



Career Advice

The Ups and Downs of Doing a Postdoc in Europe

The thing that helped Jessica Torrey get over her homesickness during the first few months of her postdoc at the **Friedrich-Alexander-University of Erlangen-Nürnberg**

(<http://www.uni-erlangen.org/>) in Erlangen, Germany, was beer. More specifically, it was a regular gathering at a beer hall: She took a 30-minute train ride to Nürnberg to attend a weekly *stammtisch*, a regular gathering in which locals and foreigners meet over drinks and practice their English and German. "At first, it was a conscious effort to seek out other people," Torrey says. "I had to show up at a bar and hope that there would be friendly people, ... but it turned out that was one of the groups where I made the most friends."

Torrey, now a materials science postdoc at the **University of Washington** (<http://www.washington.edu/>), Seattle, says that although she would happily repeat her 18-month European postdoc experience, making a smooth transition to living and doing science in a foreign country requires a deliberate effort. "You have to make yourself get out and do things that might not necessarily be in your comfort zone," she says.

American scientists brave the Atlantic in significant numbers for meetings and lectures, but doing a postdoc in Europe requires a whole different level of commitment. In 2007, only 2.2% of U.S.-born new science doctoral recipients said that they "had definite plans to go abroad for work or study," according to Joan Burelli of the National Science Foundation's **Division of Science Resources Statistics** (<http://www.nsf.gov/statistics/>), who provided data from the annual **Survey of Earned Doctorates** (<http://www.nsf.gov/statistics/srvydoctorates/>) to *Science Careers*. Logistical hurdles such as obtaining funding and a work permit can be overwhelming, and some young scientists fear that a stint at a European lab might make it harder for them to find a tenure-track job when they return to the United States. Those who have made the move acknowledge that there are challenges and that a European postdoc is not for everyone.

Yet many former expatriate postdocs report that the experience is worth it, both culturally and scientifically. With some planning and the right support network, they have overcome challenges, used their European postdoc as a launch pad for successful scientific careers, and enjoyed a rich, new personal experience. "You need to build in some safety nets if you're going to take a big leap," advises Piraye Yurttas, until recently an embryology postdoc at the **University of Cambridge** (<http://www.cam.ac.uk/>) in the United Kingdom. But once the nets are in place, it's good for a scientist's career, say those who have taken the leap. "A postdoc [in Europe] is great because you get to see both sides of everything," Torrey says. "You can see how different universities [do science] as well as different countries."

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(Courtesy, Jessica Torrey)

Jessica Torrey

Why go abroad?

Postdoc positions are well-established in the United States, and it's possible for American scientists to run independent projects from a relatively young age. So why go abroad for a postdoc? Jason D'Antonio, an oncology postdoc at **Johns Hopkins University** (<http://www.jhu.edu/>) in Baltimore, Maryland, attended a European **job fair** (http://sciencecareers.sciencemag.org/tools_tips/outreach/events/2009_01_25) at the **Massachusetts Institute of Technology** (<http://www.mit.edu/>) (MIT) earlier this year because he is considering a move abroad for a future postdoc. But he is uncertain about the effect it will have on his career. "In the U.S., everybody tells you that the American postdoc is the gold standard and that if you [do a European postdoc], you'll have to do another one here."

But Federico Sesti, who has been on faculty search committees in the Department of Physiology and Biophysics at **Rutgers University** (<http://www.rutgers.edu/>) in Piscataway, New Jersey, disagrees. "If you have seen a little bit of the world, it's better for you because you know how to deal with different kinds of cultures," he says, adding that such experience is useful to aspiring faculty members who will work with international colleagues on a day-to-day basis. Officially, search committee members wouldn't evaluate a candidate based on whether they have international experience, he notes, and ultimately it's a matter of what a candidate has published. But he thinks that doing a postdoc abroad could make young scientists better candidates for American faculty positions.

One benefit of going abroad is that it allows you to learn different approaches to doing science. Matt Bush, a biochemistry postdoc at the University of Cambridge, thinks his move to Europe has added value to his career. "I was very familiar with the U.S. groups [working on similar topics] and wanted to learn how the group over here was approaching things differently," he says. Torrey, who spent a semester at the University of Erlangen-Nürnberg as an undergraduate, says that, as a postdoc, she had to adjust to a different lab structure: "The department I worked in had a lot of technicians who ran the instruments, ... so I had to get used to handing my experiments off," she says. Sesti adds that, "In general, in Europe there is more hierarchy than in America." Another difference, he says, is in the writing styles: European scientific papers "are less overstated."

