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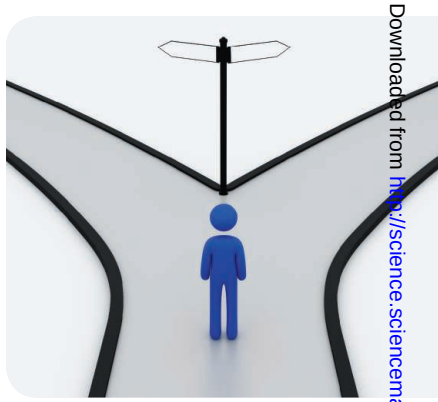
Planning Career Paths for Ph.D.s

THERE WAS A TIME NOT SO LONG AGO WHEN NEW SCIENCE PH.D.S IN THE UNITED STATES WERE expected to pursue a career path in academia. But today, most graduates end up working outside academia, not only in industry but also in careers such as science policy, communications, knowledge brokering, and patent law.* Partly this is a result of how bleak the academic job market is, but there is also a rising awareness of career options that Ph.D. scientists haven't trained for directly—but for which they have useful knowledge, skills, and experience. Still, "there is a huge disconnect between how we currently train scientists and the actual employment opportunities available for them,"† and an urgent need for dramatic improvements in training programs to help close the gap. One critical step that could help to drive change would be to require Ph.D. students and postdoctoral scientists to follow an individual development plan (IDP).

In 2002, the U.S. Federation of American Societies for Experimental Biology (FASEB) recommended that every postdoctoral researcher put together an IDP in consultation with an adviser. Since then, several academic institutions have begun to require IDPs for postdocs. And in June, the U.S. National Institutes of Health (NIH) Biomedical Research Workforce Working Group recommended that the NIH require IDPs for the approximately 32,000 postdoctoral researchers they support. Other funding agencies, public and private, are moving in a similar direction.



IDPs have long been used by government agencies and the private sector to achieve specific goals for the employee and the organization. The aim is to ensure that employees have an explicit tool to help them understand their own abilities and aspirations, determine career possibilities, and set (usually short-term) goals. In science, graduate students and new Ph.D. scientists can use an IDP to identify and navigate an effective career path.

A free Web application for this purpose, called myIDP, has become available this week.‡ It is designed to guide early-career scientists through a confidential, rigorous process of introspection to create a customized career plan. Guided by expert knowledge from a panel of science-focused career advisers, each trainee's self-assessment is used to rank a set of career trajectories. After the user has identified a long-term career goal, myIDP walks her or him through the process of setting short-term goals directed toward accumulating new skills and experiences important for that career choice. After each step, the user updates the plan, documenting efforts and progress. The user can opt to receive monthly e-mail reminders from myIDP to stay focused on goals and update progress and plans. Very importantly, the plan can be altered as skills develop, interests change, and career objectives are reconsidered.

Although surveys reveal the IDP process to be useful, trainees report a need for additional resources to help them identify a long-term career path and complete an IDP. Thus, myIDP will be most effective when it is embedded in larger career-development efforts. For example, universities could incorporate IDPs into their graduate curricula to help students discuss, plan, prepare for, and achieve their long-term career goals. The participation of faculty mentors is essential because trainees need a safe, supportive atmosphere in which to openly discuss their career plans and interests.

By turning introspection into a structured exercise, the use of IDPs allows trainees to translate a vague source of anxiety into a working plan, applying their well-developed analytical skills to the critical problem of building their own lives and careers.

– Jim Austin and Bruce Alberts

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*National Science Foundation, Science and Engineering Indicators 2012, Table 3-20 (www.nsf.gov/statistics/seind12/c3/tt03-20.htm). †M. Rosenberg, *ASBMB Today*, August 2012 (www.asbmb.org/asbmbtoday/asbmbtoday_article.aspx?id=17458). ‡http://myidp.sciencecareers.org.

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