

POSTDOC ADVANCEMENT: MARKETING YOUR VALUE

The postdoctoral appointment is not only a time of exploration and hard work, but also a time to learn and hone critical skills that will enable you to move into a position of independent research. Skills such as leadership and management, teambuilding, communication, fundraising, and even marketing are required to advance, and one must be adept in all of these areas to succeed in this highly competitive economic landscape. There are multiple opportunities for postdocs to not only gain these necessary abilities, but also demonstrate them to current and future employers. The key is keeping a watchful eye out for chances to learn and sharpen your talents and to articulate your value to decision-makers.

By **Alaina G. Levine**



fundraising
teambuilding
marketing
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leadership



Aydin Farajidavar

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—Zoe Cournia

Zoe Cournia is a Greek chemist who received advanced training abroad and desired to return to her home nation for permanent employment as a researcher. After graduating with her Bachelor’s degree in chemistry from the University of Athens, she pursued her Ph.D. at Heidelberg University, Germany and postdoctoral training at Yale University in New Haven, Connecticut. To stay connected to her country’s academic community while away, she corresponded with her undergraduate mentors and asked for introductions to other scientists. Whenever she came home on holiday, she volunteered to give research talks at her alma mater and elsewhere. Pretty soon, she was receiving invitations from universities across the nation to give seminars. “I may have left the country physically, but I never left the Greek academic system,” she says. After five years of notable research which included publishing, presenting, and mentoring combined with connecting with colleagues and lecturing activities in Greece, Cournia landed a job as an investigator (lecturer) in pharmacology

and pharmacotechnology at the Biomedical Research Foundation Academy of Athens, Greece.

“You need to be focused on the science, but you also have to have a career perspective in mind,” she says. “You need to know where you want to go.” A career plan is an important element of any scientist’s path, but there must be other aspects associated with it, in addition to significant scientific outputs, especially during these troubled economic times. In Cournia’s case, while continuing her research, she also gained skills in project and grant management, networking, marketing, and independent leadership that ultimately helped her obtain the position at the academy.

For every postdoc pining for a professorship, a good rule to follow is to use your current appointment to find and leverage opportunities that will make you extremely attractive to potential employers. Specifically, you have to learn and hone certain skills that hiring committees look for when recruiting talent. It may not always be easy to chip away time in your day to become a better communicator or to solidify your fundraising expertise, but it is necessary to gain a competitive advantage.

Leadership and Management

Becoming a thoughtful, results-oriented leader doesn’t happen overnight. “Managing human capital is very difficult,” says **Aydin Farajidavar**, assistant professor of electrical and computer engineering at New York Institute of Technology (NYIT). As a postdoc at Georgia Institute of Technology, he was thrust into a position where he had to supervise students in their research group. “The first time I complained to my PI, he said ‘welcome to the club!’” But Farajidavar realized the opportunity was precious because it gave him his first chance to really lead the team, something which he knows has helped him succeed in academia.

“As a postdoc, you are seen as a senior member of the group and may be called upon to make a decision or speak up,” says **Natalie Lundsteen**, assistant director, Graduate Student Career Services at the Massachusetts Institute of Technology (MIT) Global Education & Career Development. You can leverage this opportunity to strengthen your leadership talents. “Ask your lab **continued**>

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Yvonne Klaue

advisor if you can take over a project or oversee students,” she suggests.

This is exactly what **Yvonne Klaue** did during her postdoc at the University of California, Irvine. When her PI announced he was taking a sabbatical for a year, she offered to run the lab in his absence. Klaue organized regular meetings of the research group, supervised the junior members to ensure they were meeting the lab’s mission and goals, handled group communications with other faculty, and even oversaw inventory and budgeting.

“No one ever told me how to manage a lab,” she says. “I was thrown into it.”

