
Overview of Career Opportunities in the Life Sciences Sector

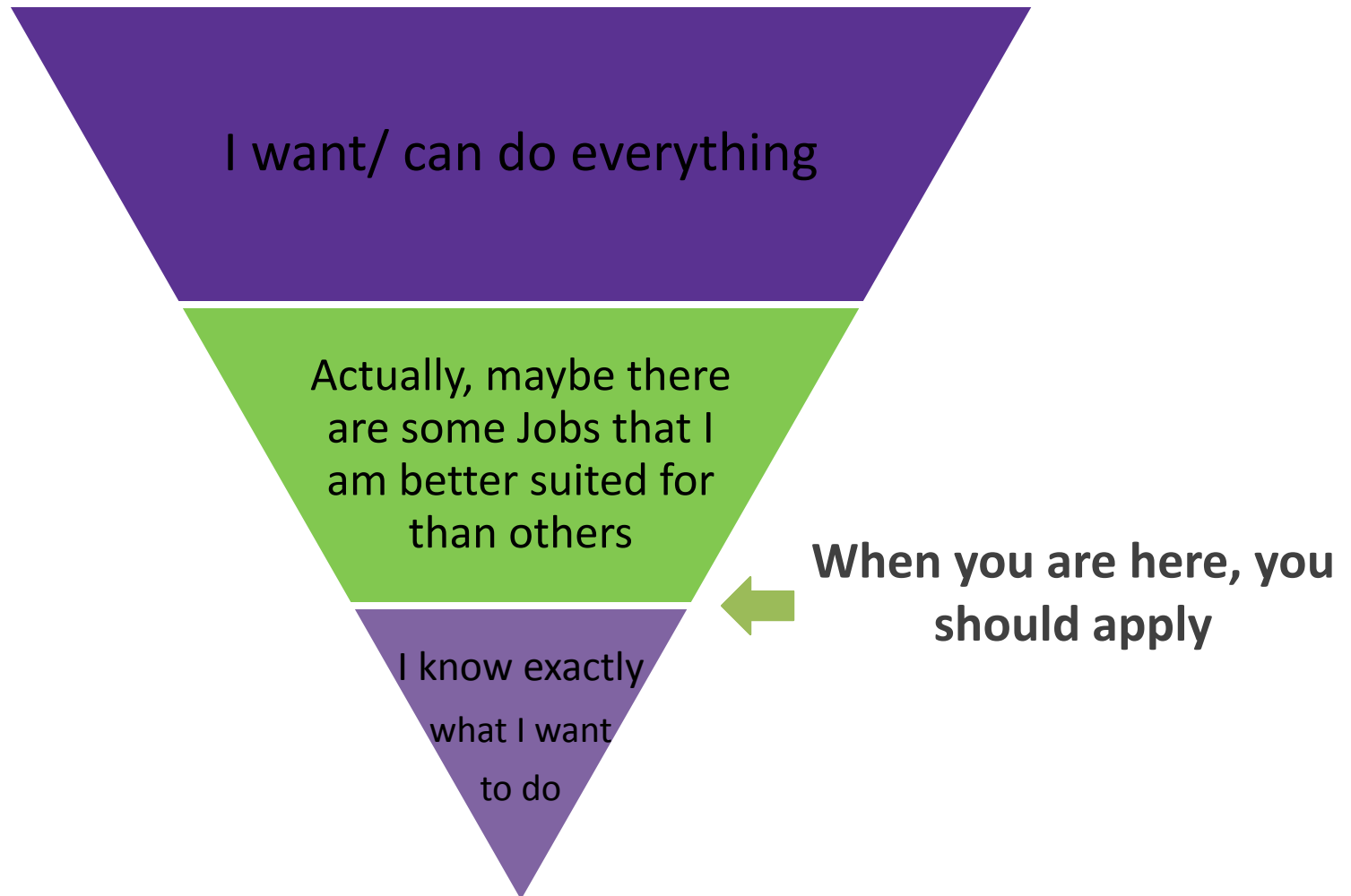
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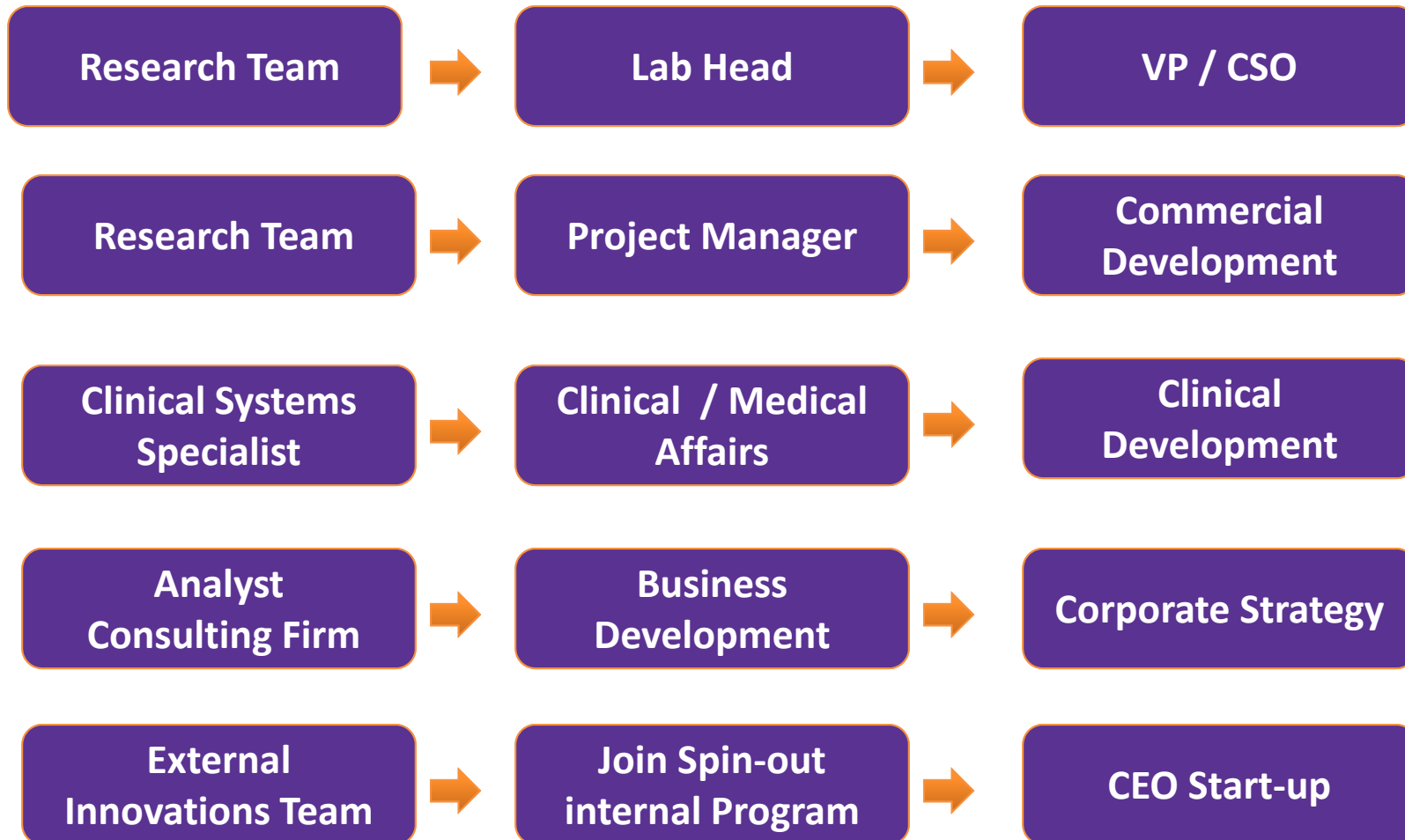
Job Searching: The Funnel Effect



