

[BPTW]

TheScientist BEST PLACES TO WORK
POSTDOCS 2009

INTERNATIONAL POSTDOCS OFTEN TAKE ON CHALLENGES THAT GO BEYOND THE LAB. HOW DO THIS YEAR'S TOP INSTITUTIONS HELP FOREIGN FELLOWS ADJUST TO THEIR NEW LIVES?

BY JENNIFER EVANS

Only moments after emerging from the plane, exhausted from his 23-hour flight, plant microbiologist Andry Andriankaja was met at the Dallas-Ft. Worth airport by a driver from the Samuel Roberts Noble Foundation. They traveled two hours to the Ardmore, Oklahoma, campus and to temporary housing set aside for Andriankaja until he found his own apartment.

"I knew Noble Foundation through its publications and research, but I didn't know much about Oklahoma," says Andriankaja. International travel was not new to Andriankaja, who hop-scotched from his native Madagascar to France for graduate school before landing in Oklahoma. But he still recalls his anxiety about what to expect from his latest big move to the Noble Foundation, which placed fourth in *The Scientist's* seventh annual Best Places to Work—Postdocs survey.

The following day, a Foundation staffer drove Andriankaja around town, helping him set up his bank account and walking him through his first trip to an American grocery store. With "all the basic things [covered], I could move on and get focused on my research," Andriankaja says. By day three, he was off to a conference with his advisor.

Andriankaja is one of many postdocs to make a gutsy move for a new position. A 2005 Sigma Xi survey of 7,600 postdocs working in the



POSTDOCS IN FRONT OF THE MAX PLANCK INSTITUTE OF MOLECULAR CELL BIOLOGY AND GENETICS IN DRESDEN WITH THEIR "TRAB"; A SHARED 1968 EAST GERMAN TRABANT.

United States found that 54% of postdocs hold temporary visas, and of these, more than 76% received their doctorate abroad.

Survey respondents often rank the quality of an institution's facilities and infrastructure as most important, followed by salary and networking opportunities. But for foreign postdocs, navigating complicated immigration laws, mastering a new language, and adjusting to a different culture add to the challenges of attaining career goals. This year's top-ranking institutions recognize that international postdocs need support both in and out of the lab.

