



Career Advice

Coming to America: Doing a Postdoc in the U.S.

When Swedish neuroscientist Jens Hjerling-Leffler moved to **New York University** (<http://www.nyu.edu>) (NYU) in New York City for a postdoc in 2007, he found life so exciting in

the city that never sleeps that he never wanted to shut his eyes. "I actually didn't sleep very much my first year," he says. "There's this idea that you're going to work a lot, and then when you're done you've got the whole city at your doorstep."

After a few months of hyperactivity, Hjerling-Leffler came down with the flu and throttled back a bit on the nightlife. He has also learned a few lessons in **Gordon Fishell's lab**

(<http://www.med.nyu.edu/fishelllab/>) at NYU, where he studies cortex and brain development. His American experience has been "much more productivity-based," Hjerling-Leffler says: "It's less about sitting in your room coming up with a smart solution or nice idea and more about getting out and doing it."

Hjerling-Leffler, who had worked in a lab in Germany as an undergraduate before returning to Sweden for his Ph.D. at the **Karolinska Institute** (<http://ki.se/ki/jsp/polopoly.jsp?d=130&l=en>), didn't worry too much about the logistics of his international move. For others, the prospect of navigating work visas, securing health care, and adjusting to the American work ethic can be intimidating. But whether or not the preparations cause anxiety, for many who go the experience becomes a kind of calling card. "The fact that I had been a postdoc at Stanford [University] was a plus on my CV, ... and it was the way people usually introduced me," says Karim Benzerara, **now a researcher** (<http://www.ipgp.fr/pages/1611.php>) at the Institute for Mineralogy and Condensed Matter Physics in Paris.

"You're living in this country not just from a scientific point of view but from a human point of view." -- Jonas Fuxe

The best-laid plans



(Courtesy, Jens Hjerling-Leffler)

Jens Hjerling-Leffler

Beyond providing a tagline when you're introduced, a postdoc in the United States may garner attention from potential employers. Anette Mansén, a postdoc career coordinator at the **Karolinska Institute** (<http://ki.se/ki/jsp/polopoly.jsp?d=15714&l=en>), says that in Sweden, "mobility is seen as something good." She believes that scientists benefit from seeing "other ways of approaching research questions and ... new collaborations." That could be why, according to many scientists and career advisers, American research experience has become de rigueur for those who wish to win independent research posts at some European institutions. U.S. training has never been an explicit requirement, says Theresa Vincent, a Swedish biologist doing a postdoc at **Weill Medical College of Cornell University** (<http://www.med.cornell.edu/>) in New York City, "but it has always been encouraged."

Sometimes the choice of postdoc lab is obvious, such as when your Ph.D. lab has a close collaborator in the United States. But if that isn't true in your case, you have to do some research to locate the right lab. Step one is to identify a few labs doing science you want to do and then to figure out which are good fits for you and your career objectives -- and are located in a place where you'll enjoy spending time. The best way to find those labs is through journal articles and your network -- your advisers and colleagues. Many -- and possibly most -- U.S. postdoc jobs aren't formally advertised, so the personal approach is best. Don't ignore the job boards though, because some postdocs are listed there, and it's

easy enough to set up specific e-mail alerts.

Consider more than just the scientific reputation of a lab before signing on, advises Bill Lindstaedt, director of the **Office of Career and Professional Development** (<http://career.ucsf.edu/>) at the University of California, San Francisco. "If they're picking the lab for the name of the principal investigator only, that may be a mistake," he warns. Talk to current and former lab members about their

relationship with their supervisor and the lab's after-work lifestyle. Ask whether the supervisor offers career advice and welcomes creative input to the group.

Vincent advises taking the time to visit each lab you're considering for a whole day to get to know the lab members, the facilities, and how things work. Location, too, mattered to Vincent, she says: "It was not only the science that was important. I also wanted another experience -- a big city."

Look into funding at the same time you're looking for a lab to work in. Most postdoc positions are funded out of a principal investigator's (PI's) grant or by the PI's host institution, but up to a fifth of postdocs **surveyed between 2003 and 2005** (http://www.sigmaxi.org/postdoc/all/your_research_short.html) had independent funding. As in Europe, if you can secure outside funding you'll be a more attractive candidate, but the competition for fellowships may be stiff because many U.S. funding sources are restricted to U.S. citizens or residents.

European funding sources may require significant lead time and may insist that you locate an institution and adviser before applying. Benzerara was able to string together funding from both the French Ministry of Foreign Affairs and his supervisor at Stanford University. He originally planned to work at the University of California, Berkeley, but because he arranged the funding with the French government far enough in advance, he was able to change plans and take the funding with him.

Arranging a visa is another thing that needs to be dealt with well in advance. Many of the scientists Lindstaedt advises initially seek H-1B visas, a work permit for highly skilled workers. But the more open-ended J-1 visa for "exchange visitors" may be a better choice for researchers considering permanent residency, because the H-1B's 3.5-year limitation can kick in before a green card -- America's permanent-resident credential -- is awarded. Lindstaedt does not offer immigration guidance -- that's usually the job of an institution's international office -- but he reminds international students that their long-term plans may change after arrival, so they should build in as much flexibility as possible from the start.

Culture shock

The differences between American and European academic research labs can sometimes surprise new postdocs, Lindstaedt notes. "American scientists finish their Ph.D. having slogged through a longer process" than "people who come from countries where the Ph.D. is very fast," he says. Undergraduate courses are also longer in the United States. The result is that new American postdocs are often older and more experienced than their European peers. Consequently, American PIs may assign more responsibility than fresh European Ph.D.s are comfortable with at first. Lindstaedt suggests that prospective postdocs discuss their roles in detail with potential supervisors and other European lab members, so they have a chance to select the right environment and begin work with realistic expectations. Vincent, for example, says that she's been inspired by American enthusiasm: "At 22, I barely knew how to hold a pipette and my supervisor was like, 'Yeah you can solve it! It's only gene therapy!'"