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A Few Industry Career Paths

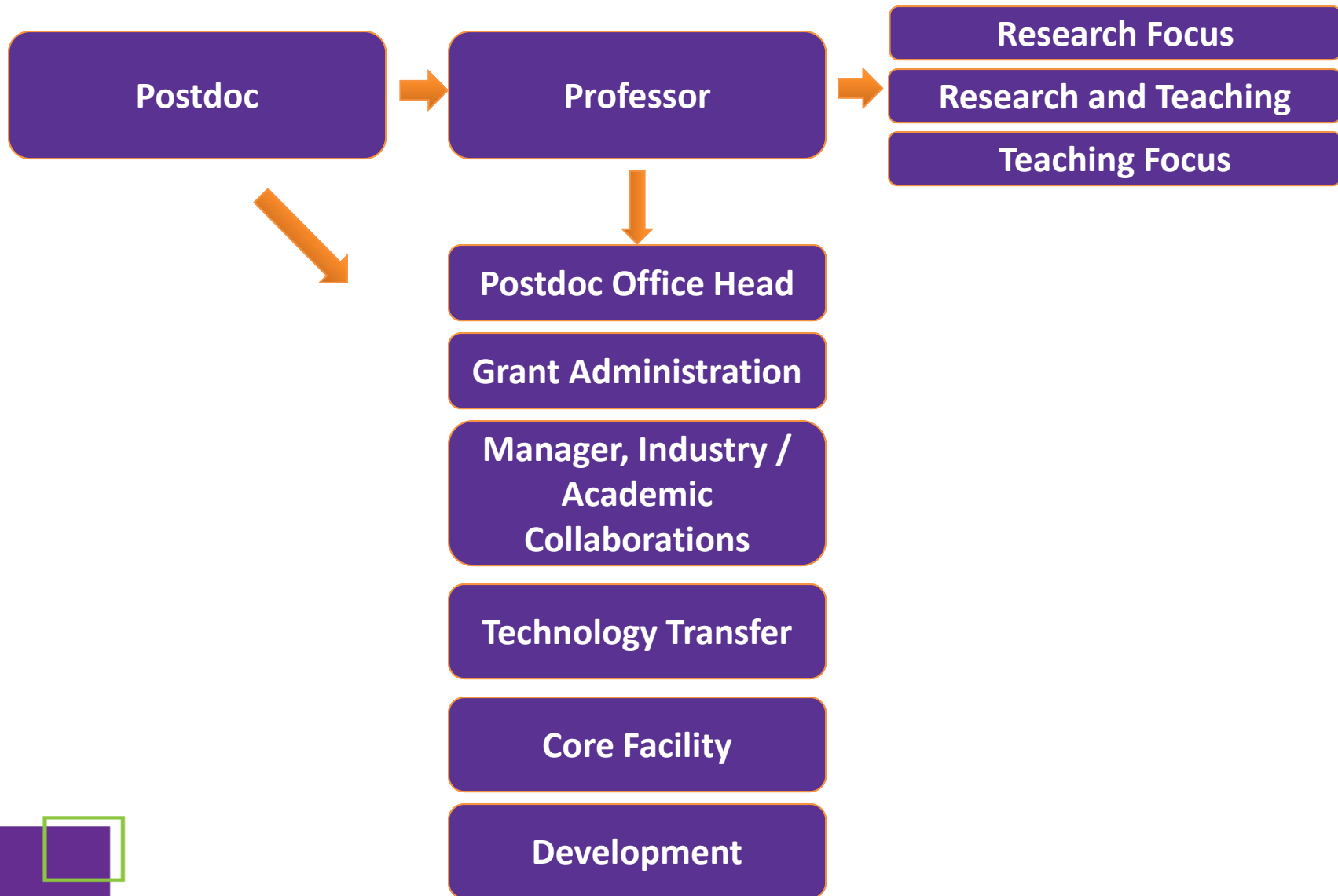


Research Career Paths

- Many organizations have different career tracks:
 - Management track
 - Do research in an org for 3-5 years
 - Then manage people, projects, teams, etc
 - Research track
 - Strong bench researchers are invaluable. If you like research, you can have a fulfilling career at the bench



A Few Academic Career Paths



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Non-Academic Career Paths

R&D Roles in Industry

- Scientist Bench Roles
- Research Management
- Regulatory
- Clinical
- Medical Affairs

Commercialization Roles in Industry

- Alliance Management
- Business Development
- Communications
- Finance
- Marketing
- Advocacy / Patient Advocacy
- Product Management
- Project Management
- Market Research
- Market Access
- Medical Science Liaison
- Medical Writing
- Reimbursement
- Pharmacoeconomics
- Operations
- Sales
- Technical Specialist
- Training



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Additional Roles

Consulting

- Scientific Evaluation
- Strategic Analysis
- Competitive Landscape
- M&A Analysis
- Financial Valuation
- Partnership Strategy
- Intellectual Property
- Sales Strategy
- Marketing Strategy
- Grant Writing
- Pharmacoeconomics
- Pricing Scenarios
- Reimbursement
- Market Assess
- Health economics
- Operations
- Commercialization
- Emerging Markets
- Supply Chain
- Communications

Patent Law

- Technical Specialist
- Patent Analyst (licensed patent agent) (future)

Editor

Venture Capital / Investment Banking

- Analyst



Non-Profit Organizations – such as...



Create a world without ALS.



someday is today



- Research Roles
- Communications
- Alliance / Project / Program Management Roles
- Grant Administration / Evaluation
- Advocacy Roles
- Licensing / Partnership Roles



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Post-Doc experiences are valuable!!

- Postdoctoral fellowships can open up many doors for your career
- If you plan to be a head of a research group in industry or a non-profit, a **productive postdoc is necessary**



How to Identify the Right Career Path



Fit Matters



VS



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Job Search Checklist

- Outline what you want in a job

- Location
- Requirements
- Responsibilities
- Size of company
- Salary
- Culture
- Management style
- Etc...

Item	Must Have	Nice to Have	Definitely No



Articulate What you Want

- Reflecting on these helps you articulate what you want
 - ✓ **Location** – i.e. I am looking for a role that is non-car accessible
 - ✓ **Requirements** – i.e. I am looking for a heavy research role
 - ✓ **Responsibilities** – i.e. I am looking for a role where I manage
 - ✓ **Size of company** – i.e. I am looking to work in a startup
 - ✓ **Salary** – i.e. I am looking for a salary on the \$80-90K range
 - ✓ **Culture** – i.e. I am looking for a team based culture
 - ✓ **Management style** – i.e. I am not looking for a micromanaging environment
 - ✓ Etc...



Are you a fit for a Small Organization?



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Small Company

Research

Training
Colleagues

Grants

Managing
Collaboration

Interact with
Vendors

Fix machines

Write SOP's

Prepare
presentations
for Business
Group

Etc...



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How about a Large Company?



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Take an Inventory of your Skills... What do you have? What do you need to build?

- Disease Knowledge
- Specific Technical Skills
- Data analysis skills
- Ability to synthesize information/learn new areas
- Experience writing Patents
- Tech Transfer Experience
- Technical Writing
- Non-Technical Writing
- Public Relations
- Exposure to Clinical Research
- Management of the Lab
- Managing budgets
- Training people
- Managing people
- Grant Writing
- Interacting with Collaborators
- Finding Collaborators
- Starting new Groups / Initiatives



http://myidp.sciencecareers.org/

myIDP INDIVIDUAL DEVELOPMENT PLAN
Science Careers

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AAAS

You have put a lot of time and effort into pursuing your PhD degree. Now it's time to focus on how to leverage your expertise into a satisfying and productive career. An individual development plan (IDP) helps you explore career possibilities and set goals to follow the career path that fits you best.

myIDP provides:

- Exercises to help you examine your skills, interests, and values
- A list of 20 scientific career paths with a prediction of which ones best fit your skills and interests
- A tool for setting strategic goals for the coming year, with optional reminders to keep you on track
- Articles and resources to guide you through the process

There is no charge to use this site and we encourage you to return as often as you wish. To learn more about the value of IDPs for scientists, read the first article in our myIDP series.

Click below to get started.

