



Career Development Resources

*compiled for the Biomedical Postdoctoral Programs' 2005 Career Workshop series

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Introduction:

All postdoctoral researchers seek a permanent position. Often they are uncertain where to start with their job-search and they can make simple mistakes in the process. This guide is meant to steer you clear of these common pitfalls and help you prepare (as you would for an experiment) for success. Remember a job-search is hard work but it is worth the pay-off. Do not get discouraged by the rejection letters we all get them. You only need one good job-offer!

I wish you every success as you embark on your job search.

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Director of Biomedical Postdoctoral Programs

Content:

This guide was created as a resource for postdoctoral fellows who are starting, or are in the midst of a job search. It contains some guidelines to follow and a collection of online resources that will direct the job seeker to some of the unlimited resources available on the INTERNET.

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I. Job hunting materials

A. Writing a Curriculum Vitae or Resume

A CV/resume is a personal written communication that clearly demonstrates your ability to produce valuable results in an area of interest to potential employers in a way that motivates them to meet you. In short, a CV/resume is designed to get you interviews. Described below is a general template for a full length CV as well as a discussion of the differences between a CV and a resume.

C.V. Template of a Postdoctoral Fellow seeking an Academic Position

NAME

Contact information.

[Include phone, mailing address, email, and URL, if you have a website]

[Do not include Social Security Number.]

CURRENT RESEARCH

Postdoctoral Fellow, Department of X, Laboratory of Dr. Z., starting date - present

Institution, City, State

[Text discussing overview of research, stressing purpose of research and conclusions. Make this interesting!]

EDUCATION

Institution, City and State

Degree, Field, Date

Dissertation:

Advisor: *[Or you can say "Committee" and include all committee members' names. This is sometimes done if everyone on the committee is well-known in your field.]*

[Start with your most recent education and work backward. Omit secondary school.]

[Some people include their postdoctoral appointment under "Education." Others list it under "Experience."]

HONORS AND AWARDS

Award, Date

[Include this section only if you have substantial ones. Otherwise put them with corresponding educational experience. If your awards are from another country, give a brief explanation to make them meaningful, such as "Awarded to the top 1% of students graduating nationally."]

PREVIOUS RESEARCH EXPERIENCE

[Use reverse chronological order.]

Institution, Laboratory Supervisor, Position

Date

[Description of research]

TEACHING EXPERIENCE

Title, **Institution**, Course Title, Date

[If you are applying for a job for which teaching is very important, also give some detail about your role and responsibilities in a course. If you have none, you could include supervision of students in your lab in this category.]

SEMINAR TALKS

Invited Speaker, Title of Talks, **Institution**, Location, Date

[This is an example of a category that might exist for one person and not for another. Choose categories to reflect your own strengths.]

PUBLICATIONS

PEER REVIEWED PUBLICATIONS

[Publications listed in standard citation format with candidate's name underlined.]

BOOK CHAPTERS AND REVIEWS

[Review articles and chapters listed in standard citation format.]

ABSTRACTS

[Abstracts listed in standard citation format with author's name underlined. You could indicate "talk" or "poster".]

GRANTS

[If you have received funding, list the agency and the project.]

SKILLS

[You may include lists of important research techniques or computer programs, subdividing them with sub-headings if the list is long. This is more commonly done for postdocs for industry positions than for faculty positions.]

PROFESSIONAL AFFILIATIONS

Association, Date

[If you have been active in scholarly or professional organizations, you might include your leadership roles in a section called "Professional Activity." You could also include any conference sections that you organized.]

ADDITIONAL INFORMATION

[This optional section can include miscellaneous information that might be of interest, such as community activities, knowledge of foreign languages, or interests. It is more common to use this section in industry than in academia. If your undergraduate or graduate degree is from outside the United States, which may make employers wonder about U.S. work permission, include any favorable visa status.]

REFERENCES

Name, Title, Contact information

[These can also be listed on a separate sheet.]

A CV or a Resume? What's the difference?

• **Length**

- CV: A CV is an all-embracing record of your academic accomplishments and can be 5, 10, even 20 pages long for a senior faculty member.
- Resume: Your resume should be one to two pages in length.

