

Making the Right Moves

A Practical Guide to Scientific Management for Postdocs and New Faculty

Burroughs Wellcome Fund
Howard Hughes Medical Institute



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Chapter I

OBTAINING AND NEGOTIATING A FACULTY POSITION

As you complete your postdoctoral training, you are probably starting to think about the next step in your research career. For some of you, this may mean a position as an investigator in an industry or government laboratory. For others, this may mean a faculty position at a university or medical center. If you pursue the latter, you will have to decide whether a tenured or nontenured position is better suited to your personal goals and ambitions. Although all these career options are rewarding, this chapter focuses on the tenure-track faculty appointment.

As you embark on your search, you will face a series of challenging questions:

- ◆ What do I want and need from my job?
- ◆ How do I go about finding a job?
- ◆ How can I ensure that my achievements and capabilities will be recognized?
- ◆ How will I choose among the offers I receive?
- ◆ How can I ensure that the resources I need to launch my career are included in the job package?

There are no universally right answers to these questions, but there are well-tested strategies for finding and obtaining the right academic appointment and for obtaining tenure. This chapter discusses some of them.

THE JOB SEARCH

Once you decide to launch your search, make it a concentrated effort. Ideally, doing so will bring multiple offers your way at about the same time. Making the job hunt a flat-out effort also makes the labor-intensive process of gathering credentials and references much more worthwhile. Keep in mind that most academic positions are advertised in the fall, with the assumption that the job will start in summer or fall of the following year.

Knowing What You Want

Your chances of finding the right job will be greater if you have your own needs and wants firmly in mind. For example, consider the following questions:

- ◆ Do you need to be working at a top-rated institution, or would a less-intense atmosphere be acceptable or even preferable, given your talents and ambitions?
- ◆ Do you want to devote yourself exclusively to research, or would you prefer some combination of research and teaching or clinical practice?
- ◆ Do you want or need to be in a particular area of the country? Do you prefer an urban, rural, or suburban location?
- ◆ Will personal responsibilities, or your spouse's or partner's professional needs, set limits on your search?
- ◆ If you are a physician-scientist, will you want to see patients and how much time will you want to devote to research versus clinical practice?

Learning What Is Out There

Use all available formal and informal sources of information. Formal sources of information include the following:

- ◆ Job announcement letters sent to your department
- ◆ Announcements (print and online) in major scientific journals such as *Cell*, *Science*, and *Nature* and in publications devoted to your subspecialty

A Few Career-Related Web Sites for Scientists

Science magazine's ScienceCareers.org Web site contains a Career Development resource for postdocs and beginning faculty (<http://sciencecareers.sciencemag.org>).

The Chronicle of Higher Education's online newsletter "Career Network" has career news and advice and publishes new scientific faculty and research jobs every day (<http://chronicle.com/jobs>).

The University of Washington's *Re-envisioning the Ph.D.* provides Web resources related to job hunting for doctoral students, postdocs, and academics (<http://www.grad.washington.edu/envision>).

- ◆ Web sites of academic institutions
- ◆ Employment bulletins published by professional associations
- ◆ Mail list servers for postdoctoral fellows

Informal sources can be even more valuable—for example, the supervisor of your postdoctoral research; other scientists with whom you have a relationship, especially those with whom you have collaborated; and your peers. So, get the word out that you are looking.

Narrowing Your Search

Measure each job opportunity against your list of priorities. Find out about

- ◆ The institution's mission, values, political and social climate, and quality (e.g., national or regional ranking)
- ◆ The department's mission, research activities, curriculum, and collegial atmosphere
- ◆ The parameters and expectations of the position, including whether it is tenure track
- ◆ Faculty policies regarding parental leave and tenure clock extension

There's no easy way to tell how many positions to apply for. Remember, though, job hunting is not wasted time; the process has valuable spin-offs. For example, you will get a chance to make presentations about your work. Your ideas are sharpened in the process, and the research itself benefits. You are practicing skills you will use throughout your career. You also get better at the job-hunting process as you go along. Your self-confidence builds, and your sense of what you want develops as you are introduced to various research environments.

However, don't apply for a job that you are clearly not qualified for or that really does not interest you. You don't want to waste people's time and perhaps damage your own credibility.

What Is Tenure Track?