First Time Here? Returning User

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20 Different Career Paths

Principal investigator in a research-intensive institution:

Independent researcher at a medical school, private research institute, government lab or university with minimal teaching responsibilities

Research in industry:

Discovery or preclinical researcher; manager of a research team or facility

Research staff in a research-intensive institution:

Staff scientist or researcher in academia or government, lab manager, director of a multi-user research facility in an academic institution

Combined research and teaching careers:

Faculty at a liberal arts college or university whose job includes both research and major teaching responsibilities

Teaching-intensive careers in academia:

A primarily teaching faculty position in a research university, liberal arts college, community college

Science education for K-12 schools:

Classroom teacher; curriculum developer; science specialist

Science education for non-scientists:

Education or public outreach specialist such as at a science museum or scientific society

Clinical practice:

Clinician such as genetics counselor, therapist, physician

Public health related careers:

Public health program analyst or evaluator; epidemiologist; biostatistician; medical informaticist

Drug/device approval and production:

Regulatory affairs professional; quality control specialist

Scientific/medical testing:

Testing specialist in an environmental, public health, genetics, or forensic science setting (intelligence agencies, federal/state departments of justice); clinical diagnostician

Science writing:

Science, medical, or technical writer or journalist; science editor; science publisher

Research administration:

Research administrator in private or public research institutions, government or academia, including compliance officers, grants and contracts officers; dean or director of research programs

Science policy:

Public affairs/government affairs staff at scientific societies, foundations, government entities, or think tanks

Intellectual property:

Patent agent; patent attorney; technology transfer specialist

Business of science:

Management consultant; business development professional in a biotech company; venture capitalist; market researcher; investment analyst

Entrepreneurship:

Starting your own business

Sales and marketing of science-related products:

Medical science liaison; technical sales representative; marketing specialist

Support of science-related products:

Technical support specialist; field application specialist; product development scientist or engineer

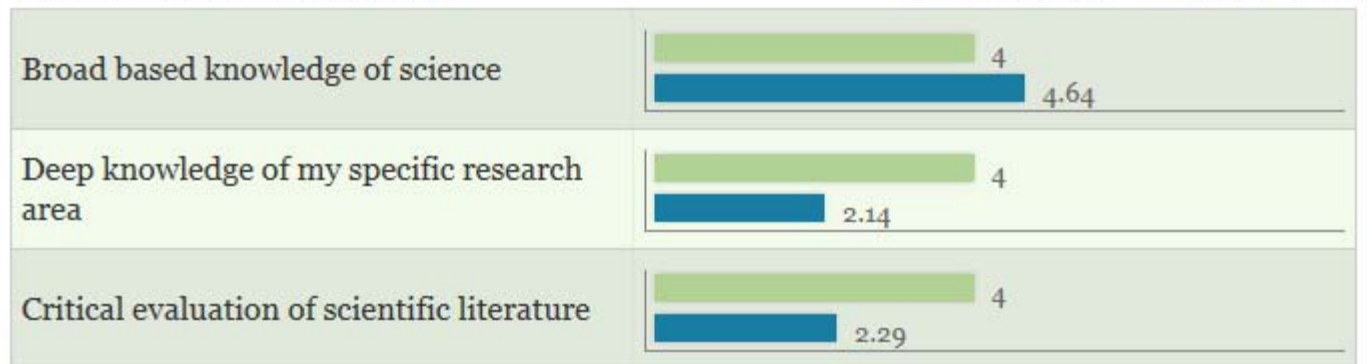
Clinical research management:

Clinical research project/trials manager or coordinator

Compare Skills Match to People in the Role

Career Path	Skills Match	Interests Match	Values
Science education for non-scientists: Education or public outreach specialist such as at a science museum or scientific society	81%	83%	<i>Consider Your Values!</i>
Sales and marketing of science-related products: Medical science liaison; technical sales representative; marketing specialist	82%	80%	
Science policy: Public affairs/government affairs staff at scientific societies, foundations, government entities, or think tanks	77%	80%	
Business of science: Management consultant; business development professional in a biotech company; venture capitalist; market researcher; investment analyst	75%	78%	
Research administration: Research administrator in private or public research institutions, government or academia, including compliance officers, grants and contracts officers; dean or director of research programs	73%	78%	

Scientific Knowledge



How to Identify Organizations



Identifying Organizations – Search...

- Conferences
 - Exhibitors
 - Sponsors
 - Presenters
 - Poster Sessions
 - Conference Career Fairs



Meetings for Scientific Organizations



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Upcoming Conferences

The Science of Cancer Health Disparities

Molecular Targets and Cancer Therapeutics

Tumor Immunology and Immunotherapy

San Antonio Breast Cancer Symposium

MYC: From Biology to Therapy

Translation of the Cancer Genome

Educational Workshops and Courses

Methods in Cancer Biostatistics

Molecular Biology in Clinical Oncology

AACR/ASCO Methods in Clinical Cancer Research

Integrative Molecular Epidemiology



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Quest Diagnostics, Inc.



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Identifying Organizations – Search...

- Papers (Science, Nature, Cell, etc)
- Patents
- Grants
- International Consulates



LinkedIn Job Search



LinkedIn Premium navigation bar with search and navigation options.

Search for people, jobs, companies, and more... **Advanced**

Home Profile Connections **Jobs** Interests









Jobs

research scientist boston ma

Search

210 results for **research scientist boston ma** Sort by **Relevance**

-  **In Vivo Neurobiology Research Scientist (BS/MS)**
Novartis Institutes for BioMedical Research
Greater Boston Area • Nov 7, 2014
Similar **View**
-  **RESEARCH SCIENTIST / 40 HOUR / DAY / BWH - MEDICINE**
Brigham and Women's Hospital
Boston-On Campus/Longwood Area • Nov 7, 2014
▶ 1,726 people in your network • Similar **View**
-  **Research Scientist, Health Economics Modeling & Simulation (consulting)**
Evidera
Greater Boston Area • Nov 12, 2014
▶ 5 connections to the poster • Similar **View**
-  **Research Scientist**
Thermo Fisher Scientific (Life Technologies)
Boston, MA, US • Nov 7, 2014 • From jobs.at.thermofisher.com
▶ 822 people in your network • Similar **View**
-  **Senior Research Scientist**
Northeastern University
Boston, MA, US • Nov 13, 2014 • From apptkr.com
▶ 1,753 people in your network • Similar **View**
-  **Research Scientist - Commercial Insurance**
Liberty Mutual
US-MA-Hopkinton • Oct 20, 2014
▶ 1,503 people in your network • Similar **View**



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Organizations may have a career page

www.wibcareercenter.com



Search Jobs

Keywords

Boston, MA

Go

Advanced



Welcome to **Women In Bio's** Career Center

We are dedicated to helping you find your next career in all professions in the life sciences industry. Create your professional profile or import your LinkedIn® information to apply for jobs, create personalized Job Alerts, and connect with recruiters.

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Women In Bio (WIB) was established in 2002 to help women entrepreneurs and executives in the Baltimore-Washington-Northern Virginia area build successful bioscience-related businesses. WIB includes women from all sectors of the bioscience industry, including executives, scientists, academics and professionals. Chapters are opening across North America in all the key biotech hubs, as the organization continues to attract energetic and engaged women to join as members and volunteers.

For Employers

Are you seeking to support women in the life sciences, as well as market your company to life science leaders? See our posting prices and learn how we can help you create a strong employer brand with WIB.

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Post Jobs | Get your job in front of hundreds of WIB members.

Analytics | Receive real-time performance metrics on your job posting.



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Identifying Smaller Organizations

Incubators/Incubator Spaces

- MassChallenge: <http://www.masschallenge.org>
- Tech Stars: <http://www.techstars.org/>
- Dog Patch Labs: <http://dogpatchlabs.com/>
- North Shore Technology Council – www.nstc.org
- Cambridge Innovation Center: www.cictr.com
- Lab Central: <http://labcentral.org/>
- HealthBox



Financing Organizations

Venture Capital Organizations Including:

 EXCEL VENTURE MANAGEMENT



HealthCare Ventures LLC



Corporate Venture Funds Including:



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Read Industry News



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Identifying Organizations – Industry Reports...



