What I Can Be with My PhD:

Career planning from a 6th year graduate student's perspective

A recap of the ASCB Mini Course

ASCB MiniCourse: Managing Science in the Biotech Industry

- One Day all intensive workshop to help basic scientists become more competitive for jobs in biotech and industry
- Morning Session: Industry Business and Marketing (Steve Casper MBA)
- Afternoon Session: Business of Science and Career Planning (Randy Ribunado Ph.D.)

Funding for course enrollment provided by SMD Center for Professional Development (CPD)

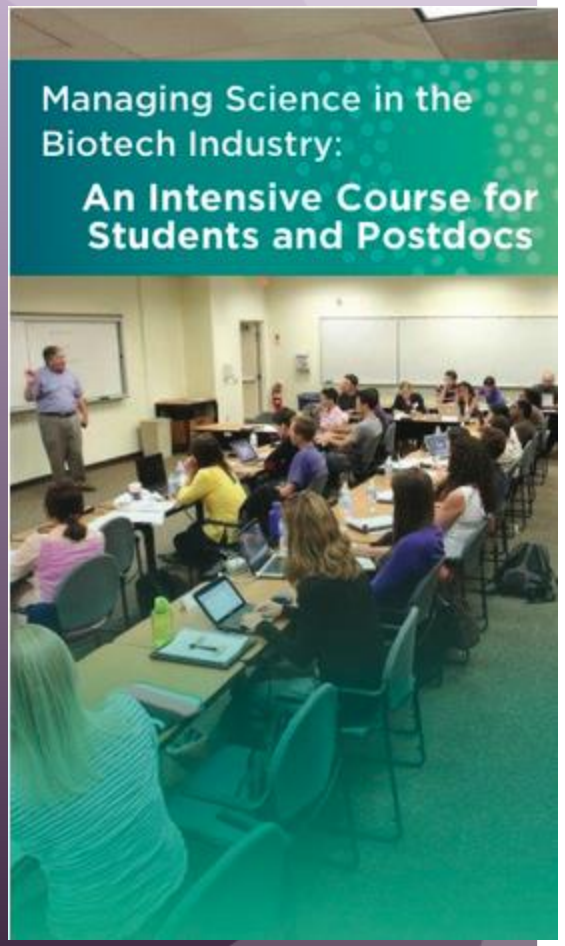
Penn
University of Pennsylvania

VE RI TAS
HARVARD
BUSINESS SCHOOL

ascb
the american society for cell biology

Intensive Course Opportunity

- **Managing Science in the Biotech Industry: An Intensive Course for PhD Students & Postdocs**
- *Application deadline February 27, 2015*
- *http://ascb.org/biotech-course/*
- *For July 12-24, 2015 2 weeks*
- *40 students; covers tuition, housing, meals and 50% travel support*
- Apply for a scholarship to attend an intensive, two-week course for postdocs and graduate students. You must be a member of the ASCB to apply. Join now at www.ascb.org and then apply for the course as a member-applicant. For more information, contact Thea Clarke at tclarke@ascb.org.