• **Target**

- CV: A CV targets academic research and faculty positions. The department conducting the job search wants to see the depth and breadth of your work as a graduate student or post-doc. This is why the document is so long. It might happen that you are asked to submit a CV for an industry research and development position. In this case, you might submit a modified form of your CV, in which your education, your relevant experience and skills appear on the first page (so that it looks like a bit like resume) and publications, presentations and other information appear on subsequent pages.
- Resume: A resume targets an audience that includes the business, non-profit and governmental communities. This audience wants to hear about the skills you possess that will make you an excellent candidate for the job they are seeking to fill. They might not be interested in your other skills. This is why the document is considerably shorter.

• **Language and Format**

- CV: A CV often includes lengthy paragraph-long descriptions of research projects and dissertations, as well as academic jargon that is comprehensible to specialists in the field.
- Resume: A resume does not include descriptions of research and avoids jargon. Rather, it uses concise, clear language that explains your skills in a way that is comprehensible to a general audience. Experience should be highlighted using bullet points, rather than put in paragraph form. Your format--italics, bold, bullet points--should also present your information in a clear and consistent manner. A resume is meant to be scanned quickly (in less than one minute); its format reflects this.

• **Selling Yourself**

- CV: A CV's format is simple and your experience in research, teaching and academic service is supposed to speak for itself.
- Resume: A resume uses language that should sell your skills and makes it clear to your potential employer that you are the person for the job.

• **Resources:**

- Career Services "Notes from Graduate Interview Workshops":
<http://www.vpul.upenn.edu/careerservices/gradstud/bgsmain.html>
- The *Chronicle* article "From CV to Resume":
<http://chronicle.com/jobs/99/12/99120301c.htm>
- "The *Chronicle* article "The CV Doctor Returns"
<http://chronicle.com/jobs/2003/09/2003092601c.htm>
- CV/Resume Writing & Samples page from UCSF career center
<http://saawww.ucsf.edu/career/studentpostdoc/lifecvsamples.htm>
- Science's Next Wave article "From an Employer's Wish List to Your CV, Part 2"
<http://nextwave.sciencemag.org/cgi/content/full/2003/04/23/5?>
- Science's Next Wave article "Escape to Industry, Part 2"
<http://nextwave.sciencemag.org/cgi/content/full/2004/03/24/10>
- Science's Next Wave article "A Resume Makeover"
<http://nextwave.sciencemag.org/cgi/content/full/1998/08/27/4?>

B. Cover letters

Cover letters for both academic and non-academic positions have a similar format. Although a cover letter for an academic job might be slightly longer than one intended for a non-academic position, neither of these types of letter should exceed one page. A cover letter should demonstrate to a potential employer that you are the best “fit” for the position. Its goal is to get you an interview.

- **Salutation:** Your salutation should read: “Dear Professor Name,” “Dear Dr. Name” or “Dear Ms. [or Mr.] Name.” Sometimes it is difficult to find out the name of the person to whom you should address your cover letter. Whenever possible, you should make extra efforts to find this information. However, if an academic job announcement states that you should send your materials to the search committee or the chair of the search committee, the acceptable salutations are “Dear Search Committee Members” and “Dear Search Committee Chair,” respectively. For a non-academic position, you can use the phrase, “To Whom it May Concern,” if you can not find the name of the person to whom you should address the letter.
- **First Paragraph:** Your first paragraph should explain why you’re writing, and where you found the job announcement. If someone else suggested that you contact the person to whom you are writing your letter, mention this: “Professor Jones suggested that I contact you...”
- **Middle Paragraphs:** This is the core of your letter. In these paragraphs, you should expand upon what is written on your CV and discuss why your qualifications and experience make you the best candidate for the job. Show that you are aware of what the position requires, and organize your letter such that it demonstrates that you can fulfill these requirements. Be concise. A cover letter should be tailored to each organization or institution to which you apply. For example, a cover letter applying for a teaching position at a liberal arts college will discuss your teaching experience at length, while one for a research institution will speak mainly to your research abilities and accomplishments. For an academic job, this section will be longer than would be the case for a cover letter for a non-academic position. It is also quite helpful to have your advisor or your P.I. (or other mentors) look over cover letters written for academic jobs.
- **Last paragraph:** Offer to send more information if they would like you to do so. If you’re planning to travel to a conference, or to the area in which the institution is located, make note of this fact. Say that you look forward to hearing from them. Thank them for their consideration.
- **Closing:** Don’t get too creative. In the US, a business letter ends quite simply:

Sincerely,
Jane Scientist, Ph.D.

*If you are sending a hard copy, don’t forget to sign the letter!

Lastly, proof read, proof read, and proof read again. This is where friends and lab mates can come in handy.

