Finding Your Way: Careers Away from the Bench

Brianna Blaser, PhD
AAAS/Science Careers
AAAS

- International nonprofit organization dedicated to advancing science, engineering, and innovation throughout the world
- Membership-based organization
- Publisher of *Science*
- Source for broad range of career advice and resources through ScienceCareers.org
- *Science* Careers Outreach Program
- Slides available at sciencecareers.org/outreach
Introduction

- Are these careers “alternative”?
- What sorts of opportunities are there?
- How do you decide what to do?
- How do you get there?
Young people themselves don’t realize how valuable they are with a PhD. It means an ability to think deeply, solve problems, analyze data, criticize, and be criticized. [PhDs] often don’t realize the breadth of what they are capable of doing.

- Neal Lane, Science Advisor to Bill Clinton
Consider that the average person sleeps 8 hours per day; that leaves 16 hours for other activities. From the time that we are roughly five years old through the time we retire in our 60s or beyond, most of us are involved in vocational activities – educational and work – one-half or more of those remaining hours, 5 days per week. If you are unfulfilled in your work life, your dissatisfaction will certainly affect other areas of your life.

Myths About Post-academic Careers:

- No one would hire you. You have no useful skills.
- Your research is your most valuable asset.
- People who work in the business world are stupid and boring.
- Jobs in the business world are stupid and boring.

- Adapted from Susan Basalla and Maggie Debelius’ “So What Are You Going to Do With That?” Finding Careers Outside Academia
"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com
Percent of US Biomedical Science PhDs Holding Tenure or Tenure-Track Positions 5-6 Years Post-PhD

Source:

Wednesday, January 27, 2010
Distribution of Biomedical Science PhDs by Sector of Employment

Source: Wednesday, January 27, 2010
What do scientists do outside of research?
What do scientists do outside of research?

- Business development
- Journal editors
- Career development
- Technical writers
- Science writers
- Tech transfer
- Information science/libraries
- Venture capital
- Marketing/sales
- Public relations
- Funding agencies
- Professional associations
- Academic administration
- Program administration
- K-12 teachers
- Community college professors
- Curriculum development
- Educational research
- Museums/science centers/aquariums
- Public policy
- Patent agents and attorneys
- Finance
- Regulatory affairs
- Entrepreneurship
- and more…
Science Writing

- Work in one of many settings
- Write on various topics
- Need strong writing skills
- Training programs, internships, volunteer

Kara Nyberg
Freelance writer
Patent Agent/Attorney

- Advise companies and inventors on intellectual property and patent issues
- No degree necessary
- Strong communication skills

James Dilmore
Reed Smith
Science Policy

- Work on government policies that intersect with science
- Bridge between the policy world and scientists
- Communication skills are key
- Fellowships to enter the field

Winston Yu
World Bank

Wednesday, January 27, 2010
Sales

- Continue to work with science and scientists
- Work with customer before and after sales occur
- Requires good people skills

Marta Fernandez
Applied Biosystems
Comparing these options to research careers

- Salaries
- Work/life balance
- Broader focus
- May not need a postdoc
- Less linear career paths
What career path is right for you?

The Decision Cycle
1. Awareness
2. Self-Assessment
3. Exploration
4. Integration
5. Commitment
6. Implementation
7. Re-evaluation

(Adapted from Carney & Wells 1995)
Self-Assessment, Exploration, and Integration

- Research your options
- Reflect on your preferences
- Conduct informational interviews
- Network
"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com
Research Your Options

- Learn about different career paths
- Ask unbiased sources
- Speak with career counselors
- Read about career paths
  - ScienceCareers.org – articles and forum
  - Alternative Careers in Science – Robbins-Roth
  - Put Your Science to Work - Fiske
  - So What Are You Going to Do With That? – Basalla & Debelius
  - Nontraditional Careers for Chemists - Balbes
Reflect on Your Preferences

- Take career inventories and self-assessments
- Informally reflect on preferences
  - Journal
  - Pro and con lists
  - Lists of skills and values
"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com
Questions to Consider
Questions to Consider

- What do you like to do? What energizes you?
Questions to Consider

● What do you like to do? What energizes you?
● What type of tasks and activities make you completely lose track of time?
Questions to Consider

- What do you like to do? What energizes you?
- What type of tasks and activities make you completely lose track of time?
- Do you want to do lab work? What would you miss about being in the lab?
Questions to Consider

- What do you like to do? What energizes you?
- What type of tasks and activities make you completely lose track of time?
- Do you want to do lab work? What would you miss about being in the lab?
- Where do you want to work?
Questions to Consider

- What do you like to do? What energizes you?
- What type of tasks and activities make you completely lose track of time?
- Do you want to do lab work? What would you miss about being in the lab?
- Where do you want to work?
- What do you want to wear to work?
Questions to Consider

- What do you like to do? What energizes you?
- What type of tasks and activities make you completely lose track of time?
- Do you want to do lab work? What would you miss about being in the lab?
- Where do you want to work?
- What do you want to wear to work?
- How often do you want to change projects?
Questions to Consider