Tenure is not given immediately to new faculty. Instead, jobs are designated as eligible for tenure, or "tenure track." A tenure-track position is one that leads to a permanent professorial appointment. In most institutions, tenure confers virtual lifetime job security because a tenured professor cannot be fired, except for certain limited causes, such as gross misconduct or neglect of duty. For many basic sciences departments, tenure means full salary support even if grants dry up. In the clinical sciences, because clinicians have a second source of salary support other than the university, tenure may not imply full salary support. Keep in mind that, from the perspective of the institution, tenure is a financial commitment to you. Being offered a nontenure position is not necessarily a reflection of the institution's assessment of your worth, but rather an assessment of whether the position is one that they can commit to supporting, even if your grant funds dry up.

Typically, a faculty member hired in a tenure-track position will work for approximately five years before a formal decision is made on whether tenure will be granted. If tenure is not granted, the investigator is typically asked to leave so that someone else can fill the tenure-track spot.

Non-tenure-track positions are often characterized by lower salaries and high teaching loads. But on the upside, some individuals choose them because they provide greater choice in terms of geographic location (as these posts are less competitive) and greater flexibility in career choices. (Also see chapter 2, "Understanding University Structure and Planning for Tenure.")

THE JOB APPLICATION

Once you have found one or several positions that you would like to apply for, you want your application to stand out sufficiently so that you will be invited for an interview. Here are some guidelines.

Making a Good First Impression

Your application is likely to be one of hundreds that an overworked search committee must sift through. Follow the application instructions, and make sure your application is concise and free of factual, grammatical, and spelling errors. You don't want it eliminated at the outset because it makes a bad impression.

Get your application in on time. However, if you learn about the position after the application deadline has passed, still send in your application; many departments are willing to consider late applications.

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While a nicely prepared application will obviously not get you a job, a poorly prepared one makes a bad impression no matter how many papers you have published.

—Johannes Walter, Harvard Medical School

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Components of a Job Application

The cover letter. This letter, which should be limited to one page, is extremely important and should be written with great care. It should give the search committee a quick but informative picture of your background and interests relevant to the job. Include the following items in your letter:

- ◆ Brief self-introduction
- ◆ Statement specifying the position for which you are applying
- ◆ Statement about your research accomplishments, indicating why the work is novel and interesting
- ◆ Brief description of your research plans, indicating what is important or creative about what you propose
- ◆ Brief description of your teaching (or clinical) experience, if the position emphasizes these activities
- ◆ Any special circumstances you believe the committee should know about up front

The last item may be a difficult judgment call. It is hard to know whether to reveal information that could eliminate you as a candidate before you've even had an interview but that will need to be addressed should you receive an offer. The classic example of such a situation is that your spouse is also a scientist looking for a faculty appointment. If you decide not to mention such a circumstance in your cover letter, inform the search committee of your special needs early in the interview process.

You may also mention your references (included in your curriculum vitae, or CV) and describe how they know you.

The CV. This career summary should contain:

- ◆ Your name and address
- ◆ All higher education, with degrees obtained and dates
- ◆ All professional positions held, with dates and brief descriptions of the work performed
- ◆ Awards and honors, including pre- and postdoctoral fellowships
- ◆ Major sources of independent funding
- ◆ Publications
- ◆ Teaching experience, awards, and interests
- ◆ References, including names, titles, and addresses and other contact information
- ◆ Invited keynotes and presentations
- ◆ Board certifications and eligibility for physician-scientists

Two-Academic-Career Couples

“Partner hire” packages, in which a job is found for the accompanying spouse or partner, take considerable work. You should put this item on the table early in the interview process—certainly before you receive an offer. You will learn whether the university, and your prospective department, views two-career appointments positively or as a nuisance.

Highlight your name in bold type in your publications list. If you are listed as an equal author on a paper, use an asterisk next to your name and all other authors who are equal and note “*equal authorship” immediately below the relevant reference. *Do not rearrange the published order of authors to show that you have equal first authorship.* List manuscripts in preparation under a separate category. Indicate accompanying *News & Views* articles or other reviews of your publications. Do not include posters exhibited at scientific meetings.

The research proposal. This is the core of your application. It will describe your research plans to a search committee composed of people from several scientific areas outside your subspecialty.

Many successful applicants write two (or possibly three) research proposals, the first of which is closely related to their current postdoctoral work. The second and third proposals show the applicant's ability to think beyond his or her current work. These proposals are typically more creative and demonstrate a bit more risk.