As you look for opportunities to reinforce your management experience, recognize that leadership is not limited to managing people and projects. A great leader is one who has vision and the ability to implement that vision with success. Cournia was able to gain and demonstrate this kind of leadership drive by creating a funding source for postdocs to travel to conferences while at Yale. At the time, there was no institutional financial support for non-U.S. citizen postdocs to present at scientific meetings. On her own accord, Cournia approached the Office for Postdoctoral Affairs and helped launch a committee to write a grant proposal to the provost to support the endeavor. The committee ended up raising \$20,000 that year and the travel fund became a permanent part of the Yale budget. “There are ways you can demonstrate your leadership potential, your potential to be a doer, and that you are really committed to your career,” she urges. “This was essential to my career so I could travel to conferences, so I did it. As an independent researcher, you need to show you can be tough and decisive and that you can take the next step to go forward and be proactive.”

There are other opportunities to be found on your campus that can aid you in your career, says **Leslie Beckman**, senior coordinator of special programs in the Office of Postdoctoral Affairs at the University of Texas Health Science Center at Houston (UTHealth). Consider serving on high-profile committees, like the postdoctoral association, or taking on interdisciplinary or even interinstitutional projects that allow you to be seen as a leader. Furthermore, teaching and informal mentoring can also provide you with critical leadership skills.

Teambuilding

As a postdoc, your research group may seem like a functioning team environment. But more often than not, “work is partitioned off into silos but the staff doesn’t have to deeply collaborate or rely on team members for success,” says **Steven Casper**, Henry E. Riggs Professor of Management and associate dean for faculty development of the Keck Graduate Institute of Applied Life Sciences (KGI). But to transition into a research career where you are the leader, you must have abilities that show you know how to effectively collaborate on and build a winning team. Casper recommends pursuing an internship or a short-term volunteer project in your university “where you have to

rely on a division of labor to reach goals,” he says. You might consider joining a team through the institution’s entrepreneurship program, where students work on business plans and appreciate a postdoc’s technical expertise. “Go outside the ‘all science zone’ and work with highly intelligent people who are in other disciplines than your own,” he advises.

Networking plays an important role in building a unit that can accomplish a goal. **Michelle Fennessy**, a postdoctoral fellow in nursing at the University of California, Davis, works at the crossroads of data management, administration, and safety in hospital environments. She realized that to accomplish her research and acquire funding, she would need a multidisciplinary lineup with major credentials behind her. So she actively recruited thought leaders in the field. It took her six months of networking through conferences and leveraging contacts to assemble her dream team, but it was worth it on so many levels, she says. “As a junior investigator, it is important to surround yourself with experts in the field to help mentor you through the process,” she notes.

Communication

“Everything we do as faculty requires communication skills,” stresses **Wendi Heinzelman**, dean of graduate studies and professor of electrical and computer engineering at the University of Rochester. “You can have the greatest idea but if you don’t know how to explain it, it will fall flat on its face.”

The ability to convince others of the importance of your work and why they should engage you, either as an employer, research partner, funder, or mentor, is paramount. You should seek as many opportunities as possible to practice these skills. Start small where the stakes are low, says Lundsteen. Begin by giving a talk in your research group, then move on to a journal group, the department, your postdoc association, and then to a conference. Volunteer to speak in another department besides your own, says **Michael Hadjiargyrou**, chair of life sciences at NYIT. “It forces you to put together a presentation that’s targeted for a specific audience,” which is vital given that when you interview for an academic job, you may have to give a talk for scientists outside your realm of research or in another department altogether. Hadjiargyrou also recommends seeking out opportunities to address lay people.

Funding

A demonstrated record of finding and acquiring funding is crucial to landing a job in academia, where “you don’t just get handed a sack of money,” jokes Lundsteen. Working on a grant project signals to the prospective employer that “you are cognizant of the funding and where it comes from,” she adds.