World Preview 2013, Outlook to 2018
The Future of Medtech

 EvaluateMedTech™

www.pwc.com



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Make a List of Organizations to Apply to

- Use this list...
 - to search LinkedIn
 - to identify posters to view at an upcoming industry meeting
 - to let your close contacts know about which companies you are interested in
 - to search events to see if people from these companies are speaking
 - etc

Company Interested in	Companies that are a fit	Companies applied to	Status
X	X	X	
X	X	X	
X	X		
X	X		
X			
X			
X			



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How to Identify Relevant Roles



Thoroughly Read Job Qualifications

Look at the qualifications.
Compare with your background.

Qualifications

- The candidate must have a Ph. D. in Molecular Biology, Biochemistry, or a closely related field, preferably with oncology/immunology experience.
- Hands-on experience with molecular biology (including recombinant DNA construction , RNA quantification using RT-PCR, transfection, western blotting techniques, etc) and cell biology (such as maintenance of variety of cell lines).
- Experience with protein purification, enzymatic characterization and inhibition assays desirable.
- Excellent written and oral communication skills.
- He or she should be highly motivated, productive and team oriented with demonstrated ability to work independently and to solve problems as they arise.



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Make a list of skills listed in job descriptions

Item	Must Have	Nice to Have
Skill 1	X	
Skill 2	X	
Skill 3	X	
Experience training people	X	
Experience with Budgeting		X



Which title is relevant to you?

When reading through job descriptions and talking with people, make a list of relevant job titles

- i.e. Research Roles **(these may all mean the same thing)**
 - Scientist
 - Sr. Scientist
 - Investigator
 - Manager
 - Research Scientist



Use the job titles to search for roles



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what

research scientist

job title, keywords or company name

where

Cambridge, MA

city, state or zip code

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[Advanced Job Search](#)

Careers

Careers

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Post a Job or Internship

Careers Page FAQs

JOB SEARCH



Search Jobs or Internships

Please apply for any open positions using the information contained in the job listing. MassBio does not process applications for the positions listed here — all applications must be sent directly to the member company that is posting the job.

Listing Type	Job
Category	Scientist (42)
Keywords:	scientist
Sort By:	Date Posted
Results Per Page:	10

SEARCH

Showing jobs: 1–10 of 160 matching scientist

naturejobs.com

What

scientist

Description or keyword

Where

cambridge

Country, city or postal code

Find Jobs



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LinkedIn Search



Search for people, jobs, companies, and more... Advanced

SEARCH

Advanced >

All
People
More...

Keywords

First Name

Last Name

Title

Current or past


Company



School



Location
Located in or near:



13,333 results

- 1st Connections x
- 2nd Connections x
- Group Members x

 **Gene** 1w
Scientist at Dyax
Greater Boston Area · Biotechnology
▶ 12 shared connections · Similar ·  302

 **Terence** 1w
Scientist III at ArQule Inc.
Greater Boston Area · Pharmaceuticals
▶ 11 shared connections · Similar ·  177

 **Dong** 1w
Scientist II at Biogen Idec
Greater Boston Area · Biotechnology
▶ 16 shared connections · Similar ·  500+

 **Manfred** 1w
Curation Scientist at Novartis
Greater Boston Area · Pharmaceuticals
▶ 10 shared connections · Similar ·  320

 **Joe** 1w
Principal Scientist at AstraZeneca
Greater Boston Area · Pharmaceuticals
▶ 9 shared connections · Similar ·  500+

 **Carlo** 1w
Senior Scientist at Synageva Biopharma
Greater Boston Area · Research
▶ 13 shared connections · Similar ·  225



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Utilize Informational Interviewing

How to find the right opportunity:

Definition: An informational interview is an interview conducted to collect information about a job, career field, industry or company.

It is **not a job interview**. Rather, it's an interview with an individual working in a career you would like to learn more about.



What to ask about

Particular Job

- Responsibilities
- Day to Day
- Like
- Dislike
- Growth potential
- Skills needed

Company

- Culture
- Work Environment
- Management Style
- Growth Potential
- Personality Fit
- Skills needed
- Skills valued

Career Progression

- Growth Opportunities
- Career Path
- Skills to Develop

Career Entry

- How to get in a role
- Networking
- Experience required
- Skills needed
- Skills one can learn
- Best way to enter field



Building your Resume

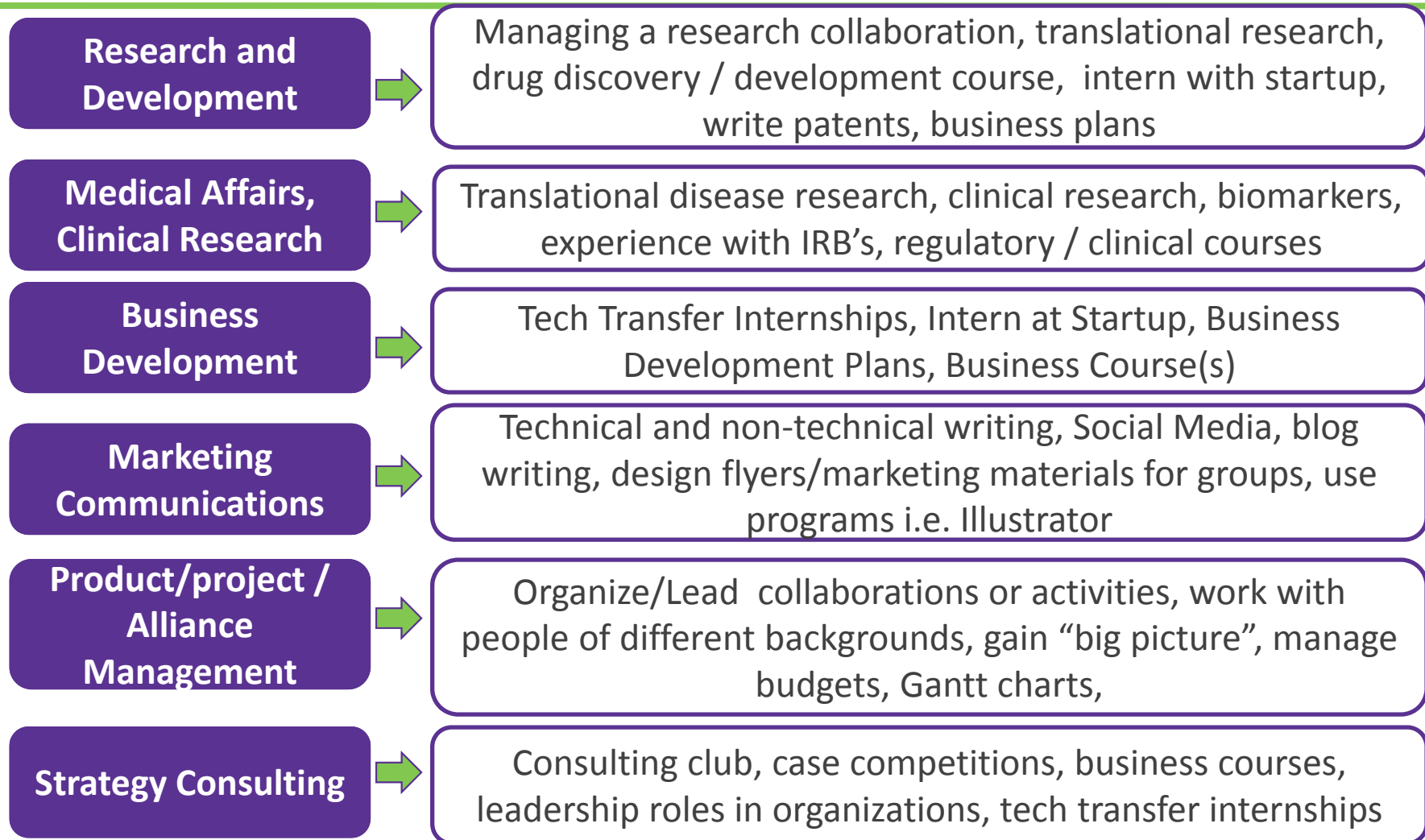


Customize your Skills!

