

8 ways to boost your postdoc

A postdoctoral appointment can be an excellent way to grow your knowledge and get your name out there. **Becky Oskin** finds out how to make the most of it

Whether you plan to explore new research areas or simply want a secure setting while searching for permanent employment, current and future postdocs say that making the most of a postdoctoral appointment is up to you. Here are some steps to making your postdoc a success.

IS IT RIGHT FOR YOU?

Completing a postdoc is a de facto requirement for a tenure-track position at many of the top-tier research universities, especially in the biomedical fields. But it's not always the natural next step. If you're interested in working at a private company or research institution, or finding a spot at a teaching-focused school, then you might not even need to do a postdoc, says Alyson Reed, executive director of the National Postdoctoral Association. "Explore options outside academia while you're still in graduate school, either through internships or networking with alumni," she says. "If you still decide that tenure-track is your heart's desire, go for the most prestigious postdoc you can find."

DO SOMETHING NEW

If you heed just one nugget of advice, choose this: work on something different from your doctoral research, somewhere other than your doctoral institution.

"Search for a lab where you can establish a niche and contribute something meaningful and novel," recommends Fabian Filipp, a postdoc at the University of California, San Diego. Jennifer Adair, a postdoc at the National Institute of Environmental Health Sciences (NIEHS), says

that picking up new skills will provide a leg up in the search for a permanent research position. "Science is changing to the point where you have to be multi-faceted."

Developing research skills is also important for industry positions. John Whittle, vice president of Boston operations at Tessella, a scientific software consulting company, says: "While we compete with other commercial organizations who perhaps have a specific interest in someone's research area, we tend to focus on their research ability."

CHOOSE THE RIGHT MENTOR

The wide variety of postdoctoral opportunities means that you can choose a lab or principal investigator (PI) that best suits your temperament and work style. Whether you need a lot of feedback or prefer working independently, Reed recommends asking your future mentor the following questions:

- » What's your philosophy on mentoring?
- » What's your approach to training?
- » Where are your previous postdocs now?
- » How much time can you spend coaching me?
- » What skills and experience do you think I need to be competitive for the job I want?
- » How do you feel about training someone for a position outside of academia?

Harvard School of Public Health postdoc

Andreas Sandgren also advises incoming postdocs to ask about opportunities for independent work. "The PI should be open to you developing your own interests. Publications are also a key point – look for a place where you're going to publish a lot," he says.

"Search for a lab where you can establish a niche and contribute something that's meaningful and novel"

But what if the perfect lab is run by a not-so-perfect PI? According to Reed, some trade-offs are OK. "There are people who are world-renowned scientists, but not necessarily outstanding mentors," she says. "You need to make a decision about how far this person is going to advance your career based on reputation versus coaching."

CHOOSE THE RIGHT SETTING

A university generally offers the best opportunities for scientists pursuing a tenure-track professorship. Postdocs gain experience in teaching, research, lab management and grant writing, all in one place. "It's important to build a portfolio of different skills that you will use during the course of your academic career," Sandgren says.

In a company lab or at a start-up, the focus is on teamwork and real-world applications. These positions often serve as a stepping stone to permanent employment, providing an inroad at competitive firms. You may, however, end up with few or no publications due to the

proprietary nature of much industrial science. "It tends to prepare you better for a job in industry, but it may not be the best option for someone who wants to keep all of their doors open and get a job in academia," says Reed.

A research institute may provide the best of both worlds for some postdocs. While institutes don't offer the same teaching and grant-writing experience as universities, many provide training and workshops to make up the difference. Salary is often based on years of experience, sidestepping the pay inequality that sometimes occurs at universities, where benchmates paid from different grants can negotiate markedly different salaries.

At the J. David Gladstone Institutes in San Francisco, for example, the starting salary is \$44,000 for postdoctoral fellows, with an additional five percent housing allowance to offset cost of living, says postdoctoral advisor John LeViathan. In contrast, universities typically pay postdocs according to the NIH stipend scale, which starts at \$36,996 for the 2008 fiscal year.

Also, if you have a family, institutes often provide better support for parents than universities. At the NIEHS, Jennifer Adair relies on subsidized, on-site childcare for her youngest child.

HAVE A PLAN

"The single most important thing for postdocs is to have a plan that highlights what their ultimate goal is and delineates steps for achieving that goal," says Diane Klotz, acting director of the NIEHS Office of Fellows' Career Development.

You should create an individual development plan in your first year, ideally with your mentor's

participation. The National Postdoctoral Association and many scientific societies offer publications to guide this process.

PUBLISH, PUBLISH, PUBLISH

Your publication record is likely to be influential when you come to apply for grants and positions, so get your first paper out as soon as possible, Sandgren says. "It doesn't necessarily have to be your first name, big production publication. You should try to get on some smaller project, just to get your name on a paper. I wish I had known that before I started."

DON'T PASS UP TRAINING

Most employers offer career training. At UCSD, Filipp has taken courses in lab management, effective presentations, bioethics, science communication and interviewing skills.

Adair is in a grant-writing program that helps her apply for an NIH Pathway to Independence award. If successful, she'll have one to two years of postdoc funding and two to three years of independent research support to take with her to a permanent position.

ESTABLISH A NETWORK

Chatting with other postdocs and senior scientists is important, especially if you're working for a PI who is focused on scientific mentoring and who offers little career advice.

"Seek out other mentors than just your PI, because having that network is very important," says Adair. "This is your time to grab every opportunity that you can." ■

A postdoc can be a fertile time professionally, allowing plenty of chances for research and publishing

From university to industry

Andy Nong



A postdoc at the Hamner Institutes for Health Sciences in Research Triangle Park, North Carolina, provided Andy Nong with the perfect transition from academia to industry.

"I was hoping to concentrate on research and do some more publishing, because once you start in industry, the chances of publication are rare," says Nong, who has a doctorate in public health and toxicology from the Université de Montréal in Canada. "I also wanted to use a postdoc to get far away from Canada and see what else is out there."

At the Hamner Institutes, an independent non-profit focused on biomedical research, Nong has two mentors, both of whom he met while attending professional meetings as a graduate student. His postdoc is funded by a contract with a chemical company. "It's close to an industry experience, because we work for a client and meet deadlines," he says.

Contacts

» National Postdoctoral Association
www.nationalpostdoc.org

» American Association of Medical Colleges
www.aamc.org/research/postdoccompact

» Federation of American Societies for Experimental Biology
opa.faseb.org/pages/PolicyIssues/training_links.htm