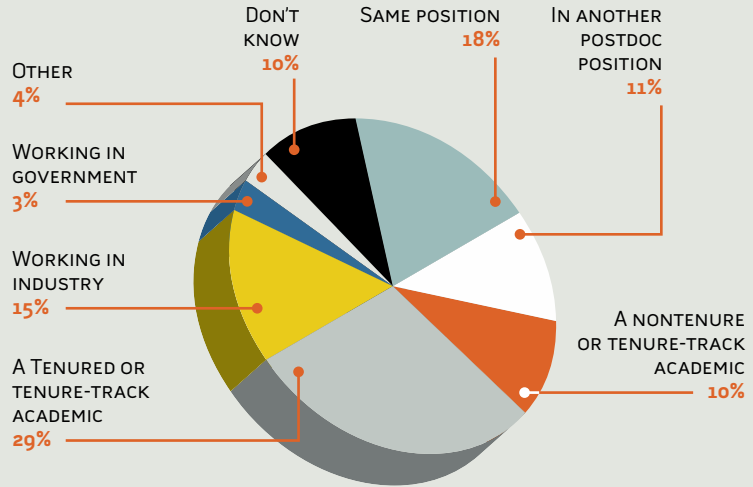
HELP FOR NEW HIRES

For Boston native Cliff Brangwynne, the high quality of research and the oppor-

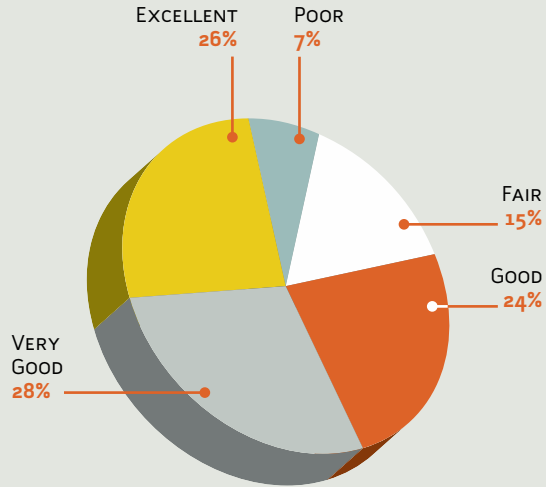
tunity for vibrant collaborations between top scientists enticed him to complete a postdoc at the Max Planck Institute of Molecular Cell Biology and Genet-

61% OF POSTDOCS ARE NOT CITIZENS OF THE COUNTRY WHERE THEY ARE DOING THEIR POSTDOCS.

WHAT TYPE OF POSITION DO YOU EXPECT TO BE IN TWO YEARS FROM NOW?



HOW DO YOU RATE YOUR CURRENT POSTDOC POSITION?



TOP 40 US INSTITUTIONS

Rank 2009	Rank 2008	Institution	Strengths		Weakness	
1	14	Whitehead Institute for Biomedical Research, Cambridge, MA	Funding	Training and Mentoring	Family and Personal Life	Equity
2	9	The Jackson Laboratory, Bar Harbor, ME	Funding	Training and Mentoring	Networking Opportunities	Value of the Postdoc Experience
3	1	The J. David Gladstone Institutes, San Francisco, CA	Equity	Funding	Remuneration and Compensation	Family and Personal Life
4	8	The Samuel Roberts Noble Foundation, Ardmore, OK	Facilities and Infrastructure	Training and Mentoring	Career Development Opportunities	Equity
5	10	Sandia National Laboratories, Livermore, CA	Remuneration and Compensation	Family and Personal Life	Funding	Value of the Postdoc Experience
6	15	Novartis Institutes for BioMedical Research, Cambridge, MA	Benefits	Networking Opportunities	Value of the Postdoc Experience	Networking Opportunities
7	13	Institute for Systems Biology, Seattle, WA	Equity	Communication	Training and Mentoring	Facilities and Infrastructure
8	19	Rocky Mountain Laboratories, NIH, Hamilton, MT	Facilities and Infrastructure	Remuneration and Compensation	Benefits	Communication
9	6	Genentech, South San Francisco, CA	Equity	Facilities and Infrastructure	Family and Personal Life	Remuneration and Compensation
10	–	University of Minnesota, Minneapolis, MN	Networking Opportunities	Family and Personal Life	Communication	Benefits
11	37	Oak Ridge Associated Universities, Oak Ridge, TN	Family and Personal Life	Networking Opportunities	Funding	Benefits
12	7	Fox Chase Cancer Center, Philadelphia, PA	Training and Mentoring	Communication	Benefits	Value of the Postdoc Experience
13	20	Argonne National Laboratory, Argonne, IL	Career Development Opportunities	Remuneration and Compensation	Facilities and Infrastructure	Benefits
14	4	Fred Hutchinson Cancer Research Center, Seattle, WA	Career Development Opportunities	Value of the Postdoc Experience	Remuneration and Compensation	Family and Personal Life
15	–	Van Andel Research Institute, Grand Rapids, MI	Funding	Benefits	Value of the Postdoc Experience	Facilities and Infrastructure
16	16	National Institute of Environmental Health Sciences, Research Triangle Park, NC	Facilities and Infrastructure	Training and Mentoring	Benefits	Value of the Postdoc Experience
17	12	Woods Hole Oceanographic Institution, Woods Hole, MA	Value of the Postdoc Experience	Networking Opportunities	Benefits	Facilities and Infrastructure
18	–	Boyce Thompson Institute for Plant Research, Ithaca, NY	Equity	Facilities and Infrastructure	Funding	Remuneration and Compensation
19	33	National Cancer Institute, Bethesda/Frederick, MD	Career Development Opportunities	Training and Mentoring	Benefits	Family and Personal Life
20	32	Vanderbilt University, Nashville, TN	Funding	Training and Mentoring	Family and Personal Life	Value of the Postdoc Experience