Include the following items in your proposals:

- ◆ A statement about the problem you intend to work on, indicating the key unanswered questions you will tackle. State how this research is expected to contribute to your general area.
- ◆ A description of your research plans. This section should comprise 50 to 70 percent of the proposal. Put forward three or four specific aims that address a range of fundamental questions within your discipline. Demonstrate that you have the necessary background to achieve what you propose. Be both creative and realistic.
- ◆ A few figures (perhaps one per proposal). These can help make your proposal more interesting to the search committee, which will be wading through perhaps hundreds of proposals from the other applicants. Remember, figures are most useful when they're embedded in the text and not tacked on at the end.
- ◆ A detailed description of your postdoctoral research, with an emphasis on what is novel and important and how it is the basis for your research proposal. Describe your predoctoral graduate research only if it is critical to your current interests. Make clear to the search committee that the work you are taking with you will not be in direct competition with your postdoc adviser.
- ◆ A list of references that includes your publications and manuscripts submitted or in press, as well as pertinent publications by others.

Reprints. Follow the directions for each application. Send along any important papers that are not yet published; otherwise, the committee will not have access to them.

Statement of teaching. If the job has a teaching component, add a separate section describing your interest in and approach to teaching and your experience.

Letters of recommendation. Depending on the application instructions, letters of recommendation can be included in the application package or submitted subsequently to the search committee. Typically, these letters are written by your graduate and postdoctoral advisers. It is also perfectly acceptable to submit one or two more references than the number asked for in the application. When you approach someone other than an adviser for a letter of recommendation, use the conversation as an opportunity to get a sense of how they judge your work. If you encounter any hesitation at all, or an indication that the person does not have time to write a letter or does not know you well enough to do so, ask others. You should ask someone

Question: What if I don't get along with my adviser?

Answer: If you do not have a good relationship with your adviser and cannot ask for a letter of recommendation, make sure you explain *why* in your cover letter. Be completely candid about the situation. Not having a recommendation from your adviser is a red flag to the search committee and will not be ignored. The committee may even contact your adviser anyway. A letter from another faculty member from the same institution may be critical in this case.

who really knows you and your work, not just someone with an important title.

Give those who are writing you a letter of recommendation plenty of time to prepare the letter. Give them your application package. If they suggest, prepare a draft of the letter of recommendation for them. Point out strengths you have that they may not be fully aware of. But be careful—do not appear to be dictating your letter to them. Provide them with stamped, addressed envelopes. Tell them when each letter to each of your potential employers will be

needed, and then remind them until they send your letters. Check to verify that each letter has been received.

THE JOB INTERVIEW

A formal interview for a faculty position typically takes the form of a daylong or overnight visit to the campus. Normally, the institution inviting you for an interview pays your expenses for travel and accommodations. You can expect to meet with several faculty members, as well as others who may be asked to provide feedback about you to the search committee, and to give talks about your research. It will be your task to do the following:

- ◆ Convince the department that your work is exciting and that you will be a leader in your field.
- ◆ Convince each member of the department that you will be a good colleague.
- ◆ Find out if the institution and the department are right for you.

Be prepared for a demanding and exhausting experience. You will be on display at all stages of the visit, from the moment you are picked up at the airport until you are sent on your way again.

Advance Preparation

Come well prepared by doing the following before your visit:

- ◆ Organize the logistics of your trip, including travel tickets, hotel accommodations, arrangements for pick up, and the schedule of events on interview day. Be conservative about your estimates of travel time: You don't need the added stress of missing a connection and being late.
- ◆ Find out about the academic interests of the people you are likely to meet. Read a few of their papers or at least skim the abstracts. Be ready to ask them about their work. You can probably find this information on the department's Web site.

- ◆ Learn as much as possible about the institution and the surrounding area. Knowing something about the city or town will give you a starting point for small talk.
- ◆ Physician-scientists may meet with representatives of the clinical enterprise and should be prepared to talk about the business side of clinical medicine, including how they will meet their salary goals through clinical work. They should also be prepared to ask about what support staff will be available to them in the clinic.

Dress Code

Dress neatly and in keeping with scientific custom as you know it. Avoid dressing at a level of formality that will make you and your hosts uncomfortable.

Preparing Your Job Talk

During your interview visit, you will be asked to give a “job talk”—a formal presentation on your current research. A job talk generally lasts about an hour, including 10 to 15 minutes for questions. You have probably given this kind of talk before, and you know what works for you, but here are a few guidelines on how to prepare your talk.

First, write out the entire talk, thinking of your audience as you write. Remember, a talk is not presented in the same way as a scientific paper. You must get your main ideas across to listeners who have had little opportunity to study the details, as well as to those whose research interests and backgrounds are very different from yours. You can assume that your audience will be composed of intelligent people who are uninformed about your chosen scientific field. To help your audience follow your talk, divide it into several clear and concise sections, and give an overview of the talk at the beginning. At the end, restate your conclusions and offer an outline of your future research plans. At the outset or at the conclusion of your talk, include a brief statement acknowledging those who helped you in your research.