- Resources:
 - Cover Letter Writing from UCSF career center
<http://saawww.ucsf.edu/career/studentpostdoc/coverletter.htm>
 - Science’s Next Wave article “The Cover Letter: Door Opener *Par Excellence*”
<http://nextwave.sciencemag.org/cgi/content/full/2002/09/18/6?>
 - Science’s Next Wave article “Cover Letters: Cover the Marketing”
<http://nextwave.sciencemag.org/cgi/content/full/2003/03/11/1?>
 - The *Chronicle* article “What You Don’t Know About Cover Letters”
<http://chronicle.com/jobs/2002/06/2002061101c.htm>
 - The *Chronicle* article “How to Write Appealing Cover Letters”
<http://chronicle.com/jobs/2000/04/2000042101c.htm>

C. Web pages

With the increasing use of online job searching, an important resource could be development of your own personal web page. This would make it easy for potential employers to access information about you.

• **Suggestions for Constructing a Web Site**

(From the *Academic Job Search Handbook*, by Mary Morris Heiberger and Julia Miller Vick, 3rd Edition)

- Browse through other people's sites for inspiration before you start to construct yours.
 - Go easy on the graphics so your site loads quickly.
 - Avoid black or other hard-to-read backgrounds.
 - Keep the site current. Make sure that all the links are to current addresses.
 - Remember that millions of people worldwide have the potential to view your site, and that you can present yourself in only one way.
 - Proofread your site carefully, making sure it is perfect.
 - Make sure the menus have a clear and obvious sense of organization.
 - Give some thought to the danger of having materials "stolen" or otherwise misappropriated. Use a copyright statement.
- Resources:
- The *Chronicle* article "Building a better home page"
<http://chronicle.com/jobs/2003/06/2003060601c.htm>
 - The *Chronicle* article "The value – and problems – of being online"
<http://chronicle.com/jobs/v45/i06/4506newitz.htm>
 - The *Chronicle* article "Do I need a Web page?"
<http://chronicle.com/jobs/2002/07/2002071201c.htm>

II. Networking

The concept of developing a network has a two-fold purpose: to meet people that can share their career experience and to alert them to your career goals and abilities. Networking is an excellent way to gather information from acquaintances about various careers that are available. The important thing to keep in mind is that networking should not be thought of just in terms of who can give you a job. After developing your network over time, eventually, this may lead to potential job opportunities.

There are several sources that can go into developing your network, including talking with people at scientific meetings, speaking with previous colleagues, contacting school alumni, utilizing departmental contacts including other faculty members on your list of references, and many other potential contacts that can be made just through a simple conversation. An important component of networking is informational interviews, which are a more formal way to contact people working within your field of interest.

- Whether contacting someone in writing or in person, keep these simple guidelines in mind:
 - Be brief, unless asked specifically to elaborate further
 - Have a prepared introductory statement that includes your name, current position, and your research or career interests as they might apply to the person that you are speaking with.

- Networking resources:
 - “Working the Room” from a presentation by Pat Rose, Director, Career Services, University of Pennsylvania
<http://www.vpul.upenn.edu/careerservices/gradstud/worktheroom.pdf>
 - The *Chronicle* article titled “Coffee in 2002, a Job Offer in 2004”:
<http://chronicle.com/jobs/2005/01/2005012001c.htm>
 - PhDs.org networking category:
<http://www.phds.org/index.php?section=41>
 - Science’s Next Wave article “Network Your Way into Work: Index of Articles”:
<http://nextwave.sciencemag.org/cgi/content/full/2004/03/03/7>
 - Science’s Next Wave article “Networking”:
<http://nextwave.sciencemag.org/cgi/content/full/1998/03/29/56>
 - Naturejobs.com article “Networking, Networking, Networking, Networking, Networking”:
http://www.nature.com/cgi-taf/DynaPage.taf?file=/nature/journal/v430/n7001/full/nj7001-812a_r.html&filetype=&dynoptions

- Informational interviewing resources:
 - Science’s Next Wave article “Informational Interviewing: Getting Information You Can Use”
<http://nextwave.sciencemag.org/cgi/content/full/2003/04/09/4?>
 - Science’s Next Wave article “Information interviewing: How to be an Insider at Every Opening”
<http://nextwave.sciencemag.org/cgi/content/full/1998/03/29/82?>
 - Informational Interviewing page from UCSF career center
<http://saawww.ucsf.edu/career/StudentPostdoc/infointerview.htm>
 - The *Chronicle* article “Informational Interviewing 101”
<http://chronicle.com/jobs/2001/04/2001041301c.htm>

III. Interviewing

A. General interviewing topics

The outcome of a job interview is often determined during the first few seconds of contact between the interviewer and the candidate. Based on the employer's initial impression, or image, candidates are classified as potentially employable or not, professional or unprofessional. It is to your personal and professional advantage that you learn to create a positive, distinctive, and professional image throughout your entire interview process. Also, keep in mind that interviewing is a game at which you will occasionally lose but try to learn from experience. Remember, looking for a job is a job in itself. It takes a lot of time and effort.