Rank 2009	Rank 2008	Institution	Strengths		Weakness	
21	42	University of Iowa, Iowa City	Funding	Family and Personal Life	Career Development Opportunities	Benefits
22	27	Cleveland Clinic Foundation, Cleveland, OH	Equity	Funding	Career Development Opportunities	Value of the Postdoc Experience
23	5	University of Texas M.D. Anderson Cancer Center, Houston	Career Development Opportunities	Funding	Value of the Postdoc Experience	Training and Mentoring
24	18	Mayo Clinic, Rochester, MN	Family and Personal Life	Benefits	Networking Opportunities	Communication
25	64	Cold Spring Harbor Laboratory, Cold Spring Harbor, NY	Value of the Postdoc Experience	Equity	Remuneration and Compensation	Family and Personal Life
26	–	Pennington Biomedical Research Center, Baton Rouge, LA	Remuneration and Compensation	Benefits	Equity	Family and Personal Life
27	–	Oregon Health & Science University, Portland	Value of the Postdoc Experience	Funding	Benefits	Equity
28	23	University of Michigan, Ann Arbor	Funding	Facilities and Infrastructure	Benefits	Remuneration and Compensation
29	17	Emory University, Atlanta, GA	Career Development Opportunities	Benefits	Equity	Remuneration and Compensation
30	41	Medical College of Wisconsin, Milwaukee	Equity	Communication	Value of the Postdoc Experience	Facilities and Infrastructure
31	30	University of Texas Southwestern Medical Center, Dallas	Benefits	Career Development Opportunities	Family and Personal Life	Equity
32	29	National Institutes of Health, Bethesda, MD	Value of the Postdoc Experience	Training and Mentoring	Benefits	Remuneration and Compensation
33	11	US Environmental Protection Agency, Research Triangle Park, NC	Remuneration and Compensation	Benefits	Communication	Training and Mentoring
34	3	Sandia National Laboratories, Albuquerque, NM	Benefits	Remuneration and Compensation	Facilities and Infrastructure	Equity
35	70	Cincinnati Children's Hospital Medical Center, Cincinnati, OH	Communication	Networking Opportunities	Funding	Family and Personal Life
36	50	St. Jude Children's Research Hospital, Memphis, TN	Facilities and Infrastructure	Benefits	Networking Opportunities	Value of the Postdoc Experience
37	26	Indiana University - Purdue University at Indianapolis, IN	Benefits	Communication	Equity	Funding
38	25	Washington University, St. Louis, MO	Value of the Postdoc Experience	Facilities and Infrastructure	Remuneration and Compensation	Benefits
39	28	Duke University, Durham, NC	Career Development Opportunities	Facilities and Infrastructure	Equity	Family and Personal Life
40	47	University of North Carolina at Chapel Hill	Facilities and Infrastructure	Remuneration and Compensation	Benefits	Value of the Postdoc Experience

ics—ranked number one for institutions outside of the United States. An international postdoc has the opportunity to get feedback from people whose “ways of looking at the world can be so fundamentally different” from his own, he says. (Another attraction was the adventure of living in Dresden, Germany with his wife during a period of historical rebuilding in the city.) Brangwynne says the multicultural environment of his lab was similar to what he experienced during graduate school in the United States, but in Dresden, even the simplest tasks outside

VISIT WWW.THE-SCIENTIST.COM FOR MORE INFORMATION ON THIS YEAR'S RESPONDENTS, RANKINGS FROM PREVIOUS YEARS, AND A SLIDESHOW OF SOME OF THIS YEAR'S WINNERS.

the lab became challenging, from mailing a letter at the post office to setting up the internet at home. The international office made things easier by taking care of “all the paperwork related to our work in Germany” and sending someone with him when he needed to register his motorcycle.

