

Rethinking our postdoctoral training

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Abstract

We decide to become postdoctoral fellows, but forget to remain owners of our careers. Often, we look at the postdoctoral experience as a “rule-of-thumb”, or a path that we must take in order to advance our scientific careers. Why not plan for it and take full advantage of postdoctoral training? Should we become just experts in the lab, or good scientists and professionals in and outside academia also? We need to rethink how we go about our postdoctoral training and open our eyes. Let’s not forget that simply mastering lab science is not the entirety of postdoctoral training.

Before, during, or near the end of our experiences in graduate school, we made the decision to continue our scientific track as postdoctoral fellows. According to the National Science Foundation and the National Institutes of Health (grants.nih.gov/training/Reed_Letter.pdf), a postdoctoral fellow is “an individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path.” Many of us may question current or past mentorship received during a postdoctoral period, or even back in grad school, but should we remain non-enthusiastic about our postdoctoral and scientific careers? Why not become “Chief Executive Officers” of our scientific training and develop a career plan? We often limit our postdoctoral training to just improving our lab science, but do we pay attention to how can we use our postdoctoral experience to become better scientists and professionals, or how to translate our skills to careers outside academia? Based on my interpretation of the above NSF-NIH definition of postdoctoral fellows, postdoctoral training should not be an obstacle to becoming owners of our careers. Further, the postdoctoral stage should not only focus on improving our pipetting skills or mastering new technologies, nor should we limit our career paths to just

the academic setting. We need to open our eyes and realize that our postdoctoral training brings the opportunity to expand our scientific horizons, even if our careers steer outside academia.

Although good mentorship, accompanied with a good plan (<http://www.nationalpostdoc.org/publications/mentoring-plans/mentoring-plan>), contributes to our scientific success, we need to plan and claim ownership of our scientific and professional careers. Our mentors (or PIs) are busy scientists and more importantly, we are not the only ones who our PIs mentor. Should we be satisfied being minority owners of our careers? In the same manner that we know everything about our doctoral thesis, we should know everything about our careers. So, should we remain “minority owners”? We will be affiliated to our postdoctoral labs for a finite period of time, but we will be bound to our career decisions forever. For this reason, it is important to engage in disciplined thinking, be open minded, focus on what’s important, remain as optimistic as possible, and understand where we are, in order to plan for the next step (Adams 2008). Map your professional and scientific goals, take command, and steer the course of your postdoctoral training (Russo 2004).

As stated by Dr. Howard G. Adams (2008), “to seize career advancement opportunities and create life

changing situations, timing is everything. The savvy professional knows to seize the moment, for once it passes, it may be gone forever." We have probably all had life experiences in which we have said... "what if?" During our postdoctoral training and career development, we want to limit the power of this phrase. Consider the postdoctoral experience as an excellent time to further expand your professional and scientific skills, including the skills that are not focused upon in the lab, often called "transferable skills" (e.g. leadership, effective teaching and mentoring, scientific management, interpersonal behaviors within and outside the lab, etc) (de Lange 2012). The postdoctoral affairs offices at our institutions often provide seminar series and workshops on topics that benefit your scientific routes and professional careers. If they are not providing enough, suggest workshop and seminars that could benefit you and your postdoctoral colleagues. Also, look for career development experiences within your scientific societies, many of which include career-advancement workshops in their meeting programs (put those membership and meeting registration fees to good use!). We cannot expect to learn how to mentor, improve our communications skills, pursue careers in non-academic professions, expand our networks, master management skills, and become better scientists if we remain within the walls of our labs. *"As scientists, we are adept at optimizing efficiency and performance in our experimental methods, technology development, analytical and numerical models, and business systems, but we are often blind to the huge impact that social dynamics and inadequate interpersonal skills have on our time and effort, staff retention, collaboration, and interaction with management"* (Cohen and Cohen 2005). Be pro-active, take advantage of the timing that the postdoctoral training brings to your career, and don't lose sight of the "little" (and not so little) skills that we must master in order to move forward and be successful in our careers.

Last, but not least, good science is not only performed in academic environments: non-academic settings can also provide many alternatives for your

scientific career. However, as is the situation with graduate students (Sauermann and Roach 2012), academia has not done a good job in letting postdoctoral fellows know about careers outside of the university settings, due to the lack of broad-based career guidance. If you are one of those who want to pursue a career outside the tenure track, the first thing you should do is find mentors and expand your network in non-academic fields (Vick and Furlong 2012). Also, take advantage of one of the most notable skills that we develop throughout our careers: reading with a purpose. Our success also feeds from how prepared we are when opportunities become available. Therefore, reading about career planning and advancement, especially if we are considering transitioning into non-academic fields, should be a no-brainer (Adams 2008).

In summary, mentorship is important for our successful careers, but it is as important to remain pro-active. *"Dreaming about what you need to do is called **wishing**. Developing strategies to accomplish what you want to do is called **planning**."* (Adams 2008).

We must rethink our postdoctoral training!

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