Next, translate your talk into a slide presentation. Most researchers use PowerPoint presentations to deliver their talks. Remember, however, to bring along a backup disk. Be sure to inform your hosts ahead of time about your audiovisual needs. Try to vary the design of your slides, alternating between text and figures. Resist the temptation to use only bulleted points, but also avoid long sentences. Be sure that your slides are readable and that the order of your slides matches your written presentation. (The American Society for Biochemistry and Molecular Biology and other professional societies publish guidelines for preparing these presentations.)

Finally, practice your talk in front of a mirror. Doing so allows you to time your presentation while getting used to the sound of your own voice. Keep repeating the talk until you can deliver it easily, using your slides as your only memory aid. If necessary, edit the talk down until it can be delivered comfortably within 50 minutes. Remember that a talk that is slightly too short is much better than one that is

too long. It may be better to focus on only one aspect of your research, so you can give sufficient detail within the time you have. Save the rest for the question-and-answer session.

When you feel comfortable giving your talk, enlist your adviser, your postdoctoral colleagues, and any graduate students you work with as an audience for a practice talk. Encourage them to ask questions and offer frank criticism. Ask them for suggestions to improve your PowerPoint slides, and leave enough time to edit your slides accordingly.

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We always ask the administrative assistant how she was treated by the candidate, both on the phone prior to the visit and during the visit. This is always very illuminating. I think candidates need to pay attention to how they treat the staff.

—Ann Brown, Duke University School of Medicine

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Delivering the Talk

Experienced speakers resort to a variety of techniques to control nervousness. Here are a few of them:

- ◆ Arrive early enough to set up equipment and become comfortable with the room. You may have to ask your host to get you to the room with enough time to prepare.
- ◆ Plant your feet firmly on the floor. Feeling balanced is important to your self-confidence.
- ◆ Know what you intend to do with your hands. A computer mouse and a pointer may be enough to keep you from fidgeting—but be careful not to play with either of them.
- ◆ The most nerve-racking minutes are those just before you begin your lecture. Focus on your breathing—make deliberate every inhale and exhale, to control a rapid heart rate.
- ◆ Greet your audience and tell them you are glad to be with them. Make eye contact with a few audience members who seem eager to hear what you have to say. Then plunge in.
- ◆ Don't worry if some people nod off or seem uninterested; continue to give your talk as you practiced it, making eye contact with those who are listening closely.

- ◆ Let it show that you are excited about your work.
- ◆ Even though you may have done all the work presented, it is important to sound modest in your presentation. Begin by saying, “The work I will tell you about today was carried out while I was in the lab of X at University Y.” Then, describe each slide in terms of “we.”
- ◆ A good trick to avoid a discussion period with no discussion is to plant a seed in the audience during your talk to encourage questions later, for example, by saying “I don’t have time to give you the details of that now but would be happy to talk about that during the discussion.”

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Some fraction of the audience is always asleep during any talk, no matter how exciting the subject. Find a few people who are listening attentively and give your talk to them.

—Johannes Walter, Harvard Medical School

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Answering questions during a talk can be especially difficult. Several ways for handling this are noted here:

- ◆ Repeat the question for the audience. Then take your time answering. If you need to, buy some more time by asking for a restatement of the question. In a pinch, give an interpretation of what you think the questioner wants to know. Then give your best answer and stop. Rambling on only conveys uncertainty.
- ◆ It is okay to answer, “I don’t know.” But offer to follow up, and do so. It’s a great opportunity to make contact with faculty after the interview.
- ◆ If questions are slow in coming, take the initiative by pointing out some aspect of your work that you passed over quickly but that you believe warrants the audience’s attention. This gives you a chance to use some of the material you edited out of your talk. You may generate a whole new line of questioning. In case you need to go back through your slides to a particular one in order to clarify a point, arrange to have your computer presentation accessible during the discussion period.
- ◆ If challenged, listen to the criticism and give a judicious response. Don’t become defensive. If the criticism seems unfair, stand your ground politely. You might suggest a follow-up discussion later.

Giving a Chalk Talk

During your interview visit, you will likely have an opportunity to give a less formal presentation—a chalk talk—during which you can offer detailed information about the direction of your future research. It should not be a polished slide presentation, but it should be prepared carefully.