To support international postdocs, the Karolinska Institute in Sweden, ranked No. 10 among international institutions, holds quarterly day-long seminars for foreign postdocs addressing everything from Swedish healthcare and social insurance to training on effective communication with Swedes. Informal English as a Second Language classes are also held for postdocs and their families at Argonne National Laboratories (ranked No. 13 in the US). At Fred Hutchison Cancer Center, which ranked 14th this year, incoming postdocs are matched with volunteer researchers from their country or region of origin to help with the adjustment.

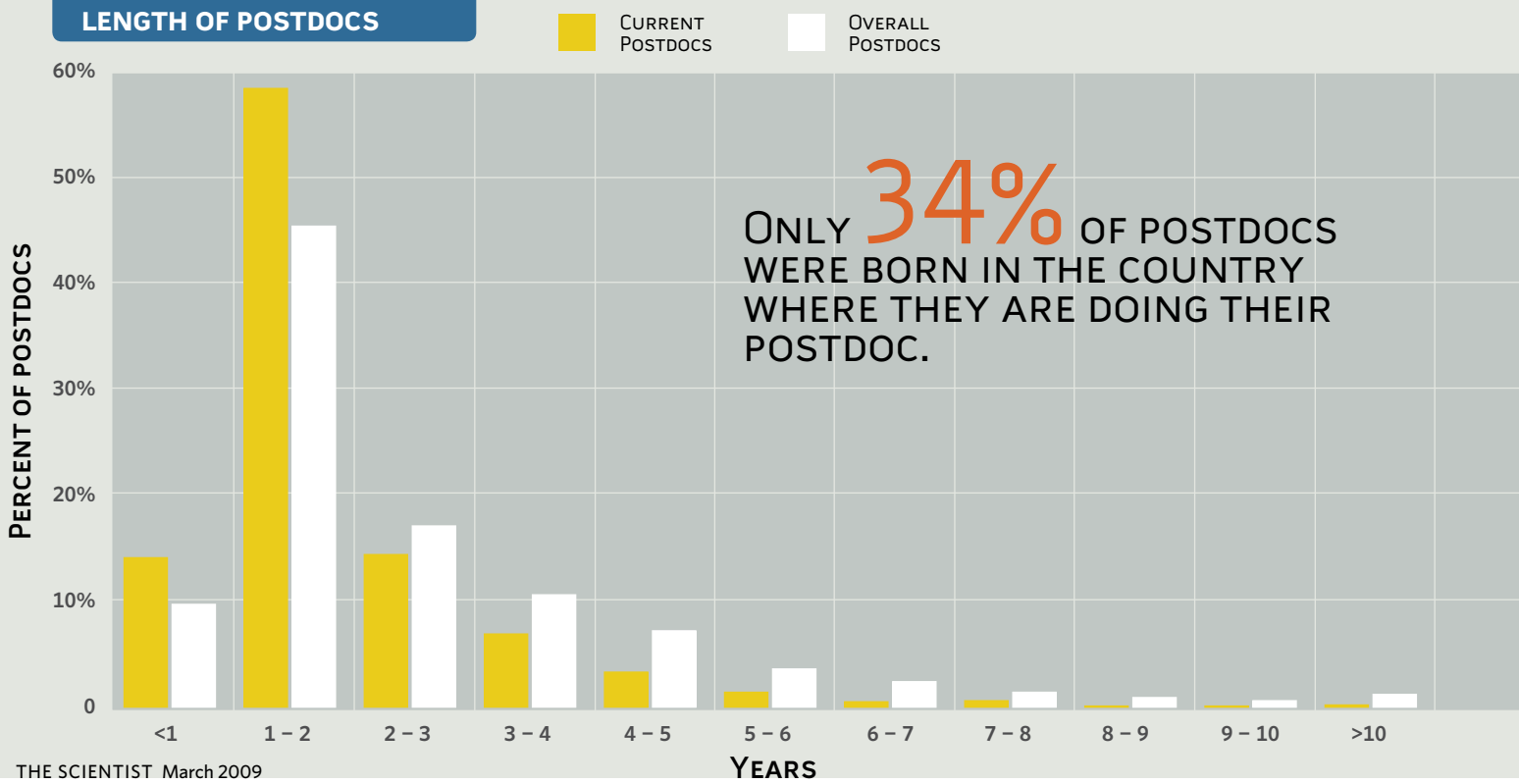
By far, the greatest issues foreign postdocs face while working in the United States are visa and immigration