- Interview Preparation
 - Learn as much as possible about the work being done by the organization and the people you will be speaking with.
 - Decide in advance what you can do to serve the interest of the individuals who will interview you. Remember that such interests usually center on quality work, increased production, greater efficiency, lower waste in time, effort, and/or materials, and reliability to help get the job done. Keep these uppermost in mind as you prepare.
 - Be prepared to ask about the duties of the job and the qualities wanted in the person to be hired. Be ready to show how you can match or exceed those requirements. After a formal offer of employment is made, you can begin to discuss salary, vacations, and other benefits.
- During the interview
 - Be on time!! Arrange to be there at least 10 minutes before your scheduled appointment.
 - Give the appearance of energy and self-confidence as you walk through the door. Smile. Shake hands firmly but don't crush bones. Be genuinely glad to meet the interviewer as a person who can play an important role in your life. Be relaxed and remember that maintaining eye contact is important.
 - Wear clean, well pressed clothing of a kind suitable to reporting for work in the job you seek. Avoid heavy perfume. Arrive well groomed from head to heels.
 - Be prepared to lead your interviewers into discussion of work problems facing their staff. This will give you strong clues to the kinds of information about your qualifications that you should stress.
 - Have extra copies of your resume. Also the names, addresses, and telephone numbers of references. Bring samples of your best work if design or writing is involved.
- Interview follow-ups
 - To close the interview, the employer will most likely ask you if you have any questions. Always, always ask a question. If nothing else, take this as an opportunity to discuss any interesting aspects of the position that you are interviewing for.
 - If the employer indicates that there are still others to interview before a decision is made, thank him/her for his/her time and ask when you will be hearing from him/her again. You might say, "Thank you for your time. Will you be calling me, or may I call in a week or so to find out your decision?"
 - Be sure to follow up the interview with a brief personal letter of thanks sent the day after your job interview. This personal touch not only acknowledges the time spent by the interviewer with you but also confirms your interest in the job for which you have applied. If you were able to have an interview with both the department supervisor where the job opening is and the personnel department head, send individually addressed letters of appreciation to both parties.
- Interviewing resources:
 - Career Services "Interview Guide":
<http://www.vpul.upenn.edu/careerservices/gradstud/bgsinterv.html>
 - Career Services "Notes from Graduate Interview Workshops":

- <http://www.vpul.upenn.edu/careerservices/gradstud/iviewwksps/interviewmenu.html>
- PhDs.org category, Finding Employment - Interviews
<http://www.phds.org/index.php?section=12>
- The *Chronicle* article titled “The Fourth Factor for Hiring”:
<http://chronicle.com/jobs/2005/02/2005021501c.htm>
- The *Chronicle* topical index section titled “Conferences, Interviews, and Presentations”:
<http://chronicle.com/jobs/archive/topical/conferences.htm>
- Science’s Next Wave article “Academic Job Interviews: The Good and the Bad”
<http://nextwave.sciencemag.org/cgi/content/full/2000/06/07/3>
- Science’s Next Wave article “Chart Your Course Through Tough Interview Waters”
<http://nextwave.sciencemag.org/cgi/content/full/1998/03/29/226>

B. Job presentations

(This section’s information was summarized from a personal discussion with Dr. Robert Doms, Chair, Microbiology Department, University of Pennsylvania)

The job talk should be prepared somewhat differently from a research presentation. Overall, the goal of the talk is to present yourself and your skills through your research and not to just present your latest experimental results.

