Individual Development Plan
for

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Philip S. Clifford, Ph.D.
Associate Dean for Research
College of Applied Health Sciences
University of Illinois at Chicago

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NOTES

SCIENTIFIC SKILLS ASSESSMENT

Assess your strengths and weaknesses on a scale of 1-5, where
1 = drastic improvement needed and 5 = highly proficient.

Scientific Knowledge

1 2 3 4 5	Broad based knowledge of science
1 2 3 4 5	Deep knowledge of my specific research area
1 2 3 4 5	Critical evaluation of scientific literature

Research Skills

1 2 3 4 5	Technical skills related to my specific research area
1 2 3 4 5	Experimental design
1 2 3 4 5	Statistical analysis
1 2 3 4 5	Interpretation of data
1 2 3 4 5	Creativity/innovative thinking
1 2 3 4 5	Navigating the peer review process

Communication

1 2 3 4 5	Basic writing and editing
1 2 3 4 5	Writing scientific publications
1 2 3 4 5	Writing grant proposals
1 2 3 4 5	Writing for nonscientists
1 2 3 4 5	Speaking clearly and effectively
1 2 3 4 5	Presenting research to scientists
1 2 3 4 5	Presenting to nonscientists
1 2 3 4 5	Teaching in a classroom setting
1 2 3 4 5	Training and mentoring individuals
1 2 3 4 5	Seeking advice from advisors and mentors
1 2 3 4 5	Negotiating difficult conversations

Professionalism

1 2 3 4 5	Demonstrating workplace etiquette
1 2 3 4 5	Complying with rules and regulations
1 2 3 4 5	Upholding commitments and meeting deadlines
1 2 3 4 5	Maintaining positive relationships with colleagues

SCIENTIFIC SKILLS ASSESSMENT (continued)

1 2 3 4 5	Contributing to discipline (e.g. member of professional society)
1 2 3 4 5	Contributing to institution (e.g. participate on committees)

Management & Leadership

1 2 3 4 5	Providing instruction and guidance
1 2 3 4 5	Providing constructive feedback
1 2 3 4 5	Dealing with conflict
1 2 3 4 5	Planning and organizing projects
1 2 3 4 5	Time management
1 2 3 4 5	Developing/managing budgets
1 2 3 4 5	Managing data and resources
1 2 3 4 5	Delegating responsibilities
1 2 3 4 5	Leading and motivating others
1 2 3 4 5	Creating vision and goals
1 2 3 4 5	Serving as a role model

Responsible Conduct of Research

1 2 3 4 5	Careful recordkeeping practices
1 2 3 4 5	Understanding of data ownership/sharing issues
1 2 3 4 5	Demonstrating responsible authorship and publication practices
1 2 3 4 5	Demonstrating responsible conduct in human research
1 2 3 4 5	Demonstrating responsible conduct in animal research
1 2 3 4 5	Can identify and address research misconduct
1 2 3 4 5	Can identify and manage conflict of interest

Career planning

1 2 3 4 5	How to maintain a professional network
1 2 3 4 5	How to identify career options
1 2 3 4 5	How to prepare application materials
1 2 3 4 5	How to interview
1 2 3 4 5	How to negotiate

INTERESTS INVENTORY

*If you had the **ideal job**, rate how frequently you would be engaged in the following activities, where 1 = never and 5 = often.*

1 2 3 4 5	Designing experiments
1 2 3 4 5	Performing experiments
1 2 3 4 5	Analyzing experimental results
1 2 3 4 5	Planning new scientific projects or developing new research directions
1 2 3 4 5	Writing grant proposals
1 2 3 4 5	Writing scientific manuscripts
1 2 3 4 5	Writing project reports or other business-related correspondence
1 2 3 4 5	Writing position papers or policy papers
1 2 3 4 5	Creating presentations
1 2 3 4 5	Representing data in figures/illustrations
1 2 3 4 5	Giving presentations about science
1 2 3 4 5	Reading papers in your field
1 2 3 4 5	Learning about other fields
1 2 3 4 5	Thinking about science
1 2 3 4 5	Keeping up with current events in science
1 2 3 4 5	Discussing science with others
1 2 3 4 5	Attending conferences or scientific meetings
1 2 3 4 5	Learning how to use new equipment or techniques
1 2 3 4 5	Building new devices or developing/refining techniques
1 2 3 4 5	Using quantitative methods in understanding science (e.g., statistics, mathematical modeling)
1 2 3 4 5	Using qualitative methods in understanding science (e.g., focus groups, in-depth interviews, field observations)
1 2 3 4 5	Performing research with animal subjects
1 2 3 4 5	Performing research with human subjects
1 2 3 4 5	Teaching in a classroom setting
1 2 3 4 5	Developing curricula
1 2 3 4 5	Writing about science to non-scientists
1 2 3 4 5	Speaking about science to non-scientists
1 2 3 4 5	Mentoring or teaching one-on-one
1 2 3 4 5	Developing collaborations