laws, says Jeremy Spohr, international officer for the National Postdoc Association (NPA). International postdocs need help both in obtaining a visa to enter the country and maintaining their visa status while in the country.

Hatice Bilgic traveled from her native Turkey to complete a postdoc at 10th ranked University of Minnesota on a three-year academic exchange (J1) visa. Nearing the expiration of her first visa, a second advisor at the university paid for the processing of paperwork for Bilgic's professional work visa (H-1B), which lasts up to six years—a service that universities and institutions are not required to provide.

According to Maureen Murphy, a postdoc administrator at 12th-ranked Fox Chase Cancer Center, roughly one-third to one-half of foreign postdocs who come in on the academic exchange visa receive their H-1B visas during their postdocs. Footing the bill is “our institution's way of saying we want this person,” says Murphy.

As president of the University of Minnesota's postdoc association last year, ▶



TOP US INSTITUTIONS

Rank	Institution/Company	No. of Post-docs	Salary Range	Postdoc Resources	Benefits*
1	Whitehead Institute for Biomedical Research, Cambridge, MA	130	\$48,058 - \$51,125	Postdoc association	Health, Retirement
2	The Jackson Laboratory, Bar Harbor, ME	46	\$36,996 - \$51,036	Postdoc office	Health, Retirement
3	The J. David Gladstone Institutes, San Francisco, CA	98	\$43,900 - \$59,400	Postdoc advisor, postdoc committee, careers program	Health, Retirement
4	The Samuel Roberts Noble Foundation, Ardmore, OK	61	\$41,200 - \$61,800	Postdoc representative	Health, Retirement
5	Sandia National Laboratories, Livermore, CA	68	\$77,800	Postdoc professional development program	Health, Retirement
6	Novartis Institutes for BioMedical Research, Cambridge, MA	36	starts at \$55,000	Postdoc program office	Health, Retirement
7	Institute for Systems Biology, Seattle, WA	27	\$36,996 - \$50,000	Postdoc association	Health, Retirement
8	Rocky Mountain Laboratories, NIH, Hamilton, MT	40	\$42,810 - \$51,633	Postdoc association	Health
9	Genentech, South San Francisco, CA	110	\$49,000 - \$52,000	None	Health, Retirement
10	University of Minnesota, Minneapolis	700	\$40,000 - \$50,000	Office of postdoc affairs, postdoc association	Health
11	Oak Ridge Associated Universities, Oak Ridge, TN	1,123	\$40,000 - \$80,000	Dependent on location	Health
12	Fox Chase Cancer Center, Philadelphia, PA	90	\$36,996 - \$50,000	Postdoc program director, advisor and representatives	Health
13	Argonne National Laboratory, Argonne, IL	162	\$50,400 - \$92,880	Postdoc office, coordinator, association and committee	Health
14	Fred Hutchinson Cancer Research Center, Seattle, WA	278	\$36,000 - \$86,000	Postdoc association, Office of scientific career development	Health, Retirement
15	Van Andel Research Institute, Grand Rapids, MI	20	\$40,000 - \$48,000	Office of postdoctoral affairs	Health, Retirement

