Taking Your Passion for Science to a Career Away from the Bench

Brianna Blaser, PhD, AAAS/Science Careers
Richard Weibl, Center for Careers, AAAS
AAAS

- International nonprofit organization dedicated to advancing science, engineering, and innovation throughout the world
- Global, membership-based organization
- Publisher of *Science*
- Science and Technology Policy Programs
- Science Education Programs
- Source for broad range of career advice and resources through *Science* Careers
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
Introduction

- Are these careers “alternative”?
- What sorts of opportunities are there?
- How do you decide what to do?
- How do you get there?
Distribution of Biomedical Science PhDs by Sector of Employment

Source: Federation of American Societies for Experimental Biology
Academic Career Options

Primary, Elementary, and Secondary School
- Teaching, Administration, Curriculum Development

School System Administration
- Curriculum and Instructional Development
- Research, Evaluation and Program Administration

Colleges, Universities, Research Institutes
- Traditional Faculty Career
- Program Administration
- Curriculum and Instructional Development
- Research and Grant Administration
Myths About Non-academic Careers:

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

Adapted from Susan Basalla and Maggie Debelius’ “So What Are You Going to Do With That?” Finding Careers Outside Academia
Corporate / Private Sector Options

- Industrial Research and Development
- Consulting
- Investment & Finance
- Intellectual & Property Law
- Science Writing & Journalism
- Editing & Publishing
- Sales, Marketing, Product Support
- Human Resources
Sales

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

Marta Fernandez
Applied Biosystems
Non-Profit / NGO Sector Options

- Research & Evaluation
- Scientific Regulation & Monitoring
- Public Policy Advocacy
- Program Administration
- Leadership & Management
- Science Writing & Journalism
- Editing & Publishing
- Public Education
Science Writing

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

Kara Nyberg
Freelance writer
Government Sector Options

- Patent Examination
- Scientific Regulation
- Public Policy
- Program Administration
- Agency Leadership & Management
- EU Bologna Process
- Ministry of Education and Research
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
Patent Agent/Attorney

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

James Dilmore
Reed Smith
Many Variations Between Sectors

- Wages and Benefits
- Work/life Balance
- Focus of Daily Duties
- Education and Training Expectations
- Different Career Paths
- Relationships to Colleagues
What career path is right for you?
Self-Assessment, Exploration, and Integration

- Research your options
- Reflect on your preferences
- Conduct informational interviews
- Network
Research Your Options

Read about career paths
- *Science* Careers – 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

Talk to Career Services professionals
Talk to people in the field – The Information Interview
The Informational Interview

- 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
Still more questions to ask

- What attracted you to this field?
- What do you like most or least about a 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?
Reflect on Your Preferences

- Take career inventories and self-assessments
- Reflect on preferences
  - Journal – ponder the questions
  - Pro and con lists
  - Skill Inventory – strong or need to acquire
  - Lifestyle values
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
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.

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?
Grand Considerations

- Employment trends
- Societal needs
- Economic conditions
- Family responsibilities
- Geographic considerations
- Immigration issues
Skills Employers Want

- Learning to learn
- Reading, writing, and computation
- Communication
- Adaptability
- Personal management
- Group effectiveness
- Leadership
Building and Working Your Network

- Ask your contacts about career options
- Social networking
- Career fairs
- Meetings and conferences
- Mentoring programs
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
- Take some additional courses

Demonstrate your interest in your new career path
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
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
Resources

Available at sciencecareers.org/outreach
- These slides
Available at sciencecareers.org/webinar
- Nontraditional Careers webinar

Brianna Blaser, bblaser@aaas.org
Richard Weibl, rweibl@aaas.org