General tips for presentations:

- Know your audience – before any interview it is perfectly acceptable to ask who will most likely attend your presentation
- Prepare a good introduction! – include general but relevant knowledge (Don’t use jargon!) as well as the significance of your research (Don’t leave this for the end! Catch the listeners’ attention early.)
- Summarize your results throughout the talk
- Stay on time! – it may be useful to plan a way to cut your talk short if necessary
- Practice your talk – use any resources available to you, i.e. volunteer for departmental seminars, practice in lab meeting, or recruit co-workers including your P.I. to listen and provide constructive feedback
- Slide design:
 - Don’t use figures directly from manuscripts – these usually contain details that will make a slide too complex (i.e. control experiments may be mentioned and not necessarily shown)
 - Use large fonts and not too much text per slide
 - Use simple colors and consistent backgrounds throughout
 - Animations can be effective but don’t overuse them
 - Never apologize for your slides or data! – simply state why a potentially unclear result is still significant or suggest alternative experiments that you will follow up on

Specific tips, depending on the type of job interview:

- Research positions in academia
 - A good, basic introduction is important – you may have graduate students as well as undergraduates at your presentation
 - Include significant discussion of your future projects
 - Remember, the search committee is looking for scientists with interesting, fundable ideas
- Teaching positions in academia
 - Tell a story using your research – minimize complicated data and focus on interesting results

- Keep your talk simple! – this is especially important if you will be teaching undergraduates who may only have limited experience with some of the experimental techniques you will be discussing
- Use schematics and simple text statements to help interpret your results
- Focus on the aspects of your research that could be developed into undergraduate research programs that will still be feasible with potentially more limited resources at a smaller university
- Research positions in industry
 - A good basic, introduction is important
 - Present your full experimental results, including different techniques and skills used in the project to highlight your personal abilities
 - Draw attention to any collaborative efforts you may have established
- Job presentation resources:
 - Science's Next Wave article "Academic Scientists at Work: the Job Talk":
<http://nextwave.sciencemag.org/cgi/content/full/2004/12/09/6>
 - Science's Next Wave article "The All-important Research Talk: Learning How to Do it Better"
<http://nextwave.sciencemag.org/cgi/content/full/2001/05/31/8>
 - The *Chronicle* article "Giving a Job Talk in the Sciences"
<http://chronicle.com/jobs/2001/03/2001033002c.htm>

IV. Careers for Biomedical Scientists: A Brief Bibliography, Career Services, University of Pennsylvania

Internet Sites

As Internet sites proliferate, it can be hard to keep track. For a full picture of Internet employment sites, see *The Riley Guide to Employment Opportunities and Job Resources on the Internet*, <http://www.rileyguide.com/>.

(Most sites listed below are linked on the Career Services website. You can find them on the Academic Job Market, Expanded Job Market for M.A.'s, ABD's and Ph.D.'s, and the Biomedical Graduate Studies and Biomedical Postdoctoral Appointees pages:

http://www.vpul.upenn.edu/careerservices/schoolmenus_grad.html)

American University Home Pages, <http://www.clas.ufl.edu/CLAS/american-universities.html>. Also includes fine links to international universities and to U.S. community colleges. Some institutions post faculty openings to their web sites.

Association for Women in Science, <http://www.awis.org/>. The site includes job listings, fellowship information, information about paid internships for those interested in science policy, and links to organizations concerned with science policy

Career Guides from the National Academies. <http://nationalacademies.org/careerguides.html>. This site is maintained by the National Academy of Science. Somewhat oriented to physical scientists, it's nevertheless useful. It includes career guides on subjects that range from career planning to scientific ethics.

Hoovers Online: The Business Network, <http://www.hoovers.com>. Lots of information on companies.

National Academy of Sciences, <http://www.nas.edu/>. *National Institutes of Health*, <http://www.nih.gov>

David Sander's Web Site, <http://www.tulane.edu/~dmsander/garryfavwebjobs.html#5>. An interesting collection of links. Sander is an American Society for Microbiology Congressional Research Fellow. Site is called "All the Virology on the Web," but will be useful to a wider array of biomedical scientists.

Scholarly Societies Project, www.lib.uwaterloo.ca/society/overview.html. Easy way to make sure you haven't overlooked relevant scholarly societies.

Science's Next Wave, <http://nextwave.sciencemag.org>. An excellent site for young scientists maintained by the American Association for the Advancement of Science. You can access *Science's Next Wave* by use the links on the Career Service's website.

The Scientist. <http://www.the-scientist.com/>. Each issue features an article on "The Profession." Collectively, these provide a wide spectrum of career information.

USA Jobs, www.usajobs.opm.gov/. The U.S. Government's official site for jobs and employment information. Includes database of current government openings, searchable by salary, field, location, and more, as well as online applications.

