Careers in science publishing

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Where will a biology PhD take you?

Arrows represent annual fluxes. Circles are total current workforce numbers.

86,000 current US biology PhD students

1,900 to 3,900 foreign-trained PhDs start postdocs

720 Leave the US

37-68,000 current postdocs

15% of postdocs get tenure-track faculty jobs within 6 years post PhD.

29,000 current tenured and tenure track faculty

A faculty job is an “alternative” career.

17,000 current bio PhDs doing non-science jobs

22,500 current industry researchers

24,000 current non-research, science related jobs

7,000 current govt researchers

At this rate, <8% of entering PhD students will become tenure-track faculty. Yet, 53% rank research professorships as their most desired career.

Every year, 16,000 students start biology PhD programs

9,000 Receive PhDs

70% (5,800) Postdoc

7 years average time to degree

37% dropout

30% (2,500) Don’t postdoc

US PhDs spend an average of 4 years, but others must spend longer to account for number of postdocs.

30% do more than one postdoc

10% of former postdocs (up from 2% in 2010) consider themselves unemployed.

25,000 current non-tenure track academic positions

20% get non-tenure track academic jobs within 6 years post PhD.

Sources:

Unless otherwise noted, NIH Biomedical Workforce Working Group (2012)
POST-GRAD CAREERS IN SCIENCE PUBLISHING & COMMUNICATION

• Journal Editing
• Medical Writing
• Science Journalism
• Science Outreach
JOBS AT THE EDITORIAL DEPARTMENT

Editorial duties are detailed and stretch the scientific knowledge:

• perform prepublication checks on articles
  • is this science?
  • readable?
  • adequate protocol information?
  • appropriate consent and ethical requirements?
  • plagiarism?

• liaise closely with authors

• write reports, articles, critiques and summaries

• plan and organize projects

• research and commission features and new titles
EDITORIAL CAREER PATH

Victoria Aranda
PhD in Biochemistry and Molecular Biology

Experience

Senior Editor
Nature Publishing Group
March 2012 – Present (2 years) | Greater New York City Area

Associate Editor
Nature Publishing Group
July 2010 – April 2012 (1 year 10 months)

Assistant Editor
Nature Publishing Group
January 2010 – July 2010 (7 months)

Postdoctoral Fellow
Cold Spring Harbor Laboratory
September 2004 – August 2009 (5 years)

Postdoctoral Fellow
Stony Brook University
April 2004 – September 2004 (6 months)

Protein sorting mechanisms, mouse genetics of lipid receptor chaperones
EDITORIAL CAREER PATH

Steven Lokwan
PhD in Neuropsychopharmacology

Background

Experience

Director of Operations
Faculty of 1000
April 2008 – Present (5 years 11 months)

Project Director
Faculty of 1000 Biology
January 2006 – April 2008 (2 years 4 months) | London, United Kingdom

Managing Editor
Faculty of 1000 Biology
January 2002 – December 2006 (5 years) | London, United Kingdom

Commissioning Editor
Faculty of 1000 Biology
August 2000 – December 2002 (2 years 5 months) | London, United Kingdom
SO HOW DO YOU GET AN EDITORIAL JOB?

Show that you have great communication skills
• neat, error-free, professional emails
• don’t have a silly sounding e-mail
• cover letter a must

Display professional purpose
• what is special about the journal/publisher?
• you want to leave research?
• why a publishing career?

