

# What will you do with your Ph.D.?

We don't want this to be a frightening question. In an effort to increase broader support for graduate students, postdocs, and other early career scientists, we have put together this series of career development resources. Items include: job search engines, writing tools, and self-assessments to aid your career trajectories. As early career scientists ourselves, we do not have all the answers but we hope that these links (and citations therein) will help guide you.

#### Who are we?

We are the Genetics Society of America's Early Career Leadership Program's <u>Career Development Sub-Committee</u>.

#### What do we do?

Our primary goal is to highlight the diversity of career outcomes and life experiences that a PhD in the biological sciences can provide. We do this through regular programming such as the <u>Decoding Life interview series</u>, and one-off events like conference posters and <u>workshops</u>.

#### How do we do it?

We are a team of a dozen or so early career scientists (mostly graduate students and postdocs) from across the country. We meet every month virtually and keep up with our tasks and each other online via Slack. If you're interested in being involved with this committee (or others through GSA) check out this <u>link</u>.

### Why do we do it?

By serving on this committee, we hope to broaden our own professional networks and gain the skills necessary to work on a team, manage projects, and practice our communication skills. We have compiled this list of resources from our own searches, resources provided by GSA, and interviews with professionals in these various careers.

### Signed,

The 2020 GSA Career Development Sub-Committee



# **Table of Contents**

(click to navigate to that section)

| What will you do with your Ph.D.?                         | 1 |
|---|---|
| Table of Contents   | 2 |
| Advice and Support During Graduate School and Postdoc:    | 3 |
| Possible Career Trajectories for PhD-wielding Scientists: | 3 |
| Self-Assessments:   | 3 |
| Job Search Tools:   | 3 |
| Skill Prep:   | 4 |
| CV/Resume Writing:  | 4 |
| Public Speaking:  | 4 |
| Suggested Reading:  | 4 |
| Career-Trajectory Specific Links:                         | 5 |
| Science Policy:   | 5 |
| Science Writing / Publishing:                             | 5 |
| Education / Outreach:                                     | 5 |
| Academic Administration:                                  | 5 |
| Academic Research:  | 6 |
| Government Research:                                      | 6 |
| Science Non-Profit:                                       | 6 |
| Business and Commercial Development:                      | 6 |
| Industry Research:  | 6 |



# Advice and Support During Graduate School and Postdoc:

GradSchool101.pdf
Grad Student Resources
National Postdoc Association (NPA)

# Possible Career Trajectories for PhD-wielding Scientists:

GSA's Decoding Life Interviews
PhD Career Finder
The obvious path vs. the right path: Experts discuss the PhD career conundrum
Science Career Profiles
New York Academy of Science: Science Alliance

## Self-Assessments:

Assess yourself through the ChemIDP
Science Careers Individual Development Plan
Narrowing the Choices: What Career Path is Right for You?

### Job Search Tools:

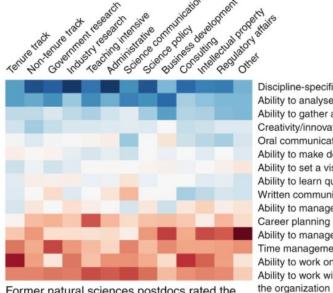
GoGig - The Anonymous Job Search
The job-matching platform built for scientists by scientists
USAJOBS - The Federal Government's official employment site
Find Jobs via the Chronicle of Higher Education
Inside Higher Ed Careers



## Skill Prep:

а

#### Current training leaves deficits in skills that are essential to the current career landscape



Former natural sciences postdocs rated the sufficiency of their doctoral training in and current need for the above professional skills on a 1 to 5 scale (5 = best training/highest current need). Heatmap colours reflect the disparity in these rankings. Data from supporting data file S1 in ref. <sup>48</sup>.

Discipline-specific knowledge
Ability to analyse data
Ability to gather and interpret information
Creativity/innovative thinking
Oral communication skills
Ability to make decisions and solve problems
Ability to set a vision and goals
Ability to learn quickly
Written communication skills
Ability to manage a project
Career planning and awareness
Ability to manage others
Time management
Ability to work on a team
Ability to work with people outside

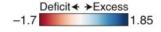


Figure a: Alund et al show that the training PhD students receive is lacking in a variety of essential skills. How can you ensure that you're working to develop these skills? Figure from:

Academic
ecosystems must
evolve to support a
sustainable postdoc
workforce

# CV/Resume Writing:

OITE Career Services: Guide to Resumes & Curricula Vitae Resume Tips (will open a powerpoint) PhD transferable skills

## Public Speaking:

<u>Toastmasters International -Home</u> <u>Three Minute Thesis</u>

### Suggested Reading:

These books can offer career guidance and inspiration Next Gen PhD — Melanie V. Sinche



# Career-Trajectory Specific Links:

### Science Policy:

A Guide to Policy Careers for Scientists

Science & Technology Policy Fellowships

Science Soapbox: Home

The Genetics & Public Policy Fellowship

Capitol Hill Day

>> Meet Dr. Maryam Zaringhalam, Science Policy Expert

### Science Writing / Publishing:

The Open Notebook -

Starting a Career in Science Writing

A Note to Beginning Science Writers

Course in Science Journalism

National Association of Science Writers

A Guide to Careers in Science Writing

- >> Meet Dr. Brooke LaFlamme, Chief Editor of Communications Biology
- >> Meet Dr. Namrata Sengupta, Science Communications Officer at Broad Institute

#### Education / Outreach:

**Education Tips from GSA** 

Developing and Implementing an Effective Public Outreach Program

Skype a Scientist!

"Reaching out - the many faces of science outreach"

How to get teaching experience that will help land you a job

- >> Meet Dr. Corey Welch, Director of STEM Scholars Program at Iowa State University
- >> Meet Dr. Jeanne Garbarino, Director or RockEDU Science Outreach at The Rockefeller University

#### Academic Administration:

Ten Tough Realities of Academic Administration

What's It Like to Be an Academic Administrator?

- >> Meet Dr. Mary Ellen Lane, Dean at the Graduate School of Biomedical Sciences for UMMS
- >> Meet Dr. Kelley Harris, Biology Major Program Manager at University of Wisconsin Madison

# Career Development Sub-Committee Explores Careers for Life Science

### Academic Research:

Making the Right Moves A Practical Guide to Scientific Management

Postdoctoral Funding Opportunities | Funding Opportunities | Research

Individual Fellowships

**Higher Education Jobs** 

>> Meet Dr. Mollie Manier, Assistant Professor of Biology at George Washington University

### Government Research:

Working in a Government Lab

Government Research: A Non-Industry, Non-Academia Career Path

- >> Meet Dr. Chinonye Nnakwe Whitley, Program Officer at NSF
- >> Meet Dr. Dorit Zuk, Division Director at NIH

### Science Non-Profit:

Non-Profit (Science Societies and Foundations) Careers

Mastering Your PhD: Exploring Nonprofit Organizations

Idealist: Jobs, Volunteering, Grad Schools, and More

The Chronicle of Philanthropy - The news and tools you need to change the world

>> Meet Dr. Kevin Lee, Chief Scientific Officer at Grace Science, Glenn, and Lawrence Ellison Foundations

## **Business and Commercial Development:**

A bridge to business

Tooling Up: The Business Development Career Track

Xconomy | Business, Life Sciences, and Technology News

- >> Meet Dr. Colleen Cuffaro, Principal at venture capital firm, Canaan
- >> Meet Dr. Christopher Cherry, patent attorney at WilmerHale
- >> Meet Dr. Tracey Raines, Chief Innovation Office at AgBiome

### Industry Research:

How to sail smoothly from academia to industry

The World's Most Comprehensive Resource for Scientists Transitioning to Industry

Rankings and Reviews of Industries

Mini-MBA: BioPharma Innovation | Rutgers Business School

Managing Science in Biotech for Postdocs

Fundamentals of the Bioscience Industry | A Center for Biotechnology Program

- >> Meet Dr. Ashlyn Ritter, medical science liaison at AbbVie
- >> Meet Dr. Joyce Tung, Vice President of Research at 23andMe