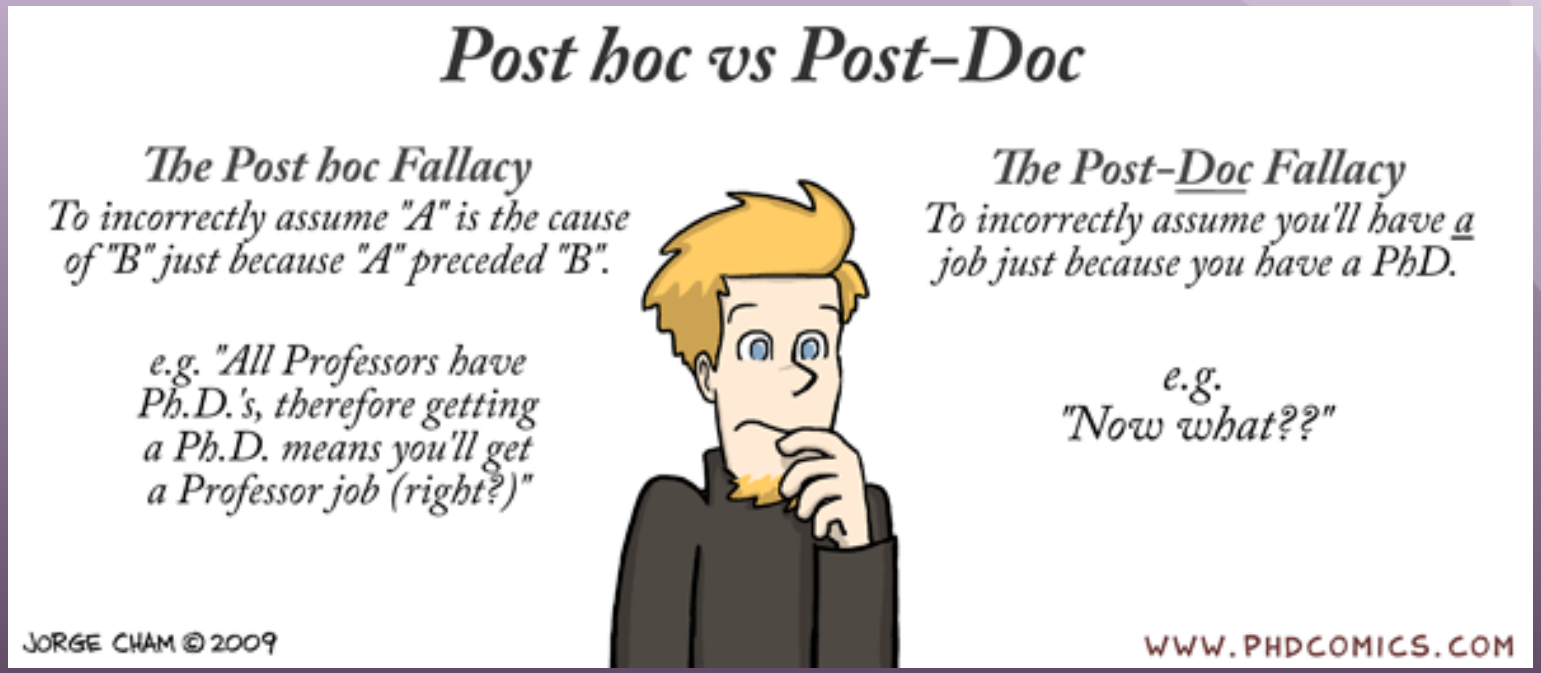
It's nice to meet you!

- 6th year Immunology PhD Candidate in Deborah Fowell's Lab

- Studying how specialized immuno suppressive CD4+ T regulatory cells (Tregs) are modulated by different types of inflammation in the skin
- Science interest sparked from Amgen Internship in 2006

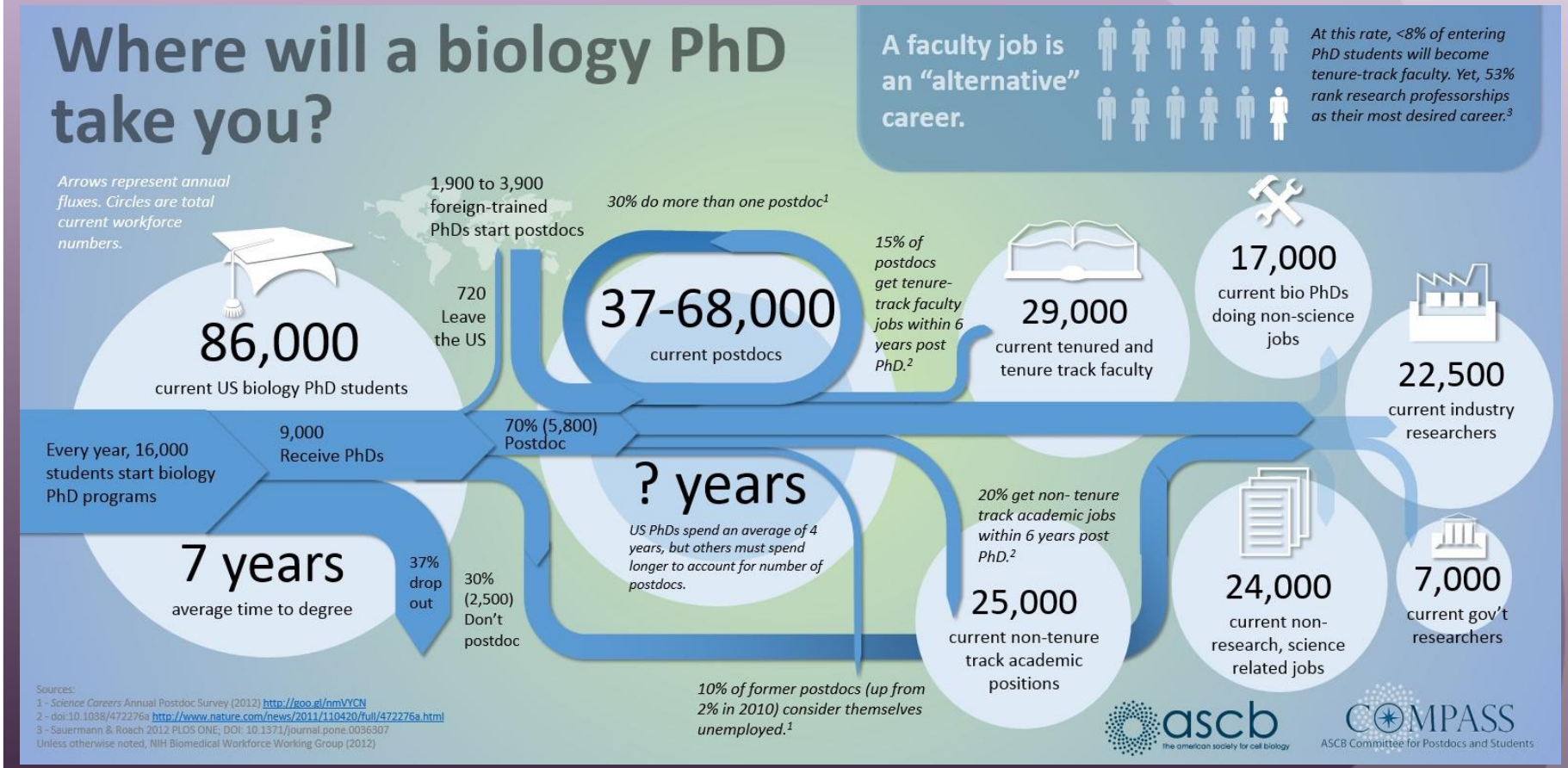
- Exploring "alternative" career options: translational research, theraputics and biotech industry work
- Loves dogs