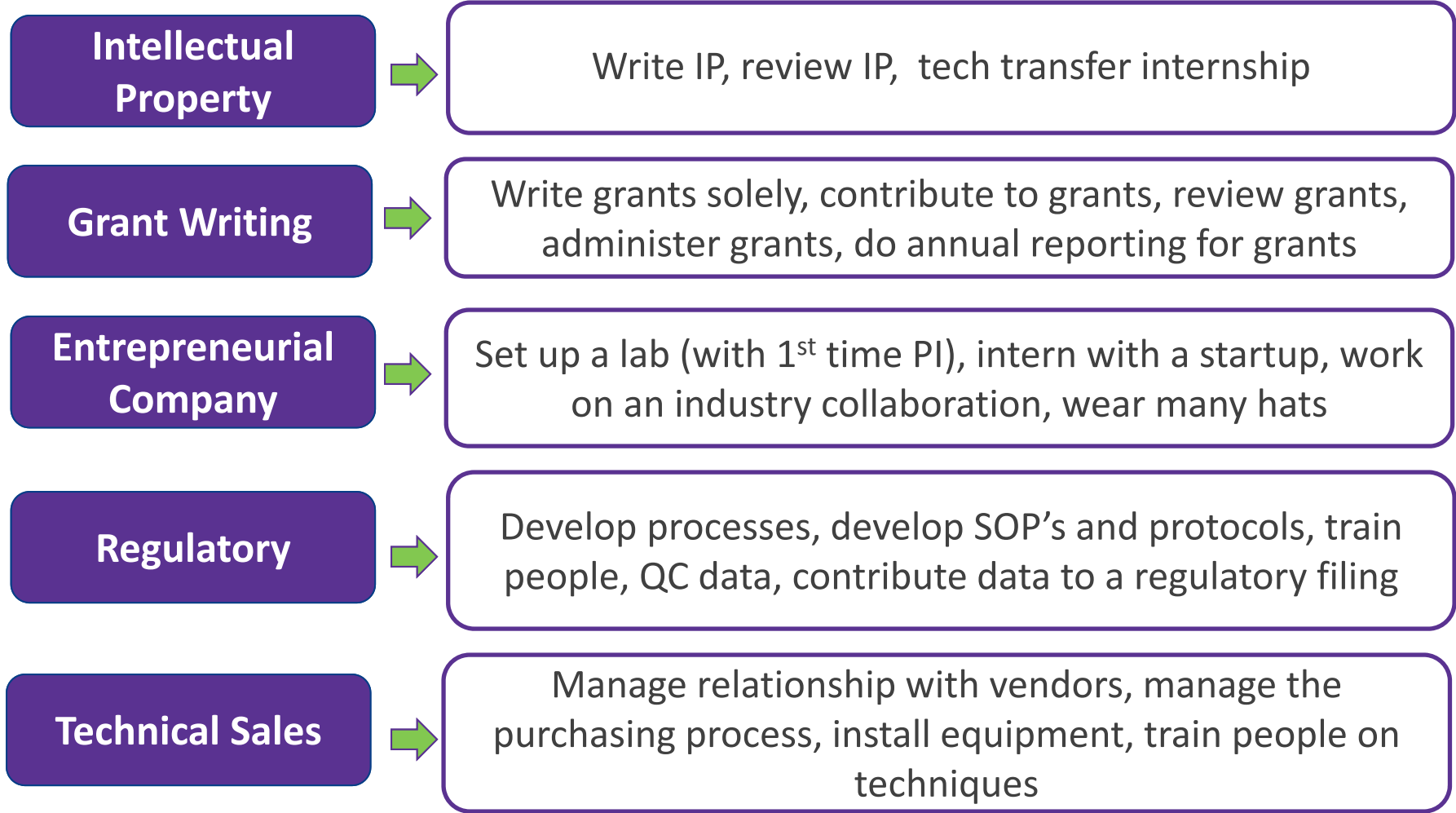
You choose what to
highlight among your experiences



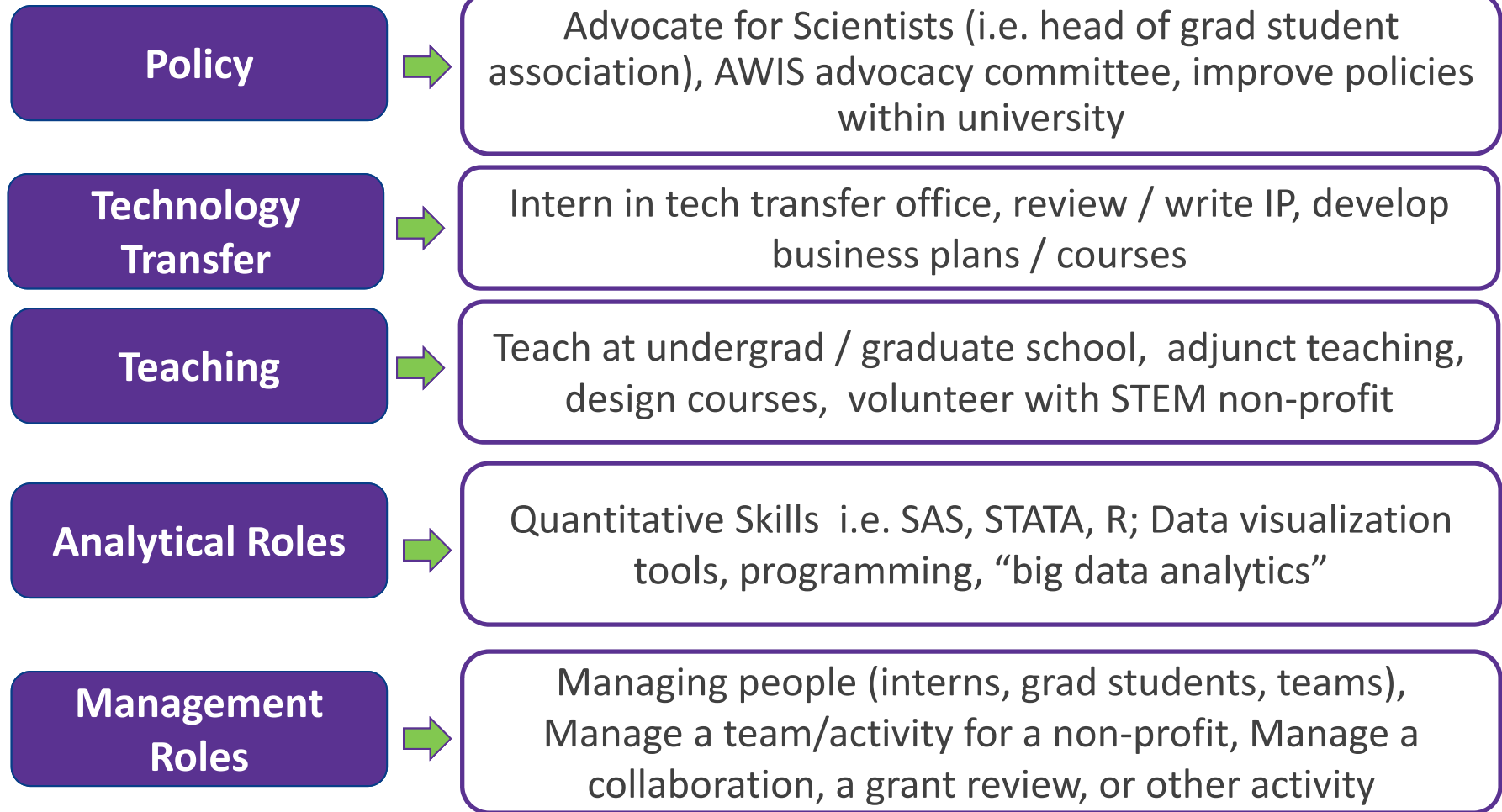
Building Skills for Different Roles



Other Valuable Experiences for Roles



Additional Valuable Experiences for Roles



Similarities Between CVs and Resumes

- Be succinct
- Include “big-picture” summaries of research experience
- Tell a story
- Tailor to position (layout and keywords)
- Don’t minimize accomplishments



Differences Between CVs and Resumes

	CV	Resume
Address	Work	Home
Email	Professional address	Personal address
Education	Education listed first	Education can be listed a few different places
Research detail	Include a lot of detail on research projects. Correct to assume reader has knowledge in your field	Research detail is tailored for each role / company
References	Professional references listed	Typically not listed
Mentees	Mentees names listed	Mentees names not listed
Grants	List grants with \$\$ on CV's	Grants funding agency name listed, typically not dollar amount