Women in Technology International, <http://www.witi.com/>. Site has an interesting mix of information, including career profiles of scientists and engineers.

Job Banks

Academic

Chronicle of Higher Education, <http://chronicle.com/jobs/>. The career network site includes all its employment classifieds in a searchable database, and numerous articles on the academic market and job-hunting.

Industry

BioNet Job Opportunities. <http://www.bio.net:80/hypermail/EMPLOYMENT/>. A newsgroup archive with an impressive list of jobs in biological science offered all over the country. Listings are updated monthly, and the site includes its own search capabilities, as well as a database of listings going back each month to 1990.

Adsumo: Jobs in Biomedical fields: <http://www.adsumo.com/>

HireBio—biotechnology and pharmaceutical jobs and learning resources: <http://www.hirebio.com/>

HireRx: <http://www.hirerx.com/>

PhDs.org—occasionally has job postings that might be of interest to postdocs: <http://jobs.phds.org/jobs>

Biofind.com: <http://www.biofind.com/jobs/>

Medzilla: <http://medzilla.com/>

Jobs from the journal *Nature*: <http://www.nature.com/naturejobs/index.html>

Science magazine: <http://recruit.sciencemag.org/>

General

ScienceJobs.com from *New Scientist Magazine*: <http://www.sciencejobs.com/splash.action>

Some Good Guides to Choosing a Career Direction or Looking for a Job

Academic Environment: A Handbook for Evaluating Employment Opportunities in Science, Lanks, Karl W., M.D., Ph.D., Washington, DC: Taylor & Francis, 1996. Very thorough coverage of factors to consider when comparing job offers. Will be extremely useful to anyone negotiating before accepting an offer.

The Academic Job Search Handbook, 3rd ed., Mary Morris Heiberger and Julia Miller Vick, Philadelphia, PA: University of Pennsylvania Press, 2001. This guide to conducting an academic job search suggests steps to take from a few years before going on the market through getting off to a good start in one's first position.

Alternative Careers in Science: Leaving the Ivory Tower. Cynthia Robbins-Roth, Ed., San Diego, CA: Academic Press, 1998. Many well-written first-person accounts by scientists who've made career transitions.

Careers for Chemists: A World outside the Lab. Fred Owens, Roger Uhler, Corinne Marasco, Washington DC: American Chemical Society, 1997.

Career Renewal: Tools for Scientists and Technical Professionals. Stephen Rosen and Celia Paul, San Diego, CA: Academic Press, 1998.

Jump Start Your Career in Bioscience. Chandra B. Louise, Ashland, OH: Bookmasters, Inc. 1998.

Guide to Nontraditional Careers in Science. Karen Young Kreeger, Philadelphia: Taylor & Francis, 1999. A thorough discussion of several options. Includes excellent resources for further exploration.

Opportunities in Biotechnology Careers. Sheldon S. Brown, VGM Career Horizons, Lincolnwood, IL: NTC Publishing, 1994.

Outside the Ivory Tower: A Guide for Academics Considering Alternative Careers. Newhouse, Margaret, Cambridge, MA: Office of Career Services, Harvard University, 1993. While not written specifically for scientists, this book is an excellent starting point for any Ph.D. considering a non-academic career. The sections on self-assessment, decision-making and job-hunting are particularly valuable.

A Ph.D. Is Not Enough! A Guide to Survival in Science. Feibelman, Peter J., Reading, MA: Addison-Wesley Publishing Co., 1993.

To Boldly Go: a Practical Career Guide for Scientists. Fiske, Peter J., Washington, DC: AGU, 1996. A compendium of very savvy advice for scientists thinking of changing career direction.

Women in Science: 100 Journeys into the Territory. Vivian Gornick, New York, NY: Touchstone, 1990. First-person accounts of the experience of female scientists.

Two Excellent Directories for Identifying Employers and Associations

Directory of American Research and Technology. New Providence, NJ: R.R. Bowker, annual. Indexed so that one can identify companies by types of R & D. Most business directories are indexed by product; the fact that this one is indexed by research is very helpful. Another useful feature is that it indicates in which laboratory a particular form of research is conducted.

National Trade and Professional Associations. Washington, DC: Columbia Books, Inc., annual. This is probably the single best career-exploration/job-hunting book in existence, because it points to all the trade and professional associations in the U.S. Every conceivable profession seems to have organized itself, and associations are often excellent sources of information about associated career paths. The directory is well indexed, making it easy to identify organizations related to your interest.