Start preparing for your career now!



Why?... Because its your Career!!

Why don't I just figure it out during my postdoc?



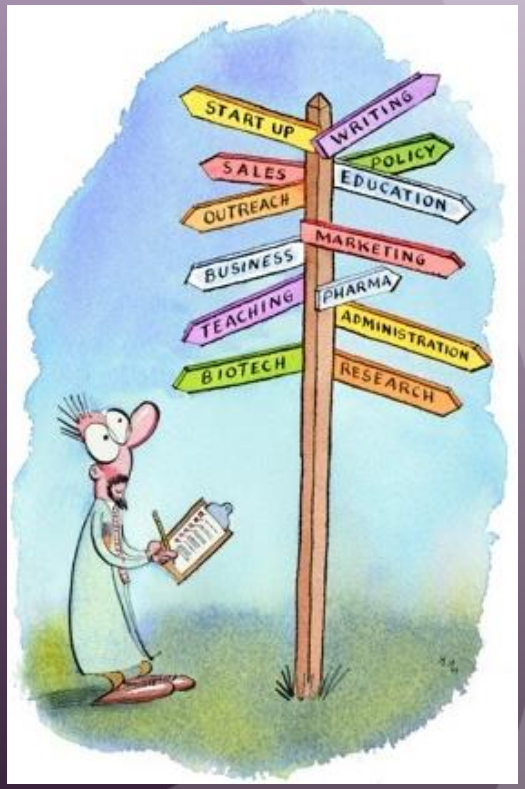
How to figure out what you want to do in life

Use Tools!

Individual Development Plan (IDP)