Resumes: Do not include

- Picture
- Personal information:
 - date of birth, family, relationship status
- Be careful with listing hobbies
 - Interesting hobbies are ok



10 Seconds ...

**The average time an HR looks at
your resume or CV**



Example of an Academic CV

EDUCATION

- 2008 - 2013 | **University of Minnesota**, St. Paul, MN
Ph.D., Natural Resource Science and Management, minor: Conservation Biology
Dissertation: "Agricultural intensification and global environmental change", advised by Dr. Jonathan A. Foley
- 2003 - 2007 | **St. Olaf College**, Northfield, MN
B.A., Biology and Environmental Studies (Social Science)

FELLOWSHIPS AND GRANTS

- 2013 - 2015 | Harvard Ziff Environmental Fellowship
- 2012 | UMN Institute on the Environment mini-grant: Adventure learning for sustainable agriculture
- 2011 | NSF / Swedish Research Council Nordic Research Opportunity
- 2010 - 2013 | NSF Graduate Research Fellowship
- 2008 - 2009 | UMN College of Food, Agricultural, and Natural Resource Sciences Fellowship

RESEARCH EXPERIENCE

- 2013 - present | *Environmental Fellow, Center for the Environment, Harvard University*
- 2009 - 2013 | *Graduate Research Assistant / Fellow, Institute on the Environment (IonE), University of Minnesota*



NAME
ADDRESS
Phone; Email

Resume Example

SUMMARY OF QUALIFICATIONS

- Experienced research scientist with a background in *in-vivo* modeling and adult neural stem cells
- Proficient in techniques in molecular and cellular biology, microscopy, histology and virology
- Excellent verbal and written skills, strong interpersonal and team work skills.

PROFESSIONAL EXPERIENCE

University of SCHOOL, Boston MA

Sept 2007-2013

Lab focused on molecular neuro-oncology with and emphasis in gliomas and neurofibromas

Doctoral researcher

- Research focused on developing mouse models of gliomas. Used gene expression to study glial development and the process of tumorigenesis.
- Demonstrated that the interaction between specific combinations of genetic alterations and susceptible cell types, rather than the site of origin are important determinates of gliomagenesis.
- Adapted sorting and dissecting techniques to purify culture and implant murine neural stem cells.
- Used molecular biology, cell biology, tissue culture, histology, flow cytometry and imaging techniques extensively. Also used viral production/delivery and mouse models (somatic and germline genetic models) extensively.
- Participated in preparing and writing of operating grant applications (NIH and DOD)
- Trained graduate student, post docs and technicians in mouse dissection and surgical procedures.
- Trained and supervised technicians in the management of the mouse colony.

SCHOOL University, BOSTON MA

Lab focused on the molecular mechanisms underlying the association of obe:

Undergraduate research thesis

- Investigated the effects of leptin in cardiac remodeling in human and
- Pharmacologically inhibited the Janus-activated kinase and mitogen-
- Utilized RT-q PCR to study the effects of leptin on matrix metalloprot

EDUCATION

SCHOOL UNIVERSITY, Boston, MA

PhD. in Cancer Biology

- Study of the mTOR Pathway with respect to cancer formation

SCHOOL University, Boston, MA

BS, Department of Biology, cum laude

SKILLS AND TECHNIQUES

- **Molecular biology:** recombinant DNA techniques, western blotting, RT-qPCR, viral transduction, liposome mediated transfection, electroporation
- **Cellular biology:** Isolation and culture of neural stem cells, astrocytes, neurons and cardiomyocytes, apoptotic, cell cycle and differentiation assays, immunofluorescence, flow cytometry, protein extraction purification
- **Microscopy:** light microscopy, fluorescent/laser confocal microscopy
- **Virology:** Amplification and purification of adenovirus and lentivirus for *in-vivo* and *in-vitro* work
- **Tumor biology:** Stereotactic intracranial injection of cells and virus, micro-dissection of mouse brain at embryonic and adult stages, transcardial perfusion.
- **Histology:** Immunocytochemistry, HE staining, cryosection and vibratome sectioning
- **Computer skills:** Microsoft word, Excel, PowerPoint, Photoshop, Illustrator, Flowjo, Prism
- **Language:** French, Italian, Spanish

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Society of neuro-oncology 2011
- American association for cancer research 2010

PRESENTATIONS

- Presentation 1 Date
- Presentation 2 Date
- Presentation 3 Date

PUBLICATIONS

- List publication 1
- List publication 2
- List publication 3
- List publication 4, etc



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Resume Formatting



Contact Information

- Your name, with credentials (e.g. Ph.D., MBA)
- Your HOME address, personal phone and email
 - Have a professional email name... i.e. firstname.lastname@gmail.com
- If you are international and have US citizenship or Green Card, list it, otherwise sponsorship is assumed

John Smith, Ph.D.

XX Street, Cambridge Ma, 02139

name@gmail.com; 123-456-7890

Green Card Holder



Resumes - a Few Points to Consider...

- **Customize each document for each job application**
- Resumes tell a story – what are you trying to communicate
- Make it easy to read
- Pay attention to formatting
 - Bullet points, fonts, size, ease of reading, etc
- Put your **first and last name** in the file name
- For resumes, 2 pages are okay, if enough experience
- Include email address and phone # in your resume



Objective vs. SOQ

Objective can be restrictive in a resume

- **Objective:** to be a bench scientist in a startup
- What if your objective changes?



Summary of Qualifications

- What top 3 things do you want people to know about your qualifications...
 - Scientific/technical skills
 - Business skills/interest
 - Leadership ability, analytical skills, teamwork
- ... and your fit with the company and position



SOQ Example - Science

- Adaptable neuroscientist specializing in the molecular mechanisms underlying chronic neurodegeneration with a particular focus on the role of traumatic brain injury in the disease pathogenesis.
- Disease experience includes Alzheimer's, ALS, and rare neuromuscular diseases (NM, CFTD, HCM, MPD-1 & GSD-V).
- Highly skilled in both *in vitro* (cellular and molecular biology, protein, histology and imaging) and *in vivo* (surgery, behavioral analysis) research techniques.
- Established track record of successful collaboration experience (4 external and 3 internal), strong ability to multi-task and work effectively within a group setting.



SOQ Example – Non Bench Work

- Current postdoctoral fellow with a research background in plant-bacterium symbiosis using genomic approaches.
- Thorough understanding of market research, IP and commercialization through a tech transfer internship.
- Successful collaboration experience (4 external and 3 internal), detail oriented, and strong communication and presentation skills (>25 conference presentations)



EXPERIENCE

What belongs in this section?

- Employment – salaried
- Post doc, Graduate, Undergraduate research
- Relevant other experience

PROFESIONAL EXPERIENCE

University of SCHOOL, Boston MA

Sept 2008-2014

Lab focused on molecular neuro-oncology with and emphasis in gliomas and neurofibromas

Doctoral researcher

- Research focused on ...
- Demonstrated that ... cells.
- Used techniques ...
- Participated in preparing and writing of operating grant applications
- Trained ...

SCHOOL University, BOSTON MA

Jan 2002-June 2005

Lab focused on the molecular mechanisms underlying the association of obesity and insulin resistance.

Undergraduate research thesis

- Investigated ...
- Identified ...
- Used techniques ...



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Listing Organization Information

EXPERIENCE

University, Boston MA

Sept 2006-2012

One sentence desc of lab

Doctoral researcher, Department of XX

- Provide a one sentence description of the lab, or organization you work(ed) for.
 - X Lab focuses on novel neurobiology research in the area of X therapeutic area
 - X Lab investigates land use and agricultural practices and their effects on ecosystems
 - X Lab develops and integrates genomics resources into barley breeding programs
- When listing position title, include department
 - Graduate Student researcher, Cell Biology Department
 - Postdoctoral Researcher, Department of Agronomy and Plant Genetics
 - Research Fellow, Department of Ecology, Evolution and Behavior



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Listing Technical Experience

- List what you were responsible for:
 - Research focused on XX
 - Identified a novel pathway related to XX
 - Responsible for setting up the lab and/or coordinating research of lab mates
 - Utilized the specific techniques of XXX
 - Were you responsible for managing any...
 - People, budgets, collaborations, activities, relationships, etc
 - Did you present at public meetings or conferences on behalf of the lab or company?
 - Did you write grants?