Give a brief overview of your research agenda, including your short- and long-term objectives. Then state several specific problems you want to work on, and explain in detail how you plan to proceed. Be prepared to write on a white board and bring along an overhead or two of preliminary data that will demonstrate the feasibility of your plan. Show that you are familiar with the details of any new techniques you may need to master. Be sure to convey to your audience why the work is important and how you can make a difference to the field.

Expect to be interrupted. The chalk talk is a chance to show that you can think on your feet and that you will be an interactive research colleague.

Meeting Potential Colleagues

Meeting other faculty members. Typically, part of the interview process will include one-on-one conversations with members of the department. It is important to show interest in their work and ask lots of questions. Remember that faculty members are looking for a colleague who will benefit their own work, as well as someone who is a good scientist. In addition, assume that you will be taken out to dinner by some of the faculty. This is a chance for them to evaluate you as a future colleague and for you to determine whether you would enjoy working with them. Be yourself during these events.

Meeting with students, postdocs, residents, or other trainees. This is essential for someone who expects to conduct research in any department. A candidate should be concerned if a department doesn't offer ample opportunities (over lunch or in the lab) to meet with students and postdocs in the absence of faculty.

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When you're talking to the faculty, it's important to appear interested in everybody's work. You don't have to be an expert on the topic. If you know something about it, it's good to chime in with a suggestion or a question. If you're clueless, it's fine to say, "This is really fascinating, but could you give me a bit more background?" It's also very important to give a dynamite seminar so that the people who didn't get a chance to meet with you privately will have a chance to hear about your work, how you express yourself, and what kind of a context you put your research in.

—Thomas Cech, HHMI

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Concluding Your Visit

Typically, your visit will conclude with a conversation with the chair of the search committee, in which you might expect to learn when a decision will be reached. As soon as you return home, write a formal letter addressed to the chair of the committee, thanking everyone for their hospitality and reiterating your interest in the position. If during your one-on-one interviews, you have promised to share data, be sure to follow up on your commitment. Now it's time to play the waiting game because the committee will undoubtedly be charged with arranging interviews for several candidates.

Be sure to inform the search committee chair if you decide to take another job before the committee extends an offer to you or if for some other reason you decide to withdraw your candidacy.

NEGOTIATING YOUR POSITION

The chair of the search committee or the department chair has given you a tentative offer or at least let you know that you are the top candidate. You are now in a position of maximum strength for obtaining what you want. The search committee has invested time and effort in choosing you, and the last thing its members want is to come up empty or to have to start over. They have decided they want you and will be disappointed if you don't come, and they want you to be happy once you are on board.

Evaluating the Offer

Before making a decision, you will need to find out as much information as possible about the position. If you are not satisfied with some aspects of the offer, try to negotiate better terms. You will have to do the following:

- ◆ Learn the details of the offer.
- ◆ Reread the list of priorities you made at the outset of your search to evaluate how the job stacks up against that list.
- ◆ Calculate precisely what you are worth in salary and other benefits to determine whether the offer measures up. For example, can you afford to live in the community? Does the institution provide housing allowances or low-interest loans to help?
- ◆ Enumerate in detail the other resources you believe you need to succeed in your scientific career (decide what is absolutely necessary and what you can live without). In some cases, it may be satisfactory for the department to guarantee you access to shared equipment, rather than buying you your own.
- ◆ Make your wishes known to the institution representatives and engage them in the process of negotiating with you.

- ◆ Get everything spelled out in writing.
- ◆ For physicians in clinical departments, make sure the offer indicates the extent of clinical duties and clinical support (such as the availability of nursing staff and assistants to take telephone messages and refill prescriptions).

The search committee is your natural source for basic information about the terms of the appointment and about university-wide benefits and policies. Ask for a copy of the university's faculty handbook and any other personnel policy manuals. Read them over thoroughly, check them against the recommended standards of the American Association of University Professors (AAUP), and prepare a list of questions for the committee.

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It is important to start thinking about the tenure process at the point of interviewing and negotiating for the right job. Ask what the rate of tenure is for the junior faculty at the institutions you are considering, what the general process is, pitfalls, and so on. Remember that the purpose of being an assistant professor is to become an associate professor, so make sure you educate yourself about what to expect before you make your choice.