- 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

my IDP INDIVIDUAL DEVELOPMENT PLAN
Science Careers



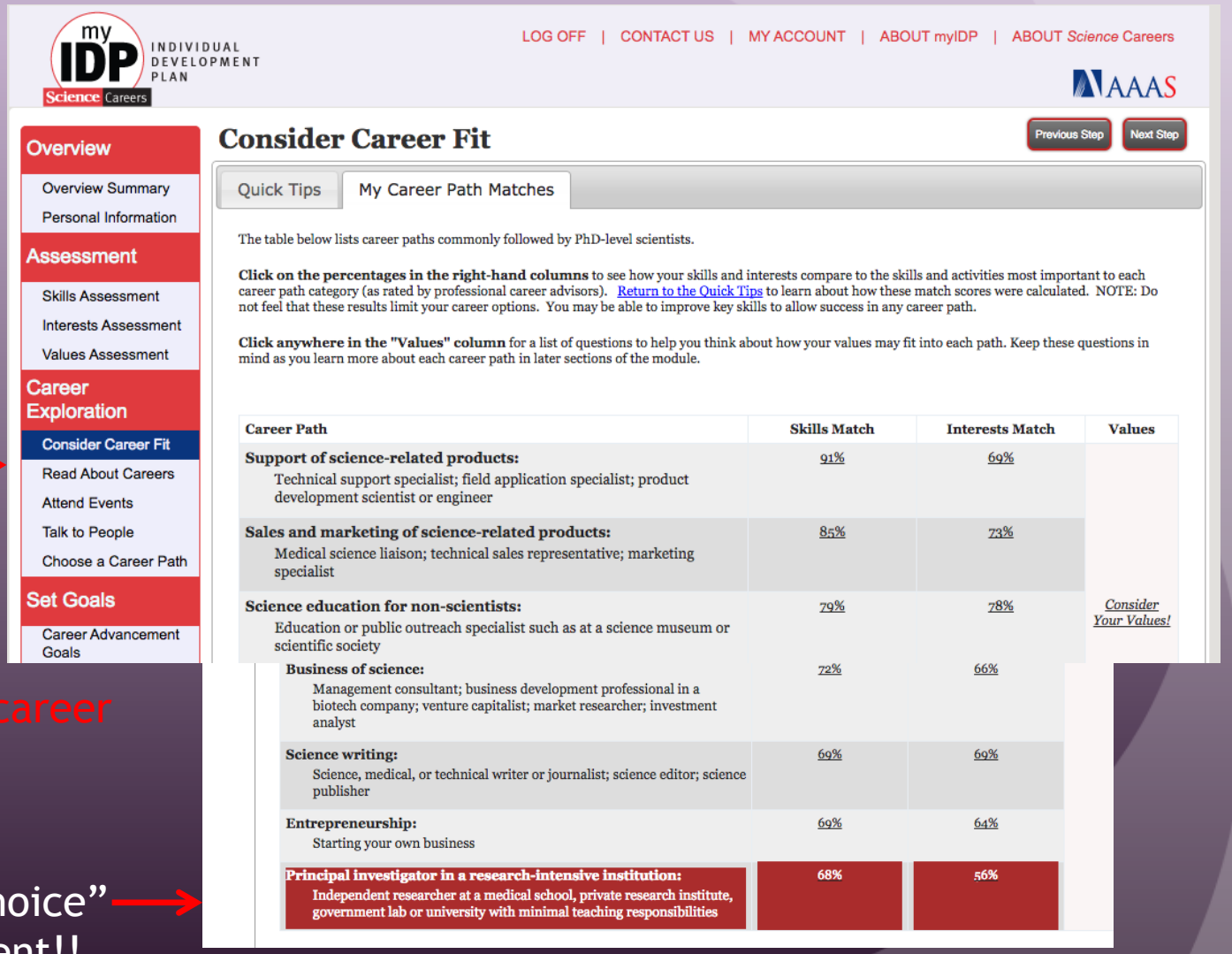
My IDP Career Options

Rate what skills you have

"Career Fit"

Update as grad career progresses!!

Notice "Last Choice" Is NOT permanent!!



Choosing the right Job for you:

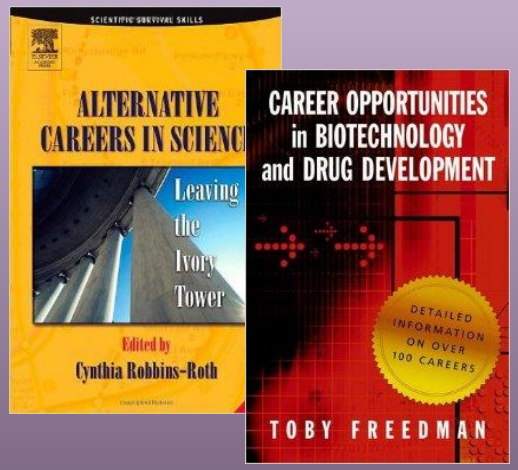
Post-doctorate position

- Type of Science (Research, Industry, Teaching)
- Big or Small Lab?
- Funding opportunities
- Location

Alternative Career

- Venture Capitalist, Patent/Legal, Consulting, Industry
  - Type of Company: Big Pharmaceutical, Biotech, Engineering firms, Toolkit, medical devices/diagnostics
    - Job Type: R&D, Communications, Operations, Business enterprise