INTERESTS INVENTORY (continued)

1	2	3	4	5	Negotiating agreements
1	2	3	4	5	Analyzing financial data or budgets
1	2	3	4	5	Assessing business trends and strategies, entrepreneurial ideas
1	2	3	4	5	Serving on committees
1	2	3	4	5	Working in a team
1	2	3	4	5	Networking with others
1	2	3	4	5	Work-related travel
1	2	3	4	5	Organizing things, creating systems in the workplace
1	2	3	4	5	Planning or organizing events
1	2	3	4	5	Leading or supervising others

LIST YOUR TOP 3 INTERESTS:

LIST 3 ACTIVITIES YOU WANT TO AVOID:

VALUES CLARIFICATION

Grade the importance of the following items in your career, where 1 = unimportant and 5 = essential

	VALUE	DESCRIPTION
1 2 3 4 5	Help society	Contribute to betterment of world
1 2 3 4 5	Help others	Be involved with directly helping individuals or small groups
1 2 3 4 5	People contact	Have day-to-day contact with clients or colleagues
1 2 3 4 5	Teamwork	Work in collaboration with others or as part of a team
1 2 3 4 5	Friendships	Develop close personal relationships with people at work
1 2 3 4 5	Congenial atmosphere	Work with friendly colleagues
1 2 3 4 5	Competition	Engage in activities that test my abilities/achievements against others' abilities/ achievements
1 2 3 4 5	Make decisions	Have authority to decide courses of action, policies, etc.
1 2 3 4 5	Fast pace	Work in a busy atmosphere with frequent deadlines
1 2 3 4 5	Supervision	Be directly responsible for work done by others
1 2 3 4 5	Influence people	Be in a position to change attitudes or opinions of other people
1 2 3 4 5	Work alone	Work on projects by myself, with little contact with others
1 2 3 4 5	Independence	Work with little direction from others
1 2 3 4 5	Intellectual challenge	Perform work that is intellectually stimulating
1 2 3 4 5	Work on frontiers of knowledge	Engage in the pursuit of knowledge or generating new ideas
1 2 3 4 5	Expert status	Be acknowledged as an expert in a given field
1 2 3 4 5	Creativity	Originate and develop new ideas
1 2 3 4 5	Aesthetics	Appreciate the beauty of things and ideas that I work with
1 2 3 4 5	Predictability	Have job duties that are similar day-to-day
1 2 3 4 5	Variety	Have job duties that change frequently
1 2 3 4 5	Job security	Be assured of keeping my job and salary
1 2 3 4 5	Benefits available	Have health, retirement, tuition reimbursements, etc.
1 2 3 4 5	Recognition	Be recognized or appreciated for the quality of my work

VALUES CLARIFICATION (continued)

1 2 3 4 5	Risk taking	Have work duties that involve trying new things, despite the chance that negative outcomes could result
1 2 3 4 5	Earning potential	Have a salary which allows me to purchase essentials as well as some luxuries of life
1 2 3 4 5	Location	Live in a place which is conducive to my lifestyle
1 2 3 4 5	Physically challenging	Have a job that requires high physical demands
1 2 3 4 5	Not physically challenging	Have a job that does not require high physical demands
1 2 3 4 5	Flexible schedule	Have some choice over the hours or days that I work
1 2 3 4 5	Status and prestige	Work in a position or organization which carries respect with my friends, family, or colleagues
1 2 3 4 5	Professional development	Have a job with opportunities for growth or promotions
1 2 3 4 5	Job tranquility	Work in a low pressure environment
1 2 3 4 5	Work/life balance	Balance time spent at work and time spent doing other activities
1 2 3 4 5	Family friendly	Have a job with policies supportive of families, including day care, flexible work schedules, etc.
1 2 3 4 5	Exercise competence	Take advantage of my strongest talents and skills on a regular basis
1 2 3 4 5	Learn new things	Be challenged to learn new skills or knowledge on a regular basis
1 2 3 4 5	High demand	Develop a desirable knowledge base or skill set to facilitate finding my next job

LIST THE TOP 3 VALUES THAT YOU RANKED AS ESSENTIAL:

CAREER EXPLORATION RESOURCES

Websites:

www.ScienceCareers.org

Books:

Career Planning and Job Search

Put Your Science to Work: The Take-Charge Career Guide for Scientists
Peter S. Fiske, Ph.D.
Washington, D.C.: American Geophysical Union 2001
Roughly the equivalent of *What Color is Your Parachute?* for scientists. This is also a very practical guide on career planning starting with the process of self-assessment. The chapters on CVs and resumes are thorough and helpful.

What Color is Your Parachute?: A Practical Manual for Job-Hunters and Career-Changers
Richard Nelson Bolles
Berkeley: Ten Speed Press, 2009
This book is billed as the best selling job-hunting book in the world. Although not directed specifically toward scientists, it provides practical advice on analyzing your own strengths, interests, and goals. The author coined the phrase "informational interviewing" to describe a process for gathering information on career opportunities. Tips on interviewing should prove useful, as well.

