INDIVIDUAL DEVELOPMENT PLAN

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Biomedical Workforce

- NIH: Report 2012
- Annual NSF and CGS Reports

The data reflect:

1. that there are more PhDs for fewer academic research positions.
2. and that students in the biomedical sciences are finding careers in a variety of fields.
3. It was the recommendation of the working group that biomedical research training should prepare trainees for the range of careers that are available to them.
PhD degrees awarded in US

Figure 1: US Graduate Degrees Awarded, by Field
Figure 19: Conceptual Framework of the PhD Biomedical Research Workforce
Employment of Biomedical Science PhDs by Sector of Employment

Source: http://sestat.nsf.gov/
Career Options

- Shift in thinking about Career Options
  - Once considered failure to succeed in academia
  - Students now often enter graduate school or postdoc positions with different career options in mind
- Changing job markets
- No longer considered “alternative careers”
Thinking about Career Options

Times you may think about career options:

• During the Postdoctoral years
• During Graduate School years
  • During the PhD Research years
  • Prior to choosing Research Dissertation lab
• Prior to entering Graduate School
Numerous studies have found that PhD students shift career aspirations away from the academic track through the course of their training, but students’ nonacademic career goals tend to be less well-defined and less well-supported by their academic programs (Fuhrman, Halme, O’Sullivan, & Lindstaedt, 2011; Gibbs & Griffin, 2013; Gibbs, McGready, Bennet & Griffin, 2014; Golde & Dore, 2001; Goldsmith, Presley, & Cooley, 2002; Goulden, Frasch, Mason, 2009; Mason, Goulden, Frasch, 2009; Monk, Foote, & Schlemper, 2012; National Research Council, 2012; Sauermann and Roach, 2012).

Council of Graduate Schools
http://cgsnet.org/understanding-career-pathways

Graduate Career Consortium
http://gradcareerconsortium.org
Graduate Training

• Shift in Curriculum and Training Opportunities
  • Prepare trainee to be competitive for *all* Career Options
  • Training in Core Competencies and transferable skills
  • Information about Career Options
  • Career Counseling
Core competencies

- Scientific Knowledge (your PhD program)
- Research Skills (your laboratory)
- Communication Skills (your program; SGSHS; Postdoc Office; your laboratory)
- Professionalism (ID 714)
- Leadership and Management (SGSHS)
- Responsible Conduct of Research (ID 709)
How to talk to your advisor about career options

• Shift in way of advising
  • From single Research Advisor
  • To Network or Team of Advisors

• Definition of Advisor:
  • One who advises
  • Typically has expertise in area of advice
Graduate School opportunities

What to utilize:

• Curriculum for Professional Development
  • Training in core competencies: Writing, presentation, teaching, business, others
• Exposure to Career Options
• Individual Development Plan

University of Michigan Career Center
www.brightlinkprep.com
Who to talk to?

- Advisor(s) with expertise
  - in career option(s)
  - In career counseling

- Where to find such advisor(s) or mentor(s)
  - Program Director
  - Graduate School Dean / Associate Dean for Postdoctoral Studies
  - Faculty at your university (incl. advisory committee)
  - Speakers at Career events (Career Options lecture series)
Career options information
Career Tools and Resources

Cultivate your neuroscience career with the help of SfN’s professional development resources and scientific training opportunities. Society members can access a wide range of resources for scientists at all career stages through Neuronline, SfN’s community for learning and discussion. To explore open neuroscience jobs or post a job opening, check out SfN’s NeuroJobs Listings.

Discover information on:

Career Paths »
Explore videos and articles describing a variety of neuroscience career options, both in academia and beyond the bench.

Professional Development »
Learn the professional skills that will help you advance your career, from writing a great resume to finding a mentor to creating an individual development plan.

Career Advice »
Discover advice from experts on topics including negotiating a contract, making a mid-career transition, and recovering from mistakes.

See additional topics on Neuronline »

Scientific Training and Professional Development Opportunities
Careers in physiology provide opportunities to conduct cutting-edge research, teach the next generation of scientists and medical professionals, and share the excitement of science with the general public. This website provides extensive resources for two major purposes: 1) To help the general public gain a better understanding of the work that physiologists do; and 2) To assist students and new and experienced physiologists in the development of their careers. Information is provided on career topics and on mentoring.

Resources

Career Poster
Poster highlighting career opportunities in physiology

What is Physiology?
Physiology helps us understand how the body works.

Careers in Physiology Brochure
Why is physiology important? What do physiologists do? How can I become a physiologist?

PowerPoint Slides on Physiology Careers
Downloadable presentations and notes for outreach talks on physiology and career opportunities for undergrads.

PhysiologyInfo.org
This site was developed by leading researchers in conjunction with the American Physiological Society to educate the public and answer your questions about this fundamental area of science.

Job Board
APS Jobs webpage.
During Graduate School or Postdoc: considering career options

- **Networking:**
  - In person (Conferences)
  - Online resources: LinkedIn

Keep your Research Advisor involved and informed
UMMC IDP Policy

http://myidp.sciencecareers.org

Piled Higher and Deeper by Jorge Cham

HONEY, MAYBE IT WOULD HELP YOUR JOB SEARCH IF YOU THOUGHT ABOUT YOUR LIFE GOALS.

I MEAN, WHAT SORT OF CAREER DID YOU HAVE IN MIND WHEN YOU WENT TO GRAD SCHOOL?

WHAT DID YOU ENVISION DOING WITH YOUR PH.D.?

WHAT DO YOU WANT TO BE WHEN YOU GROW UP?

RETired.

title: "What do you want to be?" - originally published 3/10/2008
1. Self-assessment
Consider your skills, interests, and values.

2. Career exploration
Learn about career options for PhD scientists, and compare your skills and interests to each option.

3. Set goals
Make a concrete plan for how to improve your skills, build your network, and prepare for your desired career path.

4. Implement plan
Recruit mentors to help with various parts of your plan.
Setting SMART Goals

- Specific
- Measurable
- Action-oriented
- Realistic
- Time-bound
Usefull Links

• Council of Graduate Schools
  • http://cgsnet.org/understanding-career-pathways

• Graduate Career Consortium
  • http://gradcareerconsortium.org