—Matthew Redinbo, University of North Carolina—Chapel Hill

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You may need to do some homework to rule out problems that may not be revealed in response to direct questions or that you simply cannot ask the search committee about. For example, it would be helpful to know whether the department has experienced internal personal conflicts recently, whether the university has financial problems, whether the chair is retiring or stepping down soon, and whether key faculty members are about to leave or retire. You also want to know whether people who have worked in the department have been happy, well supported, and successful. Use the grapevine: Call people you met during your interview visit, and talk with postdocs or others recently affiliated with your potential department and institution. Be discreet, but be straightforward. You don't want to be surprised.

When you are contacted with an offer, you might be asked for a second interview. This time, you will be able to ask more detailed questions about the position. You might also visit the human resources office, talk with key people in your prospective department, and have a preliminary look at available housing. A second interview visit is an excellent time to start the discussion about what you will need in terms of laboratory space, materials and equipment, and staff.

What You Need to Find Out

Here are some of the details that you will need to ask about.

The appointment. You need to know the following:

- ◆ Your job title and what it means
- ◆ The length of your initial contract
- ◆ The terms under which the contract will be renewed

Question: What if I'm offered an appointment to more than one department?

Answer: Insist on clarification in writing of where your “tenure home” will be, what the performance criteria for tenure will be, who will be making the tenure decision, the percentage of your salary paid by each department, where your office will be located, what your teaching responsibilities will be, and who will serve as your mentor. Seek advice from others who have worked in similar situations. For example, one experienced academic scientist cautions against accepting an appointment that is split 50-50 between departments.

Verify that you are indeed being offered a full-time tenure-track position. For example, several California schools have offered positions that appear to be full time yet are only half time or less than full time as far as a state-sponsored faculty position is concerned. In these cases, a faculty member is expected to rely on other funds for a significant part of salary and other support. You also need to find out about the process for obtaining tenure (see chapter 2, “Understanding University Structure and Planning for Tenure”). Research faculty appointments are often “at-will” appointments, offering no tenure protection if, for example, the position is eliminated or grant funding is lost.

The salary. You need to pin down the following:

- ◆ The amount of your base pay (this will determine the level of other benefits and future raises)
- ◆ Whether the salary is guaranteed, and, if so, for how long—in other words, you need to know whether part of your salary and other support must eventually be obtained from research grants or other nondepartmental or institutional sources

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If you have a dual appointment, it's important to clarify which department will be paying the bulk of your salary, because that department will have the biggest right to your time. For example, if your secondary department wants you to increase your teaching load, you could request that they negotiate with your primary department to reduce the teaching load there in exchange for picking up more of your salary.

—Milton Datta, Emory University School of Medicine

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- ◆ The department's history of salary increases
- ◆ Whether you will be paid on a 9-month or 12-month basis (if you are paid on a 9-month basis, find out whether your paychecks can be prorated over 12 months)
- ◆ If paid on a 9-month basis, does the institution allow you to pay yourself a summer salary from a research grant? Is there an institutional pool of money that will provide a summer salary for a year or two until you can obtain grant funding?
- ◆ Your institution's policies on outside consulting, including how much consulting is permitted, what approvals are required, and what limitations apply

Knowing what you are worth. There are many sources of information that you can use to evaluate your starting salary (see figure 1.1). Salaries differ widely depending on degree, geographic location, type of institution (public versus private), and scientific discipline. To evaluate the salary offered, you need comparative information on starting faculty salaries at the institution offering you the job and in your field elsewhere as well as on costs of living.

Figure 1.1. University starting salaries and start-up packages for junior faculty who received Burroughs Wellcome Trust Career Awards in Biomedical Sciences (CABS) and began faculty positions as tenure-track assistant professors in U.S. universities.

Faculty Appointments, 2004–2005*	
Ph.D.s (n = 21)	
Average 12-month salary	\$92,632 (\$73,000–\$135,000)
Median 12-month salary	\$89,333
Average start-up package (less salary)	\$506,392
Median start-up package (less salary)	\$675,000
Physician-Scientists (n = 11)	
Average 12-month salary	\$127,315 (\$93,000–\$155,000)
Median 12-month salary	\$125,500
Average start-up package (less salary)	\$441,245
Median start-up package (less salary)	\$480,000
<p>*These data were obtained from accepted offers received by CABS awardees who moved from postdoctoral to tenure-track assistant professor faculty positions. The positions ranged across the basic biomedical sciences, public and private institutions, and U.S. geographic areas. Although the sample size is small, the data are consistent with those obtained from CABS awardees who have received faculty appointments since 1996.</p> <p>Source: Rolly L. Simpson, BWF.</p>	

Try the following resources:

- ◆ The AAUP publishes an annual salary survey in the March-April issue of *Academe* (<http://www.aaup.org>).
- ◆ The American Chemical Society publishes a detailed annual salary survey, with data broken down by employment sector, geographic region, and professional specialty, in the magazine *Chemical & Engineering News* (<http://pubs.acs.org>).
- ◆ The Association of American Medical Colleges publishes an annual salary survey that contains data for professors at U.S. medical schools (<http://www.aamc.org>).

