

Postdoc Positions

The Creative Fundraiser

The Many Roles for the Postdoc in Search of Support

One of the most important skills to demonstrate in a postdoc appointment is the ability to acquire funding. Whether it is in the form of grants, fellowships, or out-right gifts, postdocs have to find ways to bring in the bucks, not only to keep their own research enterprise humming, but also to show future employers that they have experience raising money. Since most postdocs don't have a wealthy, anonymous benefactor or a venture capitalist relative who can provide unlimited reserves for their investigations, it is up to the early career scientist to get creative in finding funding. More and more postdocs (and even grad students) are demonstrating their ingenuity in where and how they seek and secure the necessary research resources. **By Alaina G. Levine**



In 2011, the National Institutes of Health (NIH) awarded a total of over \$316 million in fellowships (individual awards) and traineeships (awards made to institutions who in turn select and appoint trainees) to postdocs, according to Rod Ulane, director of the Division of Science Programs at NIH and NIH research training officer. So if you are in the biological sciences, the NIH is obviously your best and only bet for financing your early-career research, right? Wrong. While over 2,200 individuals applied for the individual awards in 2011, “the success rate for individual fellowship applicants has dropped from over 40 percent 10 years ago, to about 25 percent in 2011,” explains Ulane. It is clearly one of the most competitive sources of research money, and although prestigious, it is not the only game in town. Postdocs (and graduate students preparing for their postdoc appointments) can find other sources of funding (whether they are in life sciences or not), that can support research, travel, and in some cases even wages for hiring undergraduate technicians. They just have to get creative in their fundraising approaches and start thinking beyond the most obvious and popular choices.

But first and foremost, you have to start searching for opportunities and apply for them. “Postdocs need to be aggressive about finding opportunities to write grants because the deck is often stacked against them,” says **Joe Bernstein**, a postdoctoral fellow at Argonne National Laboratory, who served as the 2011 outreach committee chair for the National Postdoctoral Association. Certain agencies limit postdocs from serving as the principal investigators (PIs) on grants, so you have to do an extensive amount of research to find financing solutions that meet your unique needs and goals. But by just applying you are doing yourself and your career a huge favor, he adds,

as it helps to build knowledge and skills. In addition to the almighty dollar, emerging scholars should also consider sources of support that don't directly involve money, advises Bernstein. Depending on your field, you could apply for time on specific equipment, such as a telescope or a super computer. “Millions of hours in computing time is a currency” in many research areas, such as his own field of astrophysics he says. “You are showing you can formulate a proposal for a valuable resource in competition with other people who want it, and convince the allocation committee to give you an award over other proposers,” he describes. This valuable ability can absolutely “influence hiring committees.”

“THE LEVERAGER”

Zeb Hogan is a world-renowned expert on megafishes—six-foot long, over 200 pound aquatic monsters that inhabit bodies of fresh water, such as rivers and lakes, all over the world. The Research Assistant Professor in the Department of Natural Resources and Environmental Science at the University of Nevada, Reno, has been funded by the National Geographic Society (NGS), in one way or another, since he was a graduate student. Now, five years out of his postdoc, he is one of only 15 NGS Fellows worldwide, and has received long-term financial support to fund expeditions to and [continued](#)>

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Bioclusters: Western United States—May 4

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research in endangered waterways that affect the dwindling populations of megafishes, in areas such as southeast Asia and Australia.

Hogan, 37, has received a total of five grants from the NGS, the first of which funded his graduate school research, as well as a handful of other grants from sources as varied as the Columbus Zoo and Aquarium to the International Finance Corporation (IFC). He uncovered two major tips for financing his endeavors. One is that certain grants he received while a graduate student could be extended into his postdoc appointment. While pursuing his doctoral studies at University of California, Davis, he served on a team of investigators who authored a grant proposal to the IFC to study the ecology and conservation of *Hucho taimen* (also known as Siberian salmon) in the Eg-Uur River Basin, Mongolia. The team consisted of his thesis advisor (who served on the project advisory board) as well as a professor at the University of Wisconsin, who later became his postdoc mentor. “When we wrote the proposal, two of us were grad students (myself included), one was a postdoc, one was faculty, and one was a university researcher,” he explains. “Between the time that we wrote the proposal and completed the studies associated with the five-year grant, I had gone from being a grad student, to postdoc, and then finally to research faculty. In other words, the funding extended through the end of my time in grad school at UC Davis, throughout my postdoc at the University of Wisconsin, and into my first few years at the University of Nevada.”