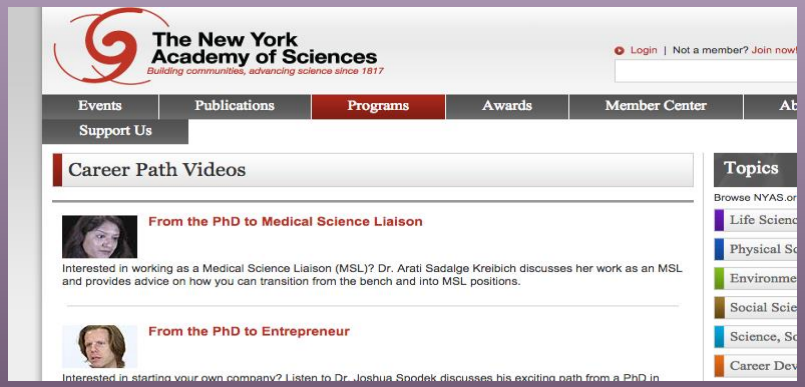
Resources for your career search



Books (available via CPD lending library)

- Alternative Careers in Science by Cynthia Robins Roth
- Career Opportunities in Biotechnology and Drug Development by Toby Freedman

Career Path Videos (NYAS): http://www.nyas.org/WhatWeDo/CareerVideos.aspx



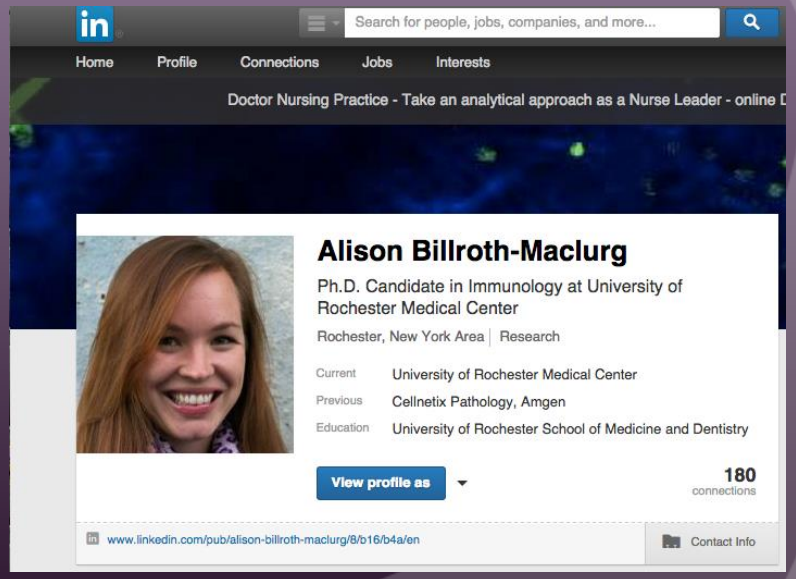
Linkedin (Virtual Networking) Connects you to job postings Ask people with your dream questions!

Market yourself for the career you desire

- Job Adds- Look up dream job advertisements, what experience is required, fill in the blanks!
- Find Mentor for Dream Job- in addition to PI that has your dream job and can advise appropriately

LinkedIn-

- Create Scientific identity (Virtual Resume)
- Get a professional headshot (or a friend that has a nice camera)
- Add people you network with/know



Building a 'Targeted' Resume

- Resume should reflect EACH Job Ad
  - Focus on non-science language as well as science
    - Science ID- Papers published, Wet and Dry Lab skills, Research Experience, Awards etc.
    - Business ID- Strategic thinker, highly motivated, manage tight timelines
    - Social ID- group leader, works in cross-matrixed teams, collaborator

Job Advertisements

Promega

Sr Research Scientist 1, Content Assay Design

Tracking Code
2367

Job Description
Promega is looking for a senior level scientist to develop new content-based assays based on existing technology platforms. This role will design, plan, and execute project strategy for cell biology technologies. You will also have the opportunity to work with customers on custom assay requests. The ideal candidate will have industry experience in cell biology, assay development tissue culture and gene editing. Experience with protein interactions and cell signaling is preferred.

JOB OBJECTIVE: Involved in the scientific leadership of the company, i.e. management, mentoring, consensus building and/or act as technical expert in multiple areas of specialization. Apply scientific leadership to individual R&D Projects. Ability to execute and champion innovative research. Formