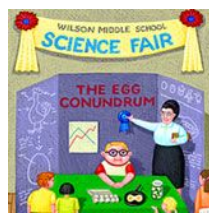


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Career Advice

Learning to Lead a Lab

By Lucas Laursen
February 21, 2014

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Firing a member of your lab is difficult. Fortunately, it's also rare. The first and only time cell biologist [Samara Reck-Peterson](#) had to do it, in her laboratory at Harvard University, she felt prepared. She had practiced the difficult conversation during a lab management course she'd taken in 2009, and she had a script ready. "Practicing is really the most important thing," she says. It helped her anticipate which parts of the conversation were likely to trigger emotional responses so she could head them off in the real conversation.

"If you have a startup package, instead of buying a whatever—a microfuge—spend a few thousand dollars on [the training] instead." —Samara Reck-Peterson

Reck-Peterson is one of many aspiring and established principal investigators (PIs) who have participated in formal lab management or leadership training courses. Such courses were once rare, and they're still not widely available. Access depends on your location and ability to pay. But if you can find one, attending such a course is well worth the effort. Most scientists who did find one say they came back with helpful people skills and a network of colleagues with whom they can share difficult situations and discuss solutions. "I think it's a mandatory course for young PIs," says molecular biologist [Raz Zarivach](#) of Ben-Gurion University of the Negev in Beer-Sheva, Israel, speaking of a lab management course offered by the European Molecular Biology Organization (EMBO)—one of two he has attended.

A growing trend?

Offering courses to PIs in management or leadership is not new. In the United States, neuroscientist [Michael Zigmond](#) began offering "survival skills" workshops including those topics for researchers at the University of Pittsburgh in Pennsylvania, in 1985, in connection with a National Institutes of Health training grant; [Beth Fischer](#) joined him in the "Survival Skills and Ethics Program" in 1993. Biologist Carl M. Cohen and his wife, psychologist Suzanne L. Cohen, have been conducting [training workshops](#) for researchers since the 1990s. (The Cohens are the authors of [several Science Careers](#) articles.) Carl Cohen believes that "there's a growing recognition of the need of this" kind of training. In 2002, the Burroughs Wellcome Fund (BWF) and the Howard Hughes Medical Institute (HHMI), with help from AAAS (publisher of *Science Careers*), launched a course in scientific management for postdocs and newly appointed PIs. BWF and HHMI repeated the course in 2005, adding a "train the trainers" component to help other organizations offer such training to their scientists. The University of San Francisco implemented a 2-day [Scientific Leadership and Management course](#) and continues to offer it most years; about 100 people participate each time it is offered. The course was expanded in 2011 to include clinical and translational junior faculty. Organizations such as Harvard Medical School, Cold Spring Harbor Laboratory, and Oak Ridge National Laboratory have all hired consultancies to deliver such courses, and at the University of California, Berkeley, grad students have organized their own [SLAM: Science Leadership and Management seminar series](#).



CREDIT: Chen Guttman

Raz Zarivach

A similar picture emerges in Europe. Courses on leadership and management training remain sparse, but those offered are popular. EMBO reports that the 15 [laboratory management courses](#) it announced for 2014 were fully subscribed within a week of their announcement; the organization added three more. This year, it counts more than 250 registered participants, up from 62 in 2005, when the courses were first offered. One of the training companies it hires—htp consulting, which taught the 2009 course Reck-Peterson attended—has tripled the number of courses it offers since 2003, its first year of operation. Starting in 2009, Vitae, the U.K. organization for the professional development of researchers, launched a 2-day [Leadership in Action](#) course. Institutions including the [University of](#)

[Zürich](#) and the [University of Cambridge](#) also offer leadership training.

Scientists, not managers



Courtesy of Carl M. Cohen

Carl M. Cohen

The main reason lab management and leadership training courses exist is a gap in traditional scientific training curricula, Carl Cohen says. PIs often rise to their positions based on the excellence of their research, their publication records, and the fellowships they win. Yet, they go on to become managers, needing to distribute their lab's workload, motivate junior colleagues and defuse tensions, keep the lab on budget, and ensure that everyone is working toward common goals, among other daunting challenges, according to trainers and senior scientists *Science Careers* interviewed for this story.

These days, most doctoral programs and university career offices supplement scientific training with transferable skills, says [Anne-Marie Glynn](#), program manager for EMBO courses. But to get that training you need to be "fortunate enough to work at one of these institutes"—and those programs often lack the basic financial accounting and people-management skills required of PIs, Glynn adds.

Many early-career scientists recognize the need for that extra training; feedback from young scientists prompted BWF and HHMI to design such a course in the first place. Today, early-career scientists are recognizing this need earlier in their training, Glynn says. While EMBO first developed courses for scientists who had already been appointed as research group leaders, lately more postdocs—and even doctoral students—have been signing on, Glynn says. In 2007 EMBO started offering 3-day courses for younger scientists in addition to the beefier, 4-day courses for research group leaders.

What will you get from the course?

Lab management and leadership courses range from on-campus classes organized by your university, to off-site courses delivered by consultancies with participants from a range of research institutions. Dedicated courses tend to be an immersive experience lasting between 1 and 4 days.

The range of topics varies. The 2002 and 2005 BWF/HHMI courses offered training in grant writing and collaboration, for example. But courses typically cover people skills, setting and meeting goals for the lab, and project and finance management. Carl Cohen says the most popular element of his workshops is the part on negotiations. "At the young PI level there are issues like, 'How do I deal with my department chair who wants me to take on more responsibility than I'm ready for?'" This includes taking on extra teaching and committee work. During the workshops, he helps young PIs learn to balance departmental responsibilities with time spent on research. Participants also learn how to agree on an appropriate balance with department chairs and senior advisers.



CREDIT: EMBL Photo Lab/Marietta Schupp

Anne-Marie Glynn

One of the ways instructors teach these and other leadership skills is through role-playing. They set up scenarios that allow attendees to practice together; this is followed by discussions of how the scenarios played out. The idea is to prepare them for similar situations, which are bound to arise in their labs.

Further reading:

The BWF and HHMI's [Making the Right Moves: A Practical Guide to Scientific Management for Postdocs and New Faculty, Second Edition](#)

[At the Helm: Leading Your Laboratory, Second Edition](#) by Kathy Barker

[Lab Dynamics: Management and Leadership Skills for Scientists, Second Edition](#) by Carl M. Cohen and Suzanne L. Cohen

["Building Leadership among Laboratory-Based and Clinical and Translational Researchers: The University of California, San Francisco Experience"](#) by C. Wides, *et al.*

Vitae's booklet [The Leading Researcher](#)

Such training proved useful for Zarivach, who says he used to push his staff too hard. Recognizing this, at his second course Zarivach asked his instructor and fellow participants how he might change his approach. They suggested that a lighter hand might stress his staff less and help them learn to work more independently. Zarivach has since begun to trust his junior colleagues more, giving them enough space to make their own mistakes while letting them know he's around when they need help. The combination of advice from course mates and trial-and-error in the lab has worked, he says.

Another strength of the courses is that they help researchers prepare for hiring decisions, alumni say. Zarivach says he learned "to give more time for the interviewed person to talk" during job interviews and to ask unconventional questions to learn more about their personalities. Reck-Peterson, who took the BWF/HHMI course before she took an hfp course, says she learned to follow up on letters of recommendation with telephone calls to get more nuanced verbal recommendations. She also learned to adjust interviews to accommodate different personality types.

Both Zarivach and Reck-Peterson say that the networks of fellow PIs they formed during the courses continue to provide support. Zarivach now heads a forum of young scientists, some of whom have taken part in leadership courses at his university, who continue discussing lab management issues via email or over coffee. Reck-Peterson and other alumni of lab management training in the Boston area get together from time to time, too, since they trust each other and have a common approach to addressing lab issues.

Choosing a course

In choosing a lab management course—assuming you have access to more than one—important aspects to consider are the time commitment and the format. Some courses bring instructors to a university for an afternoon seminar, for example, or even for a couple of days. Zarivach did a 2-day on-campus lecture-heavy course organized by his university, followed by a 3-day EMBO course in Heidelberg, Germany. At the second course, "we could discuss more," he says. There was enough time for all the participants to share their experiences and propose solutions.

Another consideration is whether to take such a course alongside institutional colleagues: Do you feel you can open up? Or would you be better off attending an off-campus course and building a remote support network? Because the topics discussed are often sensitive—dealing with recalcitrant colleagues, perhaps—an off-campus course allows you to speak more openly, Glynn says.

Some universities offer free training in lab management and leadership, but other courses cost money. If you are a Ph.D. student or postdoc, perhaps it can be covered by fellowships—but you may have to convince your PI to pay. You can help your case by offering to share what you learn with other group members.

If you are a PI, you can set your own priorities. "If you have a startup package, instead of buying a whatever—a microfuge—spend a few thousand dollars on [the training] instead," Reck-Peterson recommends. "It is well worth the investment."

Examples of current or recent courses and consultancies

[Cold Spring Harbor workshop on biosciences leadership](#)

University of California, San Francisco's [Scientific Leadership & Management course](#)

[Postdoc Leadership Program](#) at Cornell University

[Scientific Management Course for Postdoctoral Fellows](#) at Thomas Jefferson University

[University of Pittsburgh Course in Scientific Management and Leadership](#)

University of Southern California's [Managing a Scientific Laboratory](#) course

The New York Academy of Sciences' [From Scientist to CSO: A Leadership Prep Course for Scientists in Business, Academia, Government and Research Institutes](#)

The University of Ottawa's [graduate diploma in scientific management and leadership](#)

[EMBO Laboratory Management Courses](#), including one for [Female Leaders in Science](#)

[Vitae's Leadership in Action](#)

The University of Zürich's courses on [Leadership, Management, Negotiation and Moderation](#)

The University of Cambridge's [Leadership and Management Development courses](#)

[Skill Assist](#) in Pennsylvania

[Science Management Associates](#) in Massachusetts

[The Leadership Edge](#) in California

[hfp consulting](#) in Germany

[ProSciencia](#) in Germany

[True Colours](#) in Belgium

[Leadership Sculptor](#) in Germany

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