



Investing in a Postdoc for Your Lab

BY R. KEVIN GRIGSBY, DSW

The National Science Foundation (NSF) reports that 45% of recent recipients of doctoral degrees in science, engineering, and health completed or were completing postdoctoral appointments.¹ How did they find a laboratory? Too often, faculty scientists have the faulty belief that “if the science is good, nothing else matters” when it comes to selecting postdoctoral scholars. Even though finding a postdoctoral scholar (a “postdoc”) with a scientific profile similar to your own and a set of skills in hand is an important consideration, making a decision about bringing someone into the laboratory based on this dimension alone is a mistake. Too often, the fantasy of the “ideal candidate” wears off quickly and problems begin to emerge.

This column is directed toward faculty members who plan to invest the time, energy, effort, and resources required to bring a postdoc into their laboratory. Knowing what to look for in a potential postdoc leads to selecting candidates offering the greatest promise for success—and the least “promise” for creating problems. When one calculates the effort, expense, and sacrifices—as well as the lost opportunities—required to recruit, appoint, and train a postdoc, it becomes clear that making the best choice is a critical decision. Regarding the selection of a postdoc as an investment in one’s science is reasonable. Before embarking on the search for a postdoc for your laboratory, you should carefully assess your needs and ask: Is a postdoc appropriate for the project, or would a technician suffice? Are resources available to support a postdoc? Am I prepared to share credit with a postdoc? Your decision to recruit a postdoc should be fully informed in order for you to make and protect your investment.

Recruiting a Good Postdoctoral Scholar

Although it may seem self-evident to some readers, asking the question, “What is a postdoctoral scholar?” is a good first step. Just last year (2007), the NIH and NSF

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defined a postdoctoral scholar as:

*An individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path.*²

All investigators should understand that this definition clearly specifies that postdoctoral scholars are to be mentored—an important distinction faculty scientists sometimes fail to consider in the selection process. An orientation and training period will be expected from the day the scholar arrives, and ongoing mentorship is an expectation. In other words, recognize that you are not hiring an employee. You are agreeing to host a trainee, albeit a trainee already in possession of a high degree of knowledge and related skills. It is well worth taking the time to read *Advisor, Teacher, Role Model, Friend: On Being a Mentor to Students in Science and Engineering*. This publication describes best practices for mentors of students, but most of it is applicable to postdocs, too.³

Who Are Postdoctoral Scholars?

As I think about postdoctoral scholars, the Mel Brooks classic *Young Frankenstein* always comes to mind. Marty Feldman’s performance as Igor (pronounced *eye-gor*) is unforgettable. I always imagine Igor, the faithful assistant to Dr. Frankenstein, as the dedicated postdoc working in the Frankenstein laboratory. While most postdocs have no physical resemblance to Igor, the isolation of the laboratory, toiling into the night, and struggling to meet the needs of a mentor are not far off the mark. Postdocs are a diverse group with a single common feature: possession of a doctoral

degree—and not necessarily the PhD. Postdocs may hold other doctoral degrees, including the MD or its equivalent. Many postdocs have crossed international boundaries to serve in a laboratory. *The Scientist* reports “only 36% of postdocs were born in the country where they are doing their postdoc.”⁴ Detailed information about the characteristics and experiences of postdocs is available from the Commission on Professionals in Science & Technology, should you desire more information.⁵

How Are Postdocs Classified at Your University?

Postdocs are classified differently at different universities. Some universities consider them to be similar to graduate students. Others regard them as “entry level” or “future” faculty. Some provide faculty appointments—typically as lecturers, instructors, or research scientists. Universities may expect the scholars to function at the same level as newly hired staff members. In fact, some universities regard postdocs as employees, whereas others regard them as neither students nor employees. It is important for you to know how your university classifies postdoctoral scholars. Different classifications afford different sets of benefits to postdocs, including the scope of health insurance coverage, contributions to retirement funds, and the availability of vacation and/or sick leave. For international scholars, the type of appointment also may be related to visa type and status: J1 or H1B? If these terms sound unfamiliar, you should consult with your university before engaging in the recruitment process.