Other forms of compensation. Get the details of the following:

- ◆ Health coverage, life insurance, disability insurance, and retirement benefits
- ◆ Other family-related benefits, such as tuition support for family members and access to university recreational facilities
- ◆ Whether moving expenses will be paid
- ◆ Availability of a housing subsidy or at least assistance in obtaining housing

Start-up package. Find out what resources the university will make available to support your research until you can obtain grant support. Specifically, ask about

office and lab space, equipment, computers and software, a technician and other support staff, the principal investigator's contributions to graduate student stipends, help in obtaining grants, and support for travel to conferences and meetings.

Service within the university. Ask how many committees and other projects you will be expected to become involved with.

Teaching responsibilities. Although rewarding, teaching can be the most time-consuming activity for new faculty. You will want a clear statement about the following:

- ◆ Your teaching load (the number of classes each term, typical enrollments, and levels and types of students)
- ◆ Teaching-related responsibilities (office hours, direction of student theses, advising students)

Hard Money Versus Soft Money

Hard money refers to any guaranteed funds that you receive from the university where you are employed. When you are offered a faculty position, you typically receive salary and start-up funds—hard money—to cover the costs of starting your laboratory during the first one or two years of your employment. After the start-up period ends, you may continue to receive hard money support for at least a portion of your salary and perhaps for a technician's salary. However, you will also need to obtain grant support (soft money) to pay for your research and, at some universities, all or part of your salary as well. Soft money therefore refers to funds that you receive from grants—for which you will most likely have to compete.

- ◆ Teaching-related responsibilities if you have an appointment in two different departments or if you will be a member of one or more departmental graduate faculty groups or of an interdepartmental graduate program

Ask for a reduction in teaching responsibilities if your appointment involves heavy service responsibilities or if the position entails an appointment in two departments.

Protected research time. Now is the time to maximize and codify in writing how much protected time you will have for research. You need to clarify as much as possible expectations and decrease, if necessary, the number of other obligations you have. Once you have signed a contract, it will be hard to make changes.

Special Issues for Physician-Scientists

Negotiating Protected Research Time

If you are a physician-scientist, you will probably be expected to spend some time in income-generating patient care. Be sure this requirement does not engulf your research time. You should negotiate a written promise of a fixed percentage of protected time you will have for research—that is, a time when you are not on call and are not responsible for seeing or following up on patients (although it might include time for teaching or for administrative duties). In addition to being given a percentage of protected research time, you may also want to ask for a concrete definition of your clinical obligations (e.g., a half-day per week in the clinic or two weeks per year rounding on the inpatient service). The way the split between patient care and research is implemented differs from institution to institution and from department to department. For instance, individuals with a 50-50 split might have one month of clinical duty, followed by one month of research time, or attend to clinical duties mornings and laboratory work afternoons, or vice versa. While in theory it is possible to set up these parameters, they may play out differently in reality. You can't necessarily stop treating a critical care patient because you have switched back to a research month, and patient test outcomes and pathology reports will trickle in past the clinical month's end date. If you want to be assessed primarily on the quality of your research work, you should try to craft clinical responsibilities that require the least amount of follow-up, such as inpatient rounding.

“Buying Out” of Clinical Time

If you secure additional funds for your department, it is possible for you to be released from some or all of your clinical duties. However, if you request a reduction of 20 to 25 percent in your clinical duties, for example, because you have secured an R01 grant from the National Institutes of Health, someone else in the department will have to take on those obligations. Is there a new hire who can do that? Or a physician-scientist who is planning to close down or scale back his or her lab? If no one can take over your clinical duties, then no matter what the division or department chair thinks of the idea or what promises were made during the job negotiation process, you will not receive the additional protected time. You will need to find out what the funding situation is at your medical school or academic health center to determine whether buying out is an option. You need to have these discussions prior to entering into the contract and to get the commitments secured in writing.

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The issue of protected research time—not the compensation package and lab space—is the single most important negotiating point for junior faculty. If the institution is not willing to specify a time split in writing, you should worry.