Resumes – Wording Matters...

Before:

- Research studies the role of different cell types in VNH with emphasis on key proteins such as VEGF-A, miRNA-21 and IEX-1

What does this mean?



Resumes – Wording Matters...

After:

- Research studies chronic kidney disease and the role of key proteins in an oxygen-deprived environment.

Drill your resume down to words that many people can understand



EXPERIENCE SECTION EXAMPLES



Two+ Positions under one Organization

PROFESSIONAL EXPERIENCE

University of SCHOOL, City, State

2004 – Present

The laboratory of Dr. XXX focuses on....

Research Associate, XXX Department

Sept 2012 – Present

Postdoctoral Fellow, XXX Department

Aug 2009 – Sept 2012

- Research investigates...
- Demonstrated that...
- Techniques include...
- Writing experience, presentations....
- Training, Supervising, Teaching experience....
- Teamwork experience....
- Collaborations with other labs, institutes, industry

The laboratory of Dr. XXX focuses on....

Ph.D. Candidate, XXX Department

Sept 2004 – Aug 2009

- Research investigates...|
- Demonstrated that...
- Techniques include...
- Writing experience, presentations....
- Training, Supervising, Teaching experience....
- Teamwork experience....
- Collaborations with other labs, institutes, industry

COMPANY NAME, City, State

Start - End



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Subheadings Can be Useful

- Highlight transferrable skills for certain roles

EXPERIENCE

University at Buffalo, Buffalo, NY

5/2009 - 6/2013

The Dubocovich lab focuses on the neuropharmacology of the MT1 and MT2 melatonin receptors with the specific goal of discovering novel drugs for the treatment of disorders of sleep, mood and drug abuse.

Postdoctoral Associate, Department of Pharmacology & Toxicology

Scientific Experience

- Discovered obligate role of MT1 and MT2 melatonin receptors in methamphetamine-induced behavioral sensitization and conditioned place preference in mice. Examined mouse behavior by digital video analysis, cell death pathways by Western blot, and *in vivo* catecholamine release by fast-scan cyclic voltammetry.
- Published two first-author journal articles on methamphetamine sensitization.
- Presented results at national and regional conferences via posters and podium talks (four awards).

Leadership Experience

- Managed collaborations with three partner laboratories at the University at Buffalo on projects investigating discriminative stimulus properties of methamphetamine, and neurotransmitter levels in brain (fast-scan voltammetry) and circulating blood (high-pressure liquid chromatography).
- Trained and supervised technicians and students on tasks associated with behavioral/molecular data collection, statistical analysis and laboratory maintenance.
- Co-facilitator and mentor for the Collaborative Learning and Integrated Mentoring in the Biosciences program, a professional development workshop series for graduate and undergraduate students in the biomedical sciences (9/09-7/12).



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Another Strategy for Subheadings...

- If you have gained several experiences in a position you can make a separate section to highlight the skills

SCIENTIFIC EXPERIENCE

University, City, State

2010 – Present

One sentence desc of lab....

Researcher, XX Department

Regulatory Experience

- Contributed to technical summaries for regulatory submissions including XX
- Develop protocols and SOP's for XX
- Trained team members on XX

Scientific Experience

- Responsible for identifying mechanism of action for XX
- Screened small molecules and identified a lead molecule which advanced from efficacy testing into a preclinical IND program
- Responsible for performing in vivo efficacy studies in xenograft models
- Managed scientific discussions collaborators

WRITING EXPERIENCE

TEACHING EXPERIENCE



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Listing Multiple Projects

Graduate Researcher, Wake Forest University Health Sciences

- Project 1 focused on prolonging cell and tissue survival under hypoxic conditions via metabolic downregulation for tissue engineering applications and other clinical applications
 - Demonstrated (1) metabolic suppression has a favorable effect on cell survival and function under hypoxic stress (2) a protective effect of metabolic rate depression in two murine ischemic models: skin flap and compartment syndrome models
 - Developed a concept of metabolic downregulation to decrease oxygen demand of affected cells and tissues under O₂-deficient conditions
 - Identified pharmacologic agents to induce metabolic downregulation
 - Research techniques used include cell biology assays, cell culture, histology, immunohistochemistry, imaging techniques, drug delivery, tetanic contraction functional test and surgical techniques
 - Participated in preparing and writing of grant applications (i.e. AFIRM). Also generated two patents
- Project 2 used stem cell therapy to enhance bone formation using amniotic fluid-derived stem cells
 - Studied *in vitro* osteogenic differentiation of the stem cells seeded on bladder submucosa matrix/PLGA hybrid scaffolds
 - Used two murine models, femur and calvarial critical defect models, to evaluate the effect on bone formation
 - Used techniques including decellularization, fabrication of natural and synthetic composite scaffolds, scanning electron microscopic, measurement of pore size and porosity, mechanical testing, 2D and 3D osteogenic differentiation, biocompatibility, cell adhesion and proliferation, and RT-qPCR
- Project 3 focused on stem cell therapy and 3D-printing technology for skin wound healing
 - Developed skin substitutes using amniotic fluid-derived stem cells and 3D-printing technology
 - Demonstrated that the skin bioprinter can accurately deliver cells and biomaterials onto defined skin wounds
 - Demonstrated that full-thickness skin defects can be repaired using the clinical skin bioprinter
 - Evaluated skin wound healings by amniotic fluid-derived stem cells in combination with keratinocytes



Highlight Teaching, Writing, Leadership Skills

- Teaching experience
- Grants
- Journal reviewer
- Additional writing
 - university paper, conference, non-profit, etc
- Leadership roles within your institution
- Leadership role in a local or national chapter of an organization or networking group
- Community Service



RESUME EXAMPLES

Research Role – Entrepreneurial Company

University, City State

09/2010 - present

Research Fellow, Department of Bioengineering

- Develop microfluidic device to identify sensitizers of contact dermatitis and point-of-care diagnostics.
- Develop microfluidic gradient device to conduct assays to study protein mediated activation of glucose metabolism pathways in type I diabetes.
- Multiplexing real-time optical measurement of secreted cellular metabolites in MEMS format.
- Diagnostic sensor winner at Healthcare Innovation and Commercialization workshop.
- Hands-on experience with biological techniques including primary cell culture, cell lines, immunoassays, transfection, ELISA, imaging, and lipid analysis.

University of XX

07/2007 - 09/2010

Postdoctoral Fellow, Department of Mechanical Engineering

- Developed sensors and mathematical models to identify biomarkers in exhaled breath for clinical diagnostics.
- Developed organometallic films. Startup formed around idea (XX Company) won 2nd place in University Business Plan competition.

University of XX

08/2002 – 06/2007

Ph.D. Research, Mechanical Engineering Department

- Led team on a DoD funded project to develop microfluidic gas sensors to detect toxic gases and metabolites of disease biomarkers.



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Project Management Role

University of California Berkeley (Berkeley, CA)

2004 - 2011

Lab focuses on ion channel and neurotransmitter receptor biology

Postdoctoral Researcher

2010-2011

Ph.D Student

2004 - 2010

- Research focuses on optical control of excitatory neurotransmitter receptors.
- Research techniques used include: electrophysiology, optics, molecular biology.
- Managed multiple collaborations:
 - Dirk Trauner – Chemical Biology and Genetics, University of Munich (Synthetic photochromic neurotransmitter receptor ligands).
 - John Flannery – Dept. of Molecular and Cell Biology, University of CA, Berkeley (Viral vectors and retinal degeneration).
 - Herwig Baier – Dept. of Physiology, University of CA, San Francisco (Optogenetics in zebrafish).
 - Xiang Zhang – Dept. of Mechanical Engineering, University of CA, Berkeley (Custom spatiotemporal optics).
- Business courses involving project management, managing innovation, and business plan development.
- Presented extensively at scientific conferences and meetings.