Before You Start Recruiting a Postdoc

Before beginning to search for a postdoc, take the time to review the definition and to learn the relevant policies at your university. Meet the people who are responsible for the oversight of human resources issues for postdocs. You may need to consult with them in the recruitment process or in the more distant future. In fact, templates for

offer letters, as well as a host of other resources, may be available to you. Although you may view human resources personnel as bureaucrats who “don’t know science,” you are apt to find that they know the important policies and procedures and can help you navigate your way through the twists and turns of recruiting, appointing, and managing postdocs.

Finding a Postdoctoral Scholar

Ideally, a valued colleague who is very familiar with your line of research will contact you with information about a protégé who is finishing or has just finished his or her degree. Ideally, the protégé’s science and skills are aligned with yours and, temperamentally, you find the individual to be compatible with your work style. You should consider contacting colleagues to inquire about potential postdocs—especially if you know the skills and knowledge you desire in a postdoc. The Sigma Xi Postdoc Survey reports that a significant number of postdocs found their current positions through personal contact with their future mentors.⁶

Selection of the right postdoc requires due diligence. Remember, you are making an investment. As with other investments, you should read the “fine print” and make well-informed decisions. In most cases, you will need to advertise and truly “search” for the right person. Do you want someone with the skills to continue with an ongoing project? Or do you want someone with a new set of skills and who will take your laboratory to “the next step”? Fortunately, resources now exist to assist with recruiting the right person. There are a number of Web-based services that will allow you to advertise postdoc positions.⁷ The American Academy for the Advancement of Science (AAAS), the National Postdoctoral Association (NPA), and the Association of American Medical Colleges (AAMC) sponsor Web sites to help you to streamline the advertising and application process. National scientific societies often have placement assistance available through Web sites or at national meetings.

Remember, recruiting is only the first step. You should start early—six to nine months before you need the person in the laboratory—as it may take this long to recruit and select a scholar. Once you begin to receive inquiries or applications, you will

need to screen responses and offer interviews to the most promising candidates. You are likely to incur expenses if you choose to bring a candidate to your campus for an interview—most postdocs do not have the funds required to travel to your campus. Many laboratories don’t have sufficient travel funds and must rely on telephone or e-mail “interviews.” Interviewing candidates at national or international meetings is one option for conducting face-to-face interviews without incurring travel expenses as long as someone else has already paid for the tickets! Whether you rely on e-mail and telephone interviews or have the resources to arrange face-to-face



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meetings, it is critical you take the time to carefully check references, recognizing that this process differs from employment reference checking. You are recruiting a trainee, not an employee, and must set your expectations appropriately.

Bringing a Postdoc into Your Laboratory

Crafting a detailed letter of offer/appointment is of the utmost importance. In fact, you may want to ask the candidate to participate in the letter-writing process or to review a draft before you send a final copy. After all, you and the candidate need to know what to expect of each other and of

your organization. Engaging the postdoc in this process is a chance to “test drive” a working relationship. In my experience dealing with both disgruntled scholars and disgruntled faculty members, I have found the lack of clarity around expectations to be common—one party generally accuses the other of failing to live up to his or her part of an agreement.

Authorship concerns, access to research data after the postdoctoral period, and the expectation for the length of the experience should be included in the appointment letter. You should include information about remuneration, moving costs, assistance with visa issues, and other pertinent issues. Details related to what happens after the period of postdoctoral scholarship should be discussed and documented. For example, will the postdoc have the option of using the research data to build a foundation to support independent scholarship? A savvy postdoc will expect training and mentorship in exchange for his or her contribution to your science. You might think you do not have time to deal with these details “up front.” Experience suggests that setting and documenting expectations *before* the candidate agrees to come to your laboratory makes life easier for the candidate and improves the quality of the experience.⁸ More important, it makes life easier for you!

Be Prepared to Ask and Answer Questions

Good candidates will ask good questions, and so should you. After all, you are trying to find a partner with whom you will share your life’s work. It really isn’t as simple as working with a graduate student. Those relationships are well-defined by a set of requirements and measures of competence. As a mentor, you will be sharing knowledge, expertise, and, to some degree, rewards with your postdoctoral colleague. Discussing the length of the commitment you are making to the postdoc and what you expect in return should be a part of the conversation. Although most postdocs are in the laboratory for about two years,⁹ some faculty sponsors may not have the resources to support a postdoc for two years or may want a commitment of three or more years. Be explicit in your answers and include them in the offer or appointment letter.

You should be prepared to explain

whether your organization uses the National Research Service Award (NRSA) stipend scale¹⁰ levels or a different formula for establishing postdoctoral stipends. After accepting a postdoc, but prior to his or her arrival, you may want to work with him or her to prepare an application for an NRSA Postdoctoral Fellowship (F32) Award. This may enable the person to arrive with some resources in hand.

Things are not the same all over; helping the candidate to understand differences in the cost of living across the country can be very helpful to candidates, as the differentials can be remarkable. Several online calculators designed to compare the costs of living in different areas of the country are available.¹¹ For example, it takes \$39,288 in Grand Rapids, MI, to buy what \$36,996 (2007 NRSA stipend for a PhD with no experience) will buy in Tampa, FL—not much difference. On the other hand, it requires \$50,968 in Boston to buy what \$36,996 will buy in Tampa—a huge difference! Will the stipend be enough to support the postdoc's cost of living? What if he or she has a family? This type of information should be shared prior to either party's making a commitment.

When the Postdoctoral Scholar Arrives

Review your expectations with the postdoc. Because these should be included in the letter of offer or appointment, there should be no surprises. To assist the scholar in the early period of appointment, provide connections to learning resources such as the Howard Hughes Medical Institute (HHMI) Resources for the Development of Early-Career Scientists.¹² You, and your postdoc, should review the *Compact Between Postdoctoral Appointees and Their Mentors* recently published by the AAMC.¹³ If your university is a member of the National Postdoctoral Association (and even if it is not), introducing the postdoc to the NPA Web site is to your advantage.¹⁴ Likewise, if your campus has an office for postdoctoral affairs, introduce your scholar and link her or him to any orientation classes offered.

Introducing the scholar to other post-

docs helps the newcomer begin to establish a social network of support for the newly arrived scholar. Peer relationships are invaluable to the newly arrived. One of the most common mistakes I've seen made by mentors is keeping postdoctoral scholars isolated in the mistaken belief that it leads to maximum productivity in the laboratory. Nothing could be further from the truth! If the postdoc feels unsupported and isolated, productivity is likely to be less robust than if the postdoc feels supported both in and outside the laboratory. Helping the scholar to focus is important, but failing to establish a social support network typically results in poor productivity and, at times, early departure. Involvement in support social networks helps to protect your investment.

When It's Over—Launching Postdoctoral Scholars

Too often, the "what's next question" is not addressed until very late in the process. This conversation should begin before the scholar arrives in your lab. Although this may sound premature, it is not. A candidate should know whether he or she is expected to find another position after the postdoctoral period, whether he or she has the option of employment at your institution after the postdoctoral experience, and, if so, whether obtaining extramural funding is expected. Some potential postdocs may not have considered what lies beyond the immediate postdoctoral experience. Engaging in conversation about what's next should occur before the scholar arrives, and should be repeated frequently through the duration of the scholarship period. You have an obligation to help launch the postdoc into the next phase of his or her career. In fact, the postdoc's success will reflect favorably on you—and vice versa. Helping the postdoc to know what to expect is in his or her—and your—best interest as you go about sharing success. ❖

Notes

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