The other tactic Hogan found for successfully obtaining research funding: leveraging prior grants to obtain new ones. As a graduate student, he received support from NGS, which he was able to use as a springboard to acquire postdoc support through the NGS Conservation Trust. This grant in turn led to others, as well as special NGS honors, such as being named an NGS Young Explorer, and more recently an NGS Fellow. “Although grants from National Geographic typically only last one year, they have continued to fund my research as it has evolved,” he says. “First with a smaller grant to study Mekong giant catfish, then with a larger grant to study all Mekong giants, and then finally with a multi-year grant to initiate the Megafishes Project. So, certainly, the connections and contacts that students make in grad school can extend into a postdoc and beyond.”

Leveraging goes well beyond taking one grant and transforming it into another. It can also mean using your network to illuminate new or lesser-known opportunities. In particular, your PI or other research mentors can open doors to different financing solutions. “Sometimes, private foundations in particular are not used to seeing postdocs apply for grants,” says **Rachel Ruhlen**, an assistant research professor at the A.T. Still Research Institute and adjunct assistant professor in the Department of Microbiology and Immunology at A.T. Still University in Kirksville, Missouri. In such a case, “you have to put together a strong team” of collaborators and mentors who will serve on the project, and having those compatriots on your side can help you land the grant, she says. Furthermore, your research partners may



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“Don’t underestimate the importance of internal funding,” says Ruhlen. The 37-year-old researcher, who holds a Ph.D. in biological sciences from the University of Missouri–Columbia, completed two postdocs: one in the Department of Surgery at University of Missouri–Columbia, and the other in the Department of Pharmacy, Medicinal Chemistry, and Pharmacognosy at University of Illinois–Chicago. She started early in her quest for cash to cover her investigations. Although she was funded under two fellowships, she still needed to bring in extra support to pay for things not allowed under the fellowship, such as laboratory provisions. Internal funding filled this chasm. “I have been almost continuously on internal funding in one form or another,” she says. “It rarely pays any salary dollars, but it does pay for supplies, and sometimes it will pay wages for an undergrad research assistant. It’s usually a very small amount of money, less than \$10,000, and only for one year. But it’s a lot easier to get than external funding.”

The funds may be formally distributed through request for proposals (RFPs), or informally, just by making inquiries. The latter is how Ruhlen got out of a jam in one of her postdocs. “My postdoc adviser announced he was moving to North Dakota. I couldn’t uproot my family to go with him, not for a postdoc position. I had a postdoc fellowship but it only paid my salary,” she says. “Where was I to get funds to do my research? I went to my department and explained the situation to them. They asked me to write up my project as if it was a grant application, and they gave me \$10,000 to finish the experiments. That was enough to tide me over until I could get a real job.”

Bernstein has also applied for internal grants within Argonne, through the Laboratory Directed Research and Development (LDRD) program. In this case, the discretionary money is used “to seed fund early-stage projects with a good probability of a return on investment for the Department of Energy,” he explains. Projects are usually supported for up to three years.

“THE TARGETED CAMPAIGNER”

Denise Al Alam, a postdoctoral fellow at The Saban Research Institute of Children’s Hospital Los Angeles, [continued](#)>

have access to grant information that is not well-publicized. In Ruhlen’s case, she learned of a fellowship opportunity with Susan G. Komen for the Cure because her mentor served on the review panel for the foundation.