* Retirement denotes a plan with a match from the employer

TOP INTERNATIONAL INSTITUTIONS

Rank	Institution/Company	No. of Post-docs	Salary Range	Postdoc Resources	Benefits*
1	Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany	165	£25,200 - £45,600	Postdoc director, postdoc representatives	National or private health depending on contract
2	University of Copenhagen, Denmark	356	31,904 DKK	None	National health, Pension
3	University Medical Center, Utrecht, The Netherlands	125	£28,104 - £44,568	None	Collective health insurance, National pension
4	University of Dundee, United Kingdom	270	£28,839 - £43,622	Postdoc association, advisor	National health, Pension
5	University of York, United Kingdom	400 plus	£29,000 - £35,000	Skills development coordinator for postdocs	Health, Retirement
6	John Innes Center, Norwich, United Kingdom	53	£26,088 - £36,798	Postdoc training program, postdoc committee	Retirement
7	Novartis Institutes for BioMedical Research, Basel, Switzerland	35	declined to provide information	Postdoc program office	Health, Retirement
8	Biozentrum, University of Basel, Switzerland	112	65,194 - 86,430 CHF	None	National pension program
9	University of Liege, Belgium	454	£40,000 - £50,000	Postdoc fellows office	National health, Retirement
10	Karolinska Institute, Stockholm, Sweden	336	20,000 - 40,000 SEK	Postdoc career advisor	Health

HIGH MARK FOR DENMARK

After his doctorate at University College London, Bjarke Abrahamsen packed his bags and returned home to Denmark in 2008 for a postdoc at the University of Copenhagen, which ranked second for international locations in our 7th Annual Best places to Work for Postdocs survey. One of the things that drew him back, he says, was a more fluid relationship between the university and industry than he experienced in the United Kingdom. Groups at the University of Copenhagen routinely collaborate with companies or do rotations in company labs, and researchers move between industry and academic positions with ease. For that reason, “it wouldn’t be a disaster for me at all” to switch to a company or back again, he says.

Although there are no special support programs for postdocs, Abrahamsen says he appreciates the informality—which may simply be a part of the Danish culture. “In my group it’s a very flat management structure.” Abrahamsen works with associate professor Anders Jensen on the basic molecular biology and pharmacology of glutamate transporters. The absence of hierarchy “quickly makes you feel a valued part of the university and not just hands to generate data for the lab,” says Abrahamsen.

According to Ulf Madsen, associate dean at the faculty of pharmaceutical sciences, postdocs are drawn to the university because of the quality of the science—which has improved in the last two years. In January 2007, the university merged with two small universities in the city, the Danish University of Pharmaceutical Sciences and Royal Veterinary and Agricultural University, strengthening Copenhagen’s offering in the life sciences by two large biology-based faculties, or schools. In order to integrate the three universities, the administration created 20 internal five year grants of \$5 million (US) each to stimulate interdisciplinary collaborations. As a result of these efforts, says Madsen, the “research has become stronger.” —Alla Katsnelson

WHITEHEAD COMES INTO THE SPOTLIGHT



The Whitehead Institute shot to first place this year, up from 14th the year before, after not even making the list in 2007 or 2006. According to Jennifer Hughes, a recently-promoted research scientist and former genetics postdoc at the Whitehead Institute, one reason for the Cambridge, Mass., institution's dramatic rise in the rankings is a renewed focus on postdocs and a generous benefits package.

Since its formation in 2002, the postdoc association has been lobbying to address postdoc concerns. "Our postdoc association seems to be getting stronger and stronger every year," says Hughes. The administration, for its part, has redoubled its efforts to listen to the postdocs, says David Page, the director of the institute.

An increase in benefits has also improved morale for the institute's 128 postdocs. At the beginning of 2008, Whitehead boosted entry-level postdoc salaries from \$38,000 to \$47,000 per year. They added a \$4,000 lump sum retirement contribution, and life, health, and travel insurance. Whitehead also encourages a healthy work-life balance, offering daycare subsidies, and providing backup child care and nursing stations throughout the building. "It's a very family friendly place," Hughes says.

