Scientists must be taught to manage

Young scientists need more help to set up and run research labs, says **Jessica C. Seeliger**.

Starting an academic lab is like launching a small business. But does scientific training really prepare us for success? As a young investigator just over a year into my job, I feel pressure — much of it self-generated — to produce results, attract funding and ultimately to make a name for myself in my chosen field of bacterial pathogenesis.

As researchers, we are trained to work within a rational and methodical framework. But when it comes to running our labs and managing people, we have to rely on our gut feelings, our limited know-how from mentoring a few students or our observations of our previous advisers. We can often feel ill-prepared.

Take dealing with a difficult co-worker or motivating students. As scientists, we must be honest with someone about faults in data or reasoning. But while striving for this scientific objectivity, we can forget the importance of body language and of directing discussion at a problem rather than a person. And even something as apparently straightforward as having a meeting can be problematic. The many collective hours spent around conference tables can feel like lost time when agendas wander and goals are not met.

Would we do any better if we received formal training that gave us a logical framework for lab management? Some young investigators would no doubt argue that such training is inefficient and ineffective. The classic method is to work from your own experience in your mentors' labs. Although this is a valuable starting point, building a new lab and serving as its sole head is a very different prospect from working in an established lab with senior students and support staff. So my current support network consists mainly of a handful of other young investigators, all of us amazed by the universality of the challenges we face. We trade tips and anecdotes about recruiting and retaining, motivating and negotiating, and we agonize over mistakes.

So, we need help — or at least, some of us do. Yet funding agencies offer no routine management training for people at my level. This is despite the many career-progression programmes and workshops now available for graduate students and postdocs.

The Burroughs Wellcome Fund and Howard Hughes Medical Institute did create a course for people at my stage of a scientific career, called 'Making the Right Moves'. But the course ran only twice — in 2002 and 2005. What endures is a book based on the course, which, along with Kathy Barker's *At the Helm* and *Lab Dynamics* by Carl Cohen and Suzanne Cohen, constitutes almost the entire reference library available to new investigators.

Recognition of this training void has come recently from an unexpected corner: the American Express Foundation, which last year started to fund an annual 'Workshop on Leadership in BioScience' at Cold Spring Harbor Laboratory in New York.

Last month I went on the course, alongside my husband — Markus Seeliger, also a young investigator — and 25 scientists from around the world at a similar stage of their careers, for three days of lectures, role-playing exercises and case studies.

Everyone has their own story of poor management. The major advantage of the workshop we attended was that it was away from our home university, so that we could discuss sensitive personal situations in confidence. Some of the toughest problems are those that you might not feel comfortable about discussing with your principal investigator, your mentor or your chair.

We practised the difficult issues — how to manage meetings, for example, from distributing the agenda in advance and keeping everyone on task, to ending on a note of consensus. And through role plays, we learned how to structure negotiations as a problem-solving process rather than a battle of wills.

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Except in cases of misconduct, criticism need not be personal, particularly when one is trying to motivate students. Being honest does not mean that one need be brusque or unsympathetic; we can preserve scientific integrity and encourage trainees positively.

I would strongly recommend such training. And although it is useful for postdocs, it is more crucial for young faculty members. The workshop was appealing because it was tailored to our situations by people familiar with both the academic domain and the biotech world, where such training is more common.

Academic institutions must recognize the value of this pioneering effort and support or create such programmes for their own faculty members. They make multimillion-dollar investments in us, and, to protect their interests, should invest as seriously in leadership skills as in the progress of science.

I am already using what I learned. When I notice that I am dominating group discussions, for instance, I try to be more patient and to allow others to consider and voice their opinions. I like to think that, as a result, quieter members of my lab are becoming more confident, and that we all benefit from increased intellectual exchange. My husband has put the ideas into practice too: we wrote this article together, but were then told we could put only one name on it. Luckily, the workshop covered how to resolve authorship disputes. ■

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