WOMEN in Cell Biology

Career Advice for Women and Men

Learning the Art of Leading a Lab

The career objective of many junior scientists is to become a PI—to finally be the person to define the vision of the lab, design research goals, uncover the secrets of nature, and change the direction of science. After surviving the decade-long process of completing a PhD and postdoc, the aspiring scientist has mastered the techniques necessary to perform good research, which is after all the key trade of a PI. However, the job comes with many other challenges that one may possibly not anticipate as a postdoc, such as navigating the labyrinth of institutional red tape, securing lab funding, cooperating with colleagues, hiring personnel, and bargaining with vendors. Assistance is often available in department and university offices for grants, human resources, and education. However, new PIs are often left to their own devices with the most essential tasks: leading the lab and working with people! Although these key skills will contribute to the success of a laboratory, you may need to seek out training opportunities once you are catapulted into the PI position. Here I discuss some such opportunities and resources.

Scientific Leadership and Lab Management Courses and Books

As I was approaching the end of my postdoc at the University of California, San Francisco (UCSF) I realized that I was not equipped with sufficient management training for my next position, which I hoped would be as an academic faculty member and independent PI. Therefore, I signed up for a two-day Scientific Leadership and Laboratory Management Course at UCSF. The course was an eye-opening introduction that taught me concepts of leadership, use of the Myers-Briggs Type Indicator as a tool for communication, and various aspects of what is important in being a PI. It left me hungry for more and to learn different perspectives as I applied for faculty positions. When I actually landed a faculty position, I bought Kathy Barker’s excellent book At the Helm as well as Making the Right Moves from the Burroughs Wellcome Fund and the Howard Hughes Medical Institute.

As my dream became reality, and with it the grand challenge to start a lab, I learned about the EMBO Lab Management Course. I knew I could benefit from the course when I made my first hiring mistake as a faculty member. Taking the course was the best thing I did for myself and my lab, and after completing it I returned inspired, motivated, and ready to run my lab with new skills and insights.

The EMBO Lab Management Course

Our group of approximately 14 junior scientists in the course were just starting our labs and getting a taste of what awaits. We bonded quickly and found that there was much to gain if we let down our guard and shared some of the difficult situations we had already encountered—such as knowing who to hire and encouraging lab members to do experiments we suggested—that we could not solve by simply applying a formula. These situations required a different skill set; one had to apply emotional intelligence. In the course, we learned how easily a message can be misunderstood and how important active listening skills are to facilitate effective communication. We practiced how to recruit lab members, how to develop a team, and how to motivate people, taking into account that each person is unique. Particularly useful was to practice resolving conflicts and negotiating, which was always successful when you realized what the individual needed. We practiced how to moderate and coach within our group, how to better organize our work, and how to delegate it.

The environment was geared toward active learning. We sat in circles; used flipcharts, flashcards, and color codes; and most importantly, practiced. What made this course so effective is that each of us had prior experience as a PI, enough to run into problems that we could not solve. In each module, we could introduce those issues and use the roleplay exercises to find a solution. Usually each difficult situation presented was one that everyone had experienced at some point. After all, these were issues that come up not only in a lab, but

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Dynamics: Management and Leadership Skills for Scientists. Professional coaches can also be hired individually, a practice often pursued in industry and possibly useful for scientists at later career stages. (EMBO leadership course consultants can also be hired by departments or universities.4) There is a finite amount of time and energy in one's life, and these courses will make you as PI more effective within the lab, the scientific community, and society as a whole. Rather than automatically adopting previous mentors’ management styles, looking away from difficult situations, or winging it, you can get professional training via one of these courses! The UCSF program began this process for me. And there are other effective institution–based programs like the University of Texas Southwestern Medical Center’s LEAD program.5

Leadership and management training is a small investment in time and money. After all, we do not simply train scientists, but have the responsibility to equip the generation of tomorrow with the skill set they need to change the world for the better. This needs to be taken seriously, in particular in current times where we need positive mentors who can serve as role models and who have mastered the art of leading a laboratory.

—Sabine Petry, Princeton University

Footnotes
1https://postdocs.ucsf.edu/slms.
4http://lab-management.embo.org/organise-an-event.