—Todd Golub, HHMI and Dana-Farber Cancer Institute

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Getting What You Need and Want

How to negotiate. Present your requests clearly. Make a list of what you really need and explain why to the person in charge of your recruitment. Indicate any equipment you would be willing to share. Your recruiter can use this information as your advocate in requests to the relevant deans who provide the actual recruitment dollars. Don't decide between departments based on offered dollar amounts and don't pad your requests. But do be sure that you will be able to do the research that you hope to do.

When the institution responds and you begin to discuss the terms of employment, be prepared to make trade-offs. Knowing what is essential to you is crucial at this time.

The offer letter. The fruits of your negotiations should be reflected in an official letter from the institution offering you a job. Work with the institution to craft as comprehensive a letter as possible. The letter is usually your contract, so take it seriously. In addition to the basics (e.g., title, salary, and research support), the letter should detail the timing, schedule, process, and requirements for tenure.

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I tell all of my postdocs who are negotiating for faculty positions: Once you sign on the dotted line, don't count on getting anything you haven't already been promised, no matter how reasonable it might seem.

—Thomas Cech, HHMI

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Medical Center Career Tracks

In general, a faculty member in a basic science department in a medical center holds a tenure-track appointment, with responsibilities for research, teaching, and service. Such appointments are regarded as the most stable types of academic appointments because the institution assumes some obligation for salary and other types of support. However, in some departments, there may be faculty appointments that are not on the tenure track. For these individuals, the primary responsibility is research, with limited responsibilities in teaching and service. In this case, the faculty member may be entirely responsible for raising funds for his or her salary and for all other expenses needed for scientific research. Such appointments are generally given for a limited period, subject to renewal at the discretion of the department chair.

There are many different types of faculty appointments in clinical departments, such as medicine, pediatrics, or pathology. For example, in some schools, these are divided into three types of appointments: (traditional) tenure track, medical-clinical track, and clinician-educator track. The availability of different tracks provides faculty members the opportunity to choose how they want to be evaluated, for both tenure-track and nontenure positions. The tracks usually require different degrees of effort in the areas of clinical care and research, and accommodate individual and team effort differently. They also require and reward various degrees of scholarly work; for example, a full-time clinician is not expected to publish as much as a tenure-track researcher. In addition, whereas teaching and administration may be expected in every track, they may be recognized as more important in some than in others. You should research the track system at your school and ask questions during the interview specifically about the track you should be on.

Handling Multiple Offers

Multiple offers are gratifying, but they make life complicated. The important thing is to deal honorably. The following rules apply:

- ◆ Keep all parties informed of the status of your other applications.
- ◆ Use your leverage to ask an institution to match an offer but only if you intend to accept the offer.
- ◆ Be prompt to refuse, so that other candidates may be considered for a job you don't want. Keep in mind, however, that it can be risky to decline all your other offers before you've accepted your first choice in writing. There have been cases when firm verbal offers have been withdrawn because of a university-wide hiring freeze.
- ◆ Ask for an extension of a deadline if you need to, but don't miss a deadline.

After reading this chapter you should feel better prepared to tackle your job search and decide which offer to accept. To help you in the decision process, discuss all the pros and cons with those you trust. Once you have made a decision, sleep on it. When it is finalized, don't look back.

RESOURCES

Austin, Jim. "You've Worked Hard to Get This Far." ScienceCareers.org (November 22, 2002), [http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2030/you_ve_worked_hard_to_get_this_far/\(parent\)/158](http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/2030/you_ve_worked_hard_to_get_this_far/(parent)/158).

Babco, Eleanor L., and Nathan E. Bell. *Salaries of Scientists, Engineers, and Technicians: A Summary of Salary Surveys*. Washington, DC: Commission on Professionals in Science and Technology, November 2005, <http://www.cpst.org/Blubsal21F.cfm>.

Davis, Martha, and Gloria Fry. *Scientific Papers and Presentations*. New York, NY: Academic Press, 1996.

Golde, Chris M. "After the Offer, Before the Deal: Negotiating a First Academic Job." *Academe: Bulletin of the American Association of University Professors* January/February 1999, 44–49, http://www.aaup.org/publications/academe/1999/99jf/GOL_JF99.htm.

Golde, Chris, M. "Be Honorable and Strategic." ScienceCareers.org (August 24, 2001), http://sciencecareers.sciencemag.org/career_development/previous_issues/articles/1120/be_honorable_and_strategic.

Heiberger, Mary M., and Julie M. Vick. *The Academic Job Search Handbook*. Philadelphia, PA: University of Pennsylvania Press, 1996.