“THE INTERNAL FUNDRAISER”

Internal funding can mean different things to different people. It can encompass financial support from various departments within an institute, such as a home department, the vice president of research, and even the technology transfer office. It can include small grants for early-career researchers, travel support, and even publications costs.

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discovered early on that she could apply for fellowships and grants through small, regional foundations and/or those that are focused in on very specific diseases. Originally from Lebanon, she moved to France in 2003 where she enrolled in graduate school. Shortly before earning her doctorate in immunology from the University of Reims Champagne–Ardenne, she was recruited to The Saban Research Institute to serve as a postdoctoral fellow on lung development and repair. The fellowship was funded by the American Lung Association (ALA). She later received another fellowship from the American Heart Association (AHA). “After I got to the States, I knew I would only have funding for one year,” she describes. She couldn’t apply for NIH or other U.S. federal government grants because of her specialized visa, so she sought out the private foundations for support.

After being awarded the fellowships from the ALA and AHA, she immediately got involved in their local chapters in Los Angeles, California. “I would go to board meetings and tell them about my research,” she recalls. She also participated in public fundraising events, such as the “Fight for Air Walk” for the ALA, for which she recruited a team of people to raise money and partake in a 5 km walk to benefit the association. Al Alam recognized that by volunteering to assist with these philanthropic efforts, she not only was helping the society, but she was also promoting her research. By giving speeches to boards of directors, she was able to popularize her investigations to people of influence and high net worth. “Being in contact with these people is an advantage,” she comments, because it can lead to new funding opportunities and access to hidden sources for research support. “Postdocs are very isolated. We rarely connect with people outside the lab, but I recommend we do,” she continues. “Offer to help with fundraising or give a talk... It can benefit everybody—you, your team, the organization, the funding agencies,” and of course, the research



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field itself. “We need for people to understand why we are doing this research and what it’s all about.”

Ruhlen, who received a postdoc fellowship from the Susan G. Komen for the Cure foundation, agrees that there is significant merit in volunteering to assist local chapters with fundraising efforts. “It’s a fantastic idea,” she says. “It will also increase your network of contacts and that’s super important.”

But Al Alam has not limited herself to only seeking funding from science-focused sources. As a former French resident, she can apply for grants through the French Consulate in the United States that would support collaborative research endeavors with other French scholars. For investigators who are not native to the country in which they are conducting their research, their embassy or consulate can offer surprising opportunities, she notes. “I’m Lebanese, and I’m even finding opportunities through the Lebanese government,” she says, although in this case, she would have to conduct the experiments in Lebanon, which is not currently an option for her. But she has also explored funding opportunities with the Association of University Women and other groups that do not require United States citizenship of their grantees.

“THE NETWORKER”

Of all the roles a postdoc must play in order to advance as a scientist and a fundraiser, perhaps the most important is being an expert networker. Sources stress that making connections with colleagues in and out of their immediate research group, maintaining those contacts, and always striving for more associations is the key to securing financial backing of their projects. “At the end of the day it basically comes down to using contacts, collaborators, online resources, requests for proposals, advertisements, and networks to find any source of available funding,” says Hogan. “While I can think of a lot of examples of postdocs funding their work (and especially grad students writing grants to then fund their postdocs), I don’t see any holy grail. Stay active, keep an eye out for opportunities, and take advantage of them when they arise.”

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Featured Participants and Additional Resources

Featured Participants

A.T. Still Research Institute
www.atsu.edu/research

Argonne National Laboratory
www.anl.gov

National Institutes of Health
www.nih.gov

The Saban Research Institute of Children’s Hospital
www.chla.org/saban

University of Nevada
www.unr.edu



Additional Resources

American Heart Association
www.heart.org

American Lung Association
www.lungusa.org

Association of University Women
www.aauw.org

Columbus Zoo and Aquarium
www.colszoo.org

French Consulate
www.consulfrance-washington.org

International Finance Corporation
www.ifc.org

National Geographic Society
www.nationalgeographic.com

Susan G. Komen for the Cure
ww5.komen.org