The Unwritten Rules of the Highly Effective Job Search
Orville Pierson
New York, NY: McGraw-Hill 2006
A systematic, step-by-step, project management approach to the job search process that has been developed and used by professional job search consultants. It includes comprehensive help in all phases of the search beginning with preparation and planning, getting moving, tracking progress and adjusting the plan, through interviewing and starting the new job.

Academic Careers

Academic Scientists at Work: Navigating the Biomedical Research Career
Jeremy M. Boss and Susan H. Eckert
New York: Kluwer Academic/Plenum Publishers 2003
This book provides advice on landing a position in academic research and how to get organized once you've started. The most valuable part of the book may be the Job Comparison Worksheets found in the appendices. These provide a great starting point to stimulate your thoughts about issues that should be the basis of comparison of different positions. Once you find a position, the chapter entitled "Gettin' Money" has some very helpful information on grantsmanship.

Tomorrow's Professor: Preparing for Academic Careers in Science and Engineering
Richard M. Reis
New York: Wiley Interscience 1997
This is a well-written book on how to prepare, compete, and succeed in an academic career. It provides some perspective with an overview of the modern academic enterprise. The author walks systematically through the stages of a scientific career including preparation, applying for positions, first years on the job, and achieving tenure.

Nonacademic Careers

Alternative Careers in Science: Leaving the Ivory Tower
Cynthia Robbins-Roth
San Diego: Academic Press 1993
This is a multi-authored text, providing a perspective on 22 nonacademic career tracks. Although the term alternative careers is a misnomer, the descriptions of these career possibilities along with the attendant qualifications and expectations is very useful.

Career Opportunities in Biotechnology and Drug Development
Toby Freedman
Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press 2008
This is a valuable compendium of information regarding careers for life scientists in Pharma or biotech. Explanations of job requirements, essential skills, and day to day responsibilities were distilled from interviews with hundreds of key players in industry. Although not an easy read because of its encyclopedic detail, this book is an essential reference.

Lab Management

Making the Right Moves
Research Triangle Park, NC: Burroughs Wellcome Fund 2004
Chevy Chase, MD: Howard Hughes Medical Institute 2004
A practical guide to scientific management for Postdocs and new faculty.
Available free at www.hhmi.org/labmanagement

At the Helm: A Laboratory Navigator
Kathy Barker
Cold Spring Harbor, NY: Cold Spring Harbor Laboratory Press 2002
Running a laboratory requires the use of skills which are not often emphasized in graduate or postdoctoral training. Time management, hiring and retaining lab personnel, development of lab policies, communication, and group dynamics are among the issues confronting new principal investigators. Although "perfect" solutions to these issues are not identified, the approaches used in a variety of laboratories are described.

INFORMATIONAL INTERVIEWS

Informational interviews are an important tool to help you explore the wide range of career opportunities available with your training, skills, and interests. **This is clearly distinct from a job interview since the purpose is to ask for information, not a job.** An informational interview can be done in person, via telephone, or through email, but the first two modes are preferable since they allow more give and take. A typical informational interview should last 30 to 60 minutes. By the end of the conversation, you should:

1. Understand that person's job responsibilities.
2. Know what skills are required to succeed in such a position.
3. Be aware of future career opportunities for that position.
4. If possible, get contact information for 1-2 other individuals who you can contact for further information.

At the end of the interview, be sure to thank the person for their time and advice. In addition, it is very important to send a thank you note soon afterwards. Although this can be a very simple note, be specific about some aspect that you found valuable.

Example questions:

1. Can you tell me a little bit about your current responsibilities?
2. Could you describe a typical day?
3. How did you get into this field?
4. What types of skills and experiences are essential for succeeding in your position?
5. What are potential future career opportunities for someone in your position?
6. How would you describe the culture, management style, and organization of the company?
7. Would you talk about typical compensation packages including salary range and work-life balance?
8. What advice would you give someone in my position who wants to be successful in the field?
9. Can you tell me anything about other firms involved in this activity? Do you know of any companies that might be expanding or hiring in the next year?
10. Are there professional organizations that I should consider joining or websites that I should be looking at to get additional information?
11. Would you recommend anyone else to speak with in this field? May I have permission to use your name when I contact them?

SETTING PERSONAL GOALS

Looking back at your summary worksheet, identify the skills that need your attention. Then indicate what approach would be best for acquiring that skill. Finally, commit to a time that you will devote to working on it.

SKILL	APPROACH	TIMELINE
Scientific Knowledge		
Research Skills		
Communication		
Professionalism		
Management/Leadership		
Career Planning		

☞ **Post this list** next to your desk as a reminder of your goals and timeline.

☞ **Put these deadlines on your calendar** to integrate these goals with your deadlines for abstracts, grants, meetings, vacation.