Most postdocs ask themselves questions about their future goals only when forced to by the imminent end of their fellowship. Why is that? Many assume they are going on into research careers with known career trajectories. In academia, it is the tenure track. In industry, it is the climb from senior scientist to project manager. Why take time out from experiments that search for a cure for the common cold to think about these mundane and prescribed matters?

Well, regardless of your career goals, your next job will not magically appear. In addition, increasing numbers of postdocs are seeking careers beyond the bench. "In today's changing job market, the 'one size fits all' motto does not apply," says Heather Rieff, senior policy analyst at the Federation of American Societies for Experimental Biology (FASEB). The odds of gaining entry into any career dramatically improve if you have a plan.

Start by taking stock of your skills and keeping track of your progress. In the United Kingdom, the Royal Society of Chemistry (RSC) has been promoting a Postgraduate Skills Record (career_magazine/previous_issues/articles/2002_01_25/noDOI.16090583347685825000) Available free from the RSC Web site (http://www.rsc.org/lap/educatio/pgskills.htm), the PSR is a tool developed to help graduate students do an annual self-audit of their skills. Because the audit statements are generic, they work for students (or postdocs) in any field.

Regular self-audits are important, but it is critical that postdocs also develop a career-development dialogue with their adviser or supervisor. Reviewing progress and discussing career goals is a necessary part of career development.

You may feel a fight-or-flight response coming on when you hear the words "annual review." But, thought about rationally, the review process is an opportunity for you and your supervisor to explore your career plan and discuss how to shape your current activities to fit that plan. It forces both of you to think about what you will be doing after the postdoc.

The National Institute of Standards and Technology (NIST), where postdocs are federal employees with 24-month term appointments, already has a formal review process for its postdocs. "As such they are following, just like the other regular NIST employees, the annual performance plan and evaluation," explained Jack Hsia, NIST postdoc program representative and chief of academic affairs.

NIST is the exception, however. The National Academies of Science Committee on Science, Engineering, and Public Policy (COSEPUP) investigation (http://www7.nationalacademies.org/postdoc/) of the postdoctoral experience found that fewer than 20% of the responding academic institutions require an annual review of postdocs (see Enhancing the Postdoctoral Experience for Scientists and Engineers (%20http://books.nap.edu/catalog/9831.html), 2000). In distilling its findings, COSEPUP listed annual reviews as one of its 10 specific action points, recommending that "advisers, institutions, funding organizations, and disciplinary societies should monitor and provide formal evaluations (at least annually) of the performance of postdocs."

The Biomedical Postdoctoral Programs at the University of Pennsylvania in Philadelphia has a mandatory annual reappointment process. "We recommend to all mentors that they use an evaluation template at the time of reappointment," says Trevor Penning, associate dean for postdoctoral research training. "Our template has a portion for the mentor and a portion for the postdoc. However, because we do not mandate the formal evaluation process, it is used sporadically. It would be really helpful if the professional societies stated that they value such a formal evaluation process."

FASEB has stepped up to the plate. Recognizing that advisers may need some help to become effective supervisors and mentors, the FASEB Training and Careers Committee has outlined a process for developing, implementing, and revising long-term career goals and short-term needs. The process is interactive, requiring the full participation of both the postdoc and the adviser. FASEB
asserts that postdocs must take responsibility for their own careers, but advisers must share this responsibility by taking the time to become familiar with career options for postdocs.

"The Training and Careers Subcommittee felt that it was not sufficient to simply educate about the importance of having a career plan. There needed to be a blueprint for how to create such a plan," says Philip Clifford, associate dean for postdoctoral education at the Medical College of Wisconsin in Milwaukee and a member of the FASEB committee. Thus was born the Individual Development Plan (IDP) and an annual review tool for advisers and postdocs to use in discussing career goals and evaluating progress.