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Business Development Role

Business Experience

XX Pharmaceuticals, City, State

February – May 2010

Advisor, Business Development

- Provided recommendation on strategic decision to pursue in-house clinical development program v/s out-license prostate cancer asset for optimizing value. Assisted in preparation of business proposal. Successfully secured non-dilutive grants.
- Recommended market positioning for asset in Regenerative Medicine & Transplantation immunology space

Venture Capital Firm, City State

January – August 2009

Consultant

- Conducted due-diligence, identified investment risks & performed valuation analysis on 4 deals in Oncology space
- Participated in diligence of 2 successful transactions valued at \$40M

Boutique Consulting Firm, City, State

July – December 2008

Consultant

- Advised client of boutique consulting firm. Evaluated cardiovascular market entry strategy for med-tech company in clinical imaging space. Created map of competitive landscape & scenarios for disruption created by client's technology application

University XX, Office of Technology Licensing

February – December 2008

Associate

- Evaluated commercialization potential of 2 life-science technologies: intellectual property landscape, market analysis, start-up capital requirement
- Co-wrote business plan for start-up. Received capital commitments from angels.

Research Experience

University, City, State

2005-2010

PhD, Researcher, Department of Molecular Biology



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SKILLS AND TECHNIQUES



Scientific / Technical Skills

Skills and Techniques

- **Molecular Biology:** Cloning, PCR, quantitative PCR, mutagenic PCR, DNA purification from Gram-positive and Gram-negative bacteria, DNA sequence analysis, plasmid design and construction, microarrays, Illumina-based sequencing
- **Protein:** Protein expression, protein purification via affinity chromatography, protein separation by SDS/PAGE, ELISAs, Western blotting, protein quantification, enzymatic protein digestion
- **Microbiology:** Construction and maintenance of mutant bacterial strains, characterization of mutant phenotypes (ie. growth curves, cell wall protein profile, biofilm assays, antibiotic and stress susceptibility, etc.), quantitative plating, bacterial staining, light and fluorescent microscopy, electronic microscopy sample preparation, transcriptional profiling
- **Virology:** Manipulation of positive RNA virus (Dengue virus) including tissue culture infection, plaquing assays, and mouse model of infection
- **Immunology and Tissue Culture:** Growth of bacteria in primary macrophages and tissue culture cells; maintenance of tissue culture lines; isolation and differentiation of primary cells; flow cytometry; cytokine analysis by ELISAs and Western blotting; immunofluorescence; transcriptional profiling by qPCR and microarray analysis; Tcell stimulation assays; quantitative and qualitative antibody assessment
- **Animal Infections:** Intravenous, intraperitoneal, and pulmonary infection, nasopharyngeal colonization of mice, full dissections and determination of bacterial load in liver, spleen, intestines, lymph nodes, lungs, nasal lavage; cytokine and antibody assessment from serum and tissue samples
- **Computer:** Microsoft Office, Swiss PDB, GraphPad Prism, Kaleidagraph, Adobe Photoshop and Illustrator, Vector NTI, EndNote, Literature Search (PubMed, MEDLINE, GoogleScholar, Science Direct)



Non-Laboratory Scientific Skills

- Imaging software
- Statistics programs
- Design software
- Programming languages
- Patent databases
- Marketing software
- Etc...



Education Section

- List degree, thesis title, academic distinctions
- List certificates, etc. under “Additional Training”

EDUCATION

Tufts University, Sackler School of Biomedical Sciences, Boston, MA **2013**

PhD. in Neuroscience

- **Thesis:** Design, fabrication and development of a novel flexible electromyographic electrode array to study neural control of adaptive locomotion in soft-bodied animals

University of Tennessee, Knoxville, TN **2006**

M.S. in Physics

- **Thesis:** Neutron Diffraction Study of Heavy Water Intercalation in Superconducting Deuterated Sodium Cobaltate $\text{Na}_{0.35}\text{CoO}_2 \cdot 1.4\text{D}_2\text{O}$

Universita' La Sapienza, Rome, Italy **2003**

B.S. in Physics

- **Thesis:** studied the superconducting properties of Sc-doped magnesium diboride (the title is super long!)

Additional Coursework:

Tufts University, Entrepreneurial Leadership Program, Gordon Institute, **2012**

Course Focus: High Technology Entrepreneurship and Business Planning



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Additional Sections

- These sections vary from person to person.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Society for Neuroscience

2001 – Present

PATENTS

AWARDS

- Society for Neuroscience Travel Award (Harvard)
- Teaching assistant of the Year, Microbiology (UMass)

PRESENTATIONS

- Oral, Poster, Invited

PUBLICATIONS

- In press, submitted, Peer-reviewed, commentaries, book chapters, etc

Selected Invited Talks and Scientific Abstracts (7 out of 13):

Selected Publications (8 out of 11):



RESUME FORMATTING



Space

- Too much empty space
- Summary of Qualifications is good

SUMMARY OF QUALIFICATIONS

- Postdoctoral fellow with Molecular biology, Epigenetics, Genetics, Biochemistry, Microbiology and Microscopy experience. GLP and BSL II Facility Experience.
- Research techniques include: Mammalian Cell Culture, Primary cell line isolation/culture from skeletal muscle and adipose tissue, miRNA studies, ChIP-sequencing, RNA-sequencing, Real Time PCR, site directed mutagenesis, and protein expression and purification
- Strong verbal and written communication skills, leadership and teamwork skills.
- Permanent Resident of United States.

EXPERIENCE

Medical School, Boston MA

Sep 2010-current

Post-doctoral Research Associate, Department of Genetics

Lab focuses on the study of circadian rhythms

- Research focuses on utilization of next generation sequencing techniques ChIP-seq and RNA-seq in understanding the role of transcription factor transcriptional networks of circadian clock in *Neurospora crassa*.
- Utilize ChIP-seq and RNA-seq for reconstruction of metabolic regulatory map in *Neurospora*.
- Working on understanding the role of histone modifying enzymes in core clock gene regulation in mouse and *Neurospora crassa* (model filamentous fungus).
- Research techniques include: ChIP-seq, RNA-seq, Western blot, protein-protein interaction, mammalian cell culture, yeast transformation, luciferase reporter assay, RT-PCR, fungal genetics and other molecular biology techniques. Statistical software: MATLAB and Excel.
- Guided rotation graduate students, junior postdoc and lab assistants.



Making Connections that Fu

Details

- Formatting is off

- Attention to detail lacking

SUMMARY OF QUALIFICATIONS

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Full Use of Pages

Page 1

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- Working on understanding the role of histone modifying enzymes in core clock gene regulation in mouse and Neurospora crassa (model filamentous fungus).

- If using 2 pages, use the full second page
-

Page 2

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Use Bullet Points

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Guided rotation graduate students, junior postdoc and lab assistants.

Working on collaboration program project involving Broad Institute (MIT), Texas A&M, Oregon State University and Yale University. Lead Postdoc on the project.

Invited presenter at international conferences; Genetics Society Meeting (2011) and *Neurospora* Meeting (2012).

- This is hard to read. Use bullets
- Formatting matters!



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What happens to your job application

HR Person



Hiring Manager



Interviewers



Maybe



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Tips to Accelerate your Search

- Set goals: i.e.
 - Learn about 5 organizations a week
 - Attend an industry relevant networking event once a quarter
 - Informational interview with 4 people a month
- Sign up for an industry relevant newsletter(s)
- Develop / refine your Resume
- Develop / refine your LinkedIn Profile



Job Search Timeframes

- 2 years out: Self-awareness, Informational interviewing, and networking
- 1-2 years out: Informational interviewing and networking
- 3-6 months: Actively apply for roles
- Be aware of certain application deadlines
 - Large Consulting / Investment Banks: apply Fall 2014; start ~ June 2015
 - Boutique consulting firms / investment banks: Some fall application process, other rolling hiring
- Time to decide upon an offer: as short as 48 hours
- Offer to start date: 2-4 weeks



Contact Details: Connect with Propel



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Facebook: [Propel Careers](https://www.facebook.com/Propel_Careers)

LinkedIn: [Propel Careers](https://www.linkedin.com/company/Propel_Careers)

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