The research process itself may differ between labs in Europe and America, even if they're working in the same discipline. Most of the scientists interviewed for this article cited the greater resources and longer working hours in U.S. labs as the differences that struck them most, but Americans making the trip the other way told *Science Careers* in **August 2009**



(Courtesy, Bill Lindstaedt)

Bill Lindstaedt

(http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2009_08_07/caredit.a0900097) that lab management and even writing styles differ, too.

Exposure and adaptation to such differences can be very useful. For instance, Benzerara says that during his time at Stanford he learned the importance of networking and intellectual exchange. "There are many high-level people giving talks every week," he recalls -- which was not the case at his French institution. Now he organizes frequent seminars for his French students to recreate the environment at Stanford, with its critical mass of scientists. Another positive consequence: His experience working at the Stanford synchrotron facility also means that he's "definitely not scared to write proposals to go to U.S. synchrotrons," he adds.

Many American research groups expect longer hours and shorter vacations than are the norm in Europe. "I definitely have less free time than before," says Sonja Stadler, a German postdoc working in the C. David Allis lab at Rockefeller University. Making new friends can be a challenge because "we are all working such long hours."

Making the most of it

For Vincent, the experience of moving to New York for her postdoc has been "very, very smooth." She had heard from other Europeans living in the United States that housing was expensive and the insurance hard to understand, but Vincent found that with help from Cornell with housing and paperwork, "the hardest part is getting the cable guy to show up," she says. "The anticipation of moving to a new country might be more stressful for some people than the actual process."

Once you get to your new American institution, those who've made the move advise making an effort to connect with your new colleagues, foreign and domestic. For instance, Benzerara notes that new arrivals at American universities can often take part in clubs for foreigners or English learners as a way to "meet as many people as you can from the beginning." Getting an early handle on the language is key to being confident in scientific networking events such as departmental colloquia and more informal settings such as meals and after-work socializing with your colleagues, but working on your language skills in social settings can be complementary to your professional networking skills.

Jonas Fuxe, a Swedish cancer researcher now doing a postdoc at the **University of California, San Francisco** (<http://www.ucsf.edu>), moved abroad with his wife and their children, aged 9, 7, and 3 months. They chose to live a bit farther away from the university, which may have made it more difficult to meet people and feel a part of a community. Fortunately, there was another Swedish couple in his neighborhood who introduced Fuxe and his family to his neighbors, and now Fuxe and his wife are enjoying suburban social life.

Finding a residence requires time and planning and is a crucial first step in dealing with other administrative matters -- like getting insurance or a bank account. It's not possible to simply arrive one day and enroll your children in school the next, warns Fuxe. "I had to show up a few months before ... to find place to stay, and I couldn't sign up my kids for school or get health insurance set up until I had a place to live." Despite his months of preparation, Fuxe recalls, his family had to move to the United States before everything was finalized.

Indeed, despite the complications, the best approach to doing a postdoc overseas is to plan as well as you can -- and then dive in, head first, and adapt on the fly. That approach, combined with the rich experiences, scientific and personal, can provide new skills and resilience that will be a great benefit for your career. Hjerling-Leffler says the way his New York lab does science "gives you a strong feeling of independence" and has helped him feel ready for still more independence. "I have a strong feeling of not wanting to go back and be dependent on anyone," he says. Scientists can learn from the location, not just the laboratory. As Fuxe points out, "You're living in this country not just from a scientific point of view but from a human point of view."

Doing a Postdoc in the U.S.: Resources

The **National Postdoctoral Association** (<http://www.nationalpostdoc.org/home>) offers in-depth practical **advice and stories** (<http://www.nationalpostdoc.org/publications/international-postdoc-resources/international-postdoc-survival-guide/161-international-postdoc-survival-guide>) from people who've made the transition to doing postdocs in the United States. **Science Careers' Independent Postdocs: Resources** (http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2009_07_31/caredit.a0900095) contains more general links you might find useful. The U.S. Department of State provides information on **temporary worker visas** (http://travel.state.gov/visa/temp/types/types_1271.html).

When you start look for funding, try the National Institutes of Health: Its **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) in the health sciences. The **Virtual Career Center** (<http://www.training.nih.gov/careers/careercenter/index.html>) maintains a broader **list of fellowships** (<http://www.training.nih.gov/careers/careercenter/fellow.html>), including those for which non-U.S. citizens are eligible.

There are more funding listings at **PhDs.org** (<http://www.phds.org/postdoc/postdoctoral-fellowships/>), the **Federation of European Biochemical Societies** (<http://www.febs.org/index.php?id=81>), and the **European Molecular Biology Organization** (<http://www.embo.org/programmes/fellowships/long-term.html>), some of which include reintegration funding for your return home. The **Human Frontier Science Program** (<http://www.hfsp.org/>) (HFSP) 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 **Marie Curie Actions** (http://www.euresearch.ch/fileadmin/documents/PdfDocuments/R_D_Guides/RG-InfoSheet-2010.pdf) and **HFSP** (http://www.hfsp.org/how/appl_forms_CDA.php) also have funds set aside specifically for reintegration.

Photo (top): Ludovic Bertron (<http://www.flickr.com/photos/23912576@N05/3010067161/>)

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