The FASEB IDP has four basic steps:

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<tr>
<th>Step</th>
<th>For Postdocs</th>
<th>For Advisers</th>
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<tbody>
<tr>
<td>1</td>
<td>Conduct a self-assessment</td>
<td>Become familiar with available career opportunities</td>
</tr>
<tr>
<td>2</td>
<td>Survey opportunities with adviser</td>
<td>Discuss opportunities with postdoc</td>
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<tr>
<td>3</td>
<td>Write IDP, share with adviser, and revise</td>
<td>Review IDP and help revise</td>
</tr>
<tr>
<td>4</td>
<td>Implement plan and revise as needed</td>
<td>Establish a regular review of progress and help revise the IDP as needed</td>
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</table>

The committee designed the IDP to be flexible--a process that changes over time as expectations, goals, and opportunities evolve. "FASEB recommends that all institutions involved in the training and career development of postdoctoral fellows have a well-defined mentoring program in place. An IDP is one useful component of such a program in that it facilitates discussion and defines goals and needs," explains Rieff.

Beyond publicizing the IDP, FASEB has no concrete plans for encouraging advisers and postdocs to start using it. Indeed, there are some predictable stumbling blocks that stem from the perceived relationship between postdocs and their advisers, as well as the legal status of postdocs within a given institution. Employers have a burden to provide a performance review to employees. However, individual faculty members may be reluctant to take on a supervisory role with respect to postdocs. And many postdocs who say that they would prefer to be treated as employees--with all of the rights and privileges that such a status would entail--are not enthusiastic about being supervised.

A case in point is the Johns Hopkins School of Medicine in Baltimore, Maryland. The postdoctoral association has been working with faculty members to implement an annual review process. Postdocs were supported by clinical faculty members, who are aghast that a formal review process such as that for medical residents does not exist for postdocs. In addition, the university administration supports annual reviews. "They hope that the process will help resolve problems with miscommunicated expectations before the parties end up in the Dean's office," says Carol Manahan, president of the Johns Hopkins Postdoctoral Association (JHPDA).

In 1999, the Johns Hopkins School of Medicine established an annual review policy that states: "A postdoctoral training committee should be established in each department. The committee would meet with all fellows at least once a year during the fellowship to provide evaluation, counseling, and career assessment."

Three years after the release of the guidelines, only clinical departments are performing annual reviews. Why? Faculty members and postdocs have resisted participating, and the policy has no enforcement mechanism. "Faculty in the basic sciences seem to be strongly against annual reviews, believing that reviews would undermine the relationship between the preceptor and the postdoctoral fellow," says Manahan. Some faculty members think that feedback should be given every day and consider annual reviews redundant. Others argue that it would take too long to perform annual reviews properly and that using a "form" to perform the review would be meaningless.
In a 2001 JHPDA survey, the majority of postdocs responded they were not interested in "more oversight" by their advisers. At the same time, 88% of postdocs reported that they would like regular feedback from their mentors. "The label of 'annual review' strikes fear into the hearts of many postdocs," says Manahan, who suggests that the review process include an opportunity for postdocs to review their advisers. "This is done in the clinical departments, and is even part of the review process for accredited residency training programs."

Orfeu Buxton, Chair of the University of Chicago Postdoctoral Association, wants to see broad implementation of annual review policies for postdocs. He encourages postdocs to read the FASEB IDP: "It's a mature approach to a relationship between adults on a job. If a postdoc cannot imagine such a conversation with their boss, they should seriously reconsider their choice of mentor."

Clifford agrees that postdocs can take the first step: "It is important to recognize that implementation [of the IDP] does not have to be 'top down.' It is laid out in such a way that a postdoctoral fellow can initiate the process. Involvement of administrative hierarchy is not necessary for an individual to benefit from going through this process." Still, to overcome the ingrained resistance by both faculty and postdocs, FASEB and other professional societies should consider taking discrete steps to encourage the review process. One idea is to offer training seminars at society meetings. At the end of the day, any implementation plan will fall flat unless faculty members and postdocs understand the importance of working together on career-development activities.