One thing that's not new is Whitehead's heavyweight research reputation, Page says. Of 14 faculty members, seven are members of the National Academy of Sciences, and four are Howard Hughes Medical Investigators. Twelve current or former members are Nobel laureates. Promising researchers have always been drawn to the Whitehead by the prospect of "launching a truly stellar career," Page says. And because the institute is so small, cross-pollination is the rule. "There's very free exchange of information between labs and a very cooperative and collaborative spirit," Hughes says. —**Tia Ghose**

Bilgic argued that foreign postdocs need even more support for visa issues. In response, the University of Minnesota started offering a seminar on visa options after postdoc positions end, which more than 200 postdocs attended.

TRAINING FOR TOUGH TIMES

Regardless of where they come from, postdocs around the world face diminishing academic prospects. As the average ages for first R01 grants and assistant professor positions increase, along with concerns about the economic future, postdocs are "staying in their positions longer than ever before," and looking for non-academic science careers, according to Stacy Gelhaus, Chair of the NPA's board of directors.

A recent survey of postdocs at the University of Pennsylvania found that 41% planned to pursue nonacademic careers. "It's obvious that postdocs are seeing their mentors spending all this time writing grants that aren't being funded, and they are beginning to [question the] reward in academia," says Kryste Ferguson, a postdoc administrator at the University of Pennsylvania who worked on the survey. In response, many top institutions are incorporating programs to help postdocs develop additional skill sets, on top of helping them apply for grants.

A UK effort to help equip postdocs with marketable skills outside of aca-

demia led to the hiring of a certified career counselor who teaches seminars in financial and people management, negotiation and marketing at the University of York—ranked fifth internationally. At seventh-place Institute for Systems Biology (ISB) in Seattle, postdocs can apply for one-year fellowships to work as science consultants for an investment group called Accelerator Corp., where they use their expertise to help choose which biotech start-ups to fund. "It's an immersive kind of fellowship where you come in with potentially no [industry] experience and [are] plopped right into the middle of it," Lee Pang, a postdoc at ISB, says. "You essentially learn by high-grade osmosis." To help postdocs without access to the classroom polish their teaching skills, Rocky Mountain Laboratories in Hamilton, Montana, plans to give the option of teaching courses at the University of Montana within the next year.

Of course, for international postdocs, none of that career training is useful without the upfront help they need when adjusting to their new positions. "My friends are jealous," says Andriankaja of the attention and support he receives from Noble. Even now, as Andriankaja plans for a new position in chemical company BASF in Belgium, The Noble Foundation continues to guide him in visa issues. "I'm a lucky guy," he says. ■

Have a comment? E-mail us at mail@the-scientist.com

Survey Methodology

The Scientist posted a Web-based questionnaire and invited readers of *The Scientist* and registrants on *The Scientist* web site who identified themselves as non-tenured life scientists working in academia or other non-commercial research organizations to respond. We received 3,438 usable responses. We asked respondents to assess their working conditions and environments by indicating their level of agreement with 43 criteria in 11 different areas. They also indicated which factors were important to them. We ranked 85 US institutions and 27 non-US with 5 or more responses.

To calculate an institution's overall ranking, we first weighted each factor based on the average importance score. Because several factors that ranked as important in the USA are valued less elsewhere and vice versa, we used different factor weightings to rank the two groups of institutions. The overall rankings are based on the average score per institution from all respondents on all factors weighted according to their regional importance. Detailed information on the survey methodology is available on *The Scientist* web site at www.the-scientist.com. Our sample of scientists was self-selected, and we have made no attempt to standardize the results or to conduct detailed statistical analysis.

The survey was developed and responses were analyzed by AMG Science Publishing (www.amgpublishing.com)