So naturally, as a postdoc you should consider applying for grants. Cournia wrote 20 applications and received funding from three. Her hard work and success established to her perspective **continued**>

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Featured Participants

Biomedical Research Foundation Academy of Athens
www.bioacademy.gr

Georgia Institute of Technology
www.gatech.edu

Heidelberg University
www.uni-heidelberg.de/index_e.html

Jet Propulsion Laboratory, California Institute of Technology
www.jpl.nasa.gov

Keck Graduate Institute of Applied Life Sciences (KGI)
www.kgi.edu

Massachusetts Institute of Technology (MIT)
www.mit.edu

New York Institute of Technology (NYIT)
www.nyit.edu

The University of Texas Health Science Center at Houston (UTHealth)
www.uthealth.edu

University of Athens
en.uoa.gr

University of California, Davis
www.ucdavis.edu

University of California, Irvine
www.uci.edu

University of Rochester
www.rochester.edu

Yale University
www.yale.edu



Serina Diniega

“I sold myself as an applied mathematician who could solve any problem.”

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Marketing Your Value

One of the best marketing tactics you can employ is adopting a niche and incorporating it into your career strategy. As Cournia contemplated returning to her home nation, she researched how her subfield of computer-aided drug design would fit in with the strategic initiatives of Greek institutions. And since there were very few Greek scientists with this expertise, she believed she could add value to the growing academic efforts in the pharmaceutical sector in the country. “A new field was starting in Greece—drug design—and there were not a lot of scientists who had been abroad and had been doing the specialized job that I was doing,” she says. “You need to have a long-term plan and know where you want to be and what you want to be in the next 10 years, and create your niche accordingly.”

Finding that niche in which to best market your value is absolutely essential. **Serina Diniega**, a mathematician who works for NASA’s Jet Propulsion Laboratory (JPL), recognized this and put the concept into action. In the universe of planetary science, most researchers have geophysics or astronomy degrees. But with a strong desire to work in this field, Diniega realized that she could use her applied mathematics background as a competitive advantage. “I sold myself as an applied mathematician who could solve any problem,” she says. Her postdoc centered around lava flow modeling, and even though she had “absolutely no experience with lava,” she got the job because she pitched herself as an expert in modeling, which could be applied to multiple systems.

Getting Hired

Ultimately, when someone hires you, they need to know you will contribute value in all ways to the research group, department, and organization. “You have to demonstrate that you are a good playing card for the institution,” stresses **Rodrigo Morales**, assistant professor of neurology at UTHealth, which includes having a positive attitude, and experience in leadership, fundraising, and communications. But, experts agree, having all of these abilities means absolutely nothing to potential employers if you don’t have the solid scientific foundation on which to build upon them in the first place. “All of these other skills are important to get hired, but the most important thing is always to do good science,” affirms Cournia.

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employer that she knew how to manage grants, write reports, and oversee budgets.

Yet “even if you don’t get the grant, it is a very useful experience,” says Hadjiargyrou. “Grant writing is an art and it takes a long time to hone this skill.” Farajidavar secured priceless advice about grant funding practices from his PI, who had served on review panels for several national agencies. “He knew the criteria for scoring,” he says, “and he shared his experiences and read my proposals and helped edit them.” Farajidavar also asked his advisor if he could accompany him to an NSF workshop to learn the ins and outs of grant writing and meet the program officers. As a postdoc, he applied for five proposals in one year and, although none were funded, he learned another valuable lesson—you can call the program officer and inquire why your application was not selected. The information they provided was an essential factor for his next proposal getting funded.

Approach your advisor about writing a grant and if they don’t support it, find another mentor who will, advises Hadjiargyrou. And you don’t just have to apply for large-scale grants—consider pursuing small pockets of money that may exist in your department or through the postdoc affairs division of your institution.

Furthermore, as the economics of funding changes, it’s in a faculty member’s best interest to become savvy in other areas of financial support besides grant writing. As part of its communications training, UTHealth offers postdocs insight into fundraising and philanthropy, and lessons about communicating scientific results to a community of potential donors. “You will be interacting with these people in your careers,” says Beckman, so it is important to know why people and private foundations donate money to science and how to partner with them to advance your own research mission.