- What do you like to do? What energizes you?
- What type of tasks and activities make you completely lose track of time?
- Do you want to do lab work? What would you miss about being in the lab?
- Where do you want to work?
- What do you want to wear to work?
- How often do you want to change projects?
- Would you like to work independently or as part of a team?
More Questions to Consider
More Questions to Consider

- What sorts of hours do you want to work?
More Questions to Consider

- What sorts of hours do you want to work?
- Are you willing to travel?
More Questions to Consider

- What sorts of hours do you want to work?
- Are you willing to travel?
- What sort of funding situation do you want to be in?
More Questions to Consider

- What sorts of hours do you want to work?
- Are you willing to travel?
- What sort of funding situation do you want to be in?
- What non-science interests or skills do you want to use?
More Questions to Consider

- What sorts of hours do you want to work?
- Are you willing to travel?
- What sort of funding situation do you want to be in?
- What non-science interests or skills do you want to use?
- How important is your income level? job security?
More Questions to Consider

- What sorts of hours do you want to work?
- Are you willing to travel?
- What sort of funding situation do you want to be in?
- What non-science interests or skills do you want to use?
- How important is your income level? job security?
- What sort of stress levels do you want to deal with?
More Questions to Consider

- What sorts of hours do you want to work?
- Are you willing to travel?
- What sort of funding situation do you want to be in?
- What non-science interests or skills do you want to use?
- How important is your income level? job security?
- What sort of stress levels do you want to deal with?
- Who do you know who likes their job?
Yet Other Considerations

- Employment trends
- Societal needs
- Economic conditions
- Family responsibilities
- Geographic considerations
- Immigration issues
Informational Interviewing

- Learn about career options and expand your network
- Ask for a few minutes of the person’s time
- Prepare ahead of time
- Ask open-ended questions
- Mind your manners
- Ask for referrals
- Afterwards, write a thank you note
Questions to ask

- What attracted you to this field?
- What do you like most or least about this position or field?
- Describe a typical day or week.
- What steps did you take to break into this field?
- What skills are most helpful in your job? How can I develop them?
- To what professional associations do you belong?
- How do I locate positions in this field?
- What advice do you have for me?
Other Networking

- Ask your contacts about career options
- Social networking
- Career fairs
- Meetings and conferences
- Mentoring programs
Careers Away From the Bench

Profile

Brianna Blaser
Project Director, Outreach at Science Careers/AAAS
Washington D.C. Metro Area | Professional Training & Coaching

Current
• Project Director, Outreach at AAAS

Past
• Center for Workforce Development Research Assistant at University of Washington
• Women Studies TA at University of Washington
• Intern at Association for Women in Science

Education
• University of Washington
• Carnegie Mellon University

Connections
72 connections

Websites
• My Company

Public Profile
http://www.linkedin.com/pub/brianna-blaser/6/6a6/858

Summary
Brianna Blaser is Project Director of Outreach for AAAS & Science Careers where she promotes Science Careers resources through career and professional development workshops to undergraduate and graduate students, postdoctoral scholars, and early career scientists.

Brianna earned her PhD in Women's Studies at the University of Washington in 2008. Her dissertation, More than Just Lab Partners: Women Scientists and Engineers Married to and Partnered with Other Scientists and Engineers, examined how women scientists' relationships with other scientists affect both their professional and personal lives. While at the University of Washington, Brianna was a research assistant at the Center for Workforce Development where she organized professional development activities, including a newsletter, a mentoring program, and workshops for
"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com
Transitioning/Implementation

- Think about your skill set
  - Skills you have
  - Skills employers want
- Develop and cultivate new skills
- Start following a career path
Skills You Have
Skills You Have

- Data analysis and management
- Project management
- Communication
- Computer and technical operations
- Teaching and leadership
- Teamwork
- Problem-solving and critical thinking
- Technical knowledge
"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com
Skills Employers Want

- Learning to learn
- Reading, writing, and computation
- Communication
- Adaptability
- Personal management
- Group effectiveness
- Leadership
Develop New Skills

You might need experience in new arenas!

- Volunteer
- Complete an internship
- Pursue fellowships
- Get additional training
- Take a part-time or temporary job
- Demonstrate an interest in your new career path
Start Following a Career Path

- Decide whether you need a postdoc
- Start sending out applications
- Be explicit about the skills you have
- Make a plan (or not)
  - Individual Development Plans – FASEB
But what will my advisor think?

- Your career path is about YOU
- You are not the only one to doubt the academic/research path
- Be honest about your concerns
- Many experience relief
"Piled Higher and Deeper" by Jorge Cham
www.phdcomics.com
Changing careers is not a failure; it often requires more courage than continuing in the expected direction and can lead to much greater personal development.

- Anita Crafts-Lighty

The PhD is good training for a professional life. For me, it was my entrée into the culture of physics and the first step to [my current job].

- P.W. Hammer, American Institute of Physics
Resources

Available at sciencecareers.org/outreach
- These slides

Available at sciencecareers.org/webinar
- Nontraditional Careers webinar