientific projects. Second, universities and funding agencies could combine forces to provide more formal training courses; and finally, postdoctoral advisors should both re-examine and celebrate their roles as mentors. *Nature Cell Biology* agrees with Martin Raff (University College London) who says that, “In the future, there must be more effort everywhere to build an infrastructure which encourages young scientists to take on difficult and original projects, rather than playing it safe”.