In narrow specialties with only a few active research groups, a move to Europe could be the simplest way to continue working on similar science. Katie Mussack found her current postdoc at the University of Cambridge's **Institute of Astronomy** (<http://www.ast.cam.ac.uk/>) in an ad while completing her Ph.D. in solar physics at the **University of Southern California** (<http://www.usc.edu/>) in Los Angeles. She also considered a plasma physics position in Norway but settled on Cambridge in part because of an existing collaboration between that group and her graduate school colleagues. For Mussack, looking at European positions was just a way of casting a wider net during the job search. She says she was "looking for the job, not the location."

Science aside, location can be a big part of the allure. Yurttas says she looked forward to sampling Cambridge's famous traditions, such as wearing the "Harry Potter" robes to formal meals and rubbing elbows with prominent scholars. She says she also heard from some scientists that "the hours were more sane in Europe." Although that may be true for some postdocs, for Yurttas, it was just a hopeful rumor.



(Courtesy, Piraye Yurttas)

Piraye Yurttas

Life abroad

Raising a family in Switzerland wasn't part of Edward Wenger's plan when he signed up for a physics postdoc with a research group at MIT. But not long after he joined, his group moved to the **European Organization for Nuclear Research** (<http://public.web.cern.ch/public/>) (CERN) near Geneva, Switzerland. Living in Switzerland has provided him and his family with "an opportunity to do things we wouldn't necessarily be able to do otherwise," Wenger says, such as "visit a whole bunch of really exciting places, whether by 3-hour train ride or an hour or two flight."

However, for his family "the move was a net negative," Wenger says, because his wife had to take a break from her law career and does not have the social network he has at the lab. She has sought out other expatriate spouses in the area, he says, who help her navigate what Wenger calls the "peculiarities" of living in Switzerland, such as closed shops on Sundays and rules against mowing the lawn during certain hours.

If you're seeking out a postdoc abroad, it can help to reach out to current members of the lab you're thinking of joining and ask them about such peculiarities before committing to the move. Of course, those lab members can also provide insights into their experience inside the lab. Scientists who have already left the lab can be even more valuable, because they can speak more freely.

Establishing links before you arrive can also pay off during the transition. Bush and Mussack credit administrators and other international members of their respective labs with helping them navigate the Catch-22 of needing a bank account to get a rental agreement and an address to get a bank account. "Ask questions," Mussack advises. And if your funding body regularly brings Americans to Europe, such as the **Alexander von Humboldt Foundation** (<http://www.humboldt-foundation.de/web/31813.html>), which funded Torrey's postdoc, they may have resources to help with the move, including information on matters such as where you can buy groceries or a used bike.

Yurttas encountered practical difficulties on her arrival in Cambridge. The university accommodation service put her in touch with private landlords, but her housing search took longer than planned, and she had to pay extra to keep her belongings in storage in the meantime. She says she now wishes she had moved in stages, starting with just a suitcase, and that she hadn't depended so completely on the university accommodation service. But by seeking logistical help from those who have gone before, new postdocs can feel less like foreigners and more like international scholars with a built-in support network.

Language barriers can be an additional burden. Peter Peters, a cell biologist at the **Netherlands Cancer Institute** (<http://www.nki.nl/>), is familiar with the challenge of adapting to science in a new country; he did a postdoc at the U.S. **National Institutes of Health** (<http://www.nih.gov/>) and found support groups for foreign arrivals like him helpful. Now that he has returned to the Netherlands and supervises foreign postdocs, he encourages them to eliminate the language barrier right away. He says that the foreign postdocs in his group who adapt best tend to learn enough Dutch to follow casual chitchat--he recommends the children's news channel on television--but they do not need to learn to speak or write it because so many Dutch understand English. Torrey spent most of her undergraduate semester in Erlangen mastering German and says that having a basic grasp of the language helped her make new friends and get her postdoctoral research done.

As for the perennial question of funding your postdoc, it requires the same steps as finding a postdoc in the United States, though--as Bush notes--you should be careful of the schedule for applying. "Some fellowships you're only eligible for while you're still in the U.S.," he warns, and many European fellowships have deadlines up to a year in advance of the start date, unlike some American fellowships, which may have quarterly or rolling cycles.

Happy endings

To increase the odds that your postdoc position leads to an independent position, it's important to maintain communications and contact with colleagues in your target network. If you can, ensure that you'll have time and funding for regular visits with the people who will help you find your next job. "From the time you start, you want to keep going back to meetings [in the United States] and presenting your data and presenting yourself as somebody who's got a great story and is really productive and demonstrating your presence," says biologist Amy Gladfelter, who spent 4 years in a Swiss postdoc before moving directly to a tenure-track position at **Dartmouth College** (<http://www.dartmouth.edu/>). Some postdoc fellowships include travel funding; postdocs can also apply for travel grants from scientific societies to attend conferences or negotiate for such funding with their supervisor. Gladfelter says that in addition, "I would routinely call or write people in the U.S. to talk."

Gladfelter advises "going to small enough meetings where you really talk to people" and letting them know that you don't plan to spend the rest of your scientific career abroad.

Mussack says that although she'll be ready to go home when the time comes, "2 years is too short." Just writing the necessary software to execute her postdoc project occupied the first 6 months, and she had a particularly easy personal transition to life abroad. She says she has had to spend much of this postdoc searching for her next job.

Despite the challenges, Yurttas says that being in a historic center of learning--and enjoying the European work-life balance--was "intoxicating." Gladfelter, who wrote an **essay** (<http://www.lifescied.org/cgi/content/full/1/4/128>) about her postdoc experience in 2002, says that despite going against the advice of respected colleagues, "I look back on those days and they were glorious."

Doing a Postdoc in Europe: Resources

Here are some places to look for international postdoc funding opportunities:

- National Science Foundation: **International Research Fellowship Program** (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5179)
- National Institutes of Health: **The Fogarty International Center** (<http://www.fic.nih.gov/index.htm>) maintains a **list of international grants and fellowships** (http://www.fic.nih.gov/funding/directory_fellowships.htm), though not all in Europe. The **Virtual Career Center** (<http://www.training.nih.gov/careers/careercenter/index.html>) maintains a **list of fellowships** (<http://www.training.nih.gov/careers/careercenter/fellow.html>), domestic and international. The **NIH F32 postdoc fellowships** (<http://grants1.nih.gov/grants/guide/pa-files/PA-09-210.html>) aren't specifically intended to fund research abroad, but it is allowed, with the appropriate justification.
- The **Human Frontier Science Program** (<http://www.hfsp.org/>) provides "young scientists with up to three years of postdoctoral research training in an outstanding laboratory in another country," according to its Web site. It also offers short-term fellowships for 2 weeks to 3 months for scientists to travel to another lab to learn new techniques or set up new collaborations.
- The **Alexander Von Humboldt Foundation** (http://www.humboldt-foundation.de/en/programme/stip_aus/tshp1.htm) offers 2-year fellowships to Americans who want to study in Germany. Also, its **Guidelines and Information for Research Fellows** (http://www.humboldt-foundation.de/pls/web/docs/F23154/guidelines_fellowships.pdf) is incredibly detailed; even if you aren't thinking of going to Germany, you might have a look at it for details you (and we) haven't thought of.
- The Royal Society and the British Academy offer the **Newton International Fellowships** (<http://www.newtonfellowships.org/>) for 50 people from all disciplines funding to do research in the U.K.

Although it's not specific to postdocs in Europe, **Independent Postdocs: Resources** (http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2009_07_31/caredit.a0900095) has some links you might find useful. You can read more about Amy Gladfelter's **postdoc experience in Switzerland** (<http://www.lifescied.org/cgi/content/full/1/4/128>) in an article she wrote in *CBE--Life Sciences Education*. Also check out Peter Peters' **Postdoc Career Development Initiative** (<http://www.postdoc-development.eu/>).

Photo (top): César Astudillo (<http://www.flickr.com/photos/cesarastudillo/679873142/>)

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