Be concise and specific
• But don’t write a massive essay!
• don’t talk about love of writing or communicating science to the public

No experience necessary
• science writing degrees are not good for this type of career
• publisher prefers to mentor you from the start

Be ready for tests
• eye for detail test, manuscript test, writing tests, editorial test
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CAREERS IN SCIENCE WRITING

• technical writer - requires a lot of science writing expertise (grants, papers, methods, etc)

• science journalism/writing for the public

• policy writing

• consult other science writers
SCIENCE WRITING CAREER PATH

Jennifer Deleon
PhD in Molecular and Cell Biology

Experience

Freelance Science Writer
New York Academy of Sciences
November 2012 – Present (1 year 4 months) | Greater New York City Area

Doctoral Research
Stony Brook University
January 2011 – Present (3 years 2 months)
Utilized advance molecular biology techniques to identify novel roles of Class I Pi3K
Ed Yong
PhD in Biochemistry

Experience

Freelance journalist
Various
September 2007 – Present (6 years 6 months)
Science writer published in Nature, the BBC, New Scientist, Wired UK, the Guardian, the Times, Discover, The Scientist, the BMJ, CNN, Slate, the Daily Telegraph, the Economist and more.

Creator of award-winning science blog Not Exactly Rocket Science

Head of Health Evidence and Information
Cancer Research UK
September 2004 – July 2011 (6 years 11 months)
Leads the Evidence and Information team, a group of six people with scientific backgrounds who ensure that the charity’s information on cancer prevention and early detection is evidence-based and up-to-date.

Edits and fact-checks writing from across the charity for consistency and accuracy, including press releases, web content, publications, copy from corporate partners, health campaigns, policy statements and more.
David Saltzberg
PhD in Physics

- Thesis work on the mass of the W boson
- Postdoc at CERN
- faculty member at UCLA
- Recipient of multiple awards and fellowships
- science consultant for CBS’s The Big Bang Theory: checks scripts, advises producers, writers, actors, set decorators, prop masters, costume designers etc. on scientific accuracy
- writes The Big Blog Theory blog to explain the science behind each episode
SO HOW DO YOU GET A SCIENCE WRITING JOB?

• Writing experience during PhD often isn’t adequate

• Journalism training/experience is expected

• Blogging/tweeting/social media
  • Guest blog:
    • F1000 blogs
    • Sciencescape blog

• Networking
SCIENCE OUTREACH

Main goals: increase product awareness and public engagement

- plan, develop, and execute strategies to reach individual users
- develop relationships across departments internally
- Develop and lead global programs
- Travel to key meetings and site visits to deliver compelling presentations
- Attend conferences and participate as a speaker or panelist
GENERAL WORK TASKS

• Meetings and conference calls

• institute visit

• Conferences

• Organize and lead discussion groups

• Communicate to/with researchers
  • Email
  • Meetings
  • Blog posts
  • Press releases
  • Social media

• At conferences: talk to people to find out what’s new in different fields
Christine Buske
PhD in Cell Systems Biology/Neuroscience

Experience

**Head of Outreach & Relationship Development**
Springer Science+Business Media / Papers
January 2014 – Present (2 months) | London, United Kingdom

**Lead Marketer ('Papers Genius') for Papers**
Springer Science+Business Media / Papers
January 2013 – January 2014 (1 year 1 month) | London, United Kingdom
SCIENCE OUTREACH CAREER PATH

Lou Woodley
PhD in Gene expression and microbiology (thesis unsubmitted)

Experience

Communities Specialist - nature.com
Nature Publishing Group
April 2011 – December 2013 (2 years 9 months) | London, Cambridge, NYC and online

Product Manager - Nature Network and nature.com blogs
Nature Publishing Group
November 2009 – April 2010 (6 months)

Product Development Manager
Nature Publishing Group
July 2009 – November 2009 (5 months)

Graduate Intern
Macmillan
November 2008 – June 2009 (8 months)

Managing Editor
BlueSci magazine
June 2004 – October 2006 (2 years 5 months)

Managing Director / Sales Director
Loughborough High School - Young Enterprise Scheme
1996 – 1997 (1 year)
THE OUTREACH TEAM AT F1000
DO WHAT YOU LOVE!

Brian May, guitarist of Queen
PhD in Astrophysics

Brian Keith
“Dexter” Holland, guitarist of Offspring
PhD candidate in Molecular and Cellular Biology

Mayim Hoya Bialik, actress
PhD in Neuroscience

Angela Merkel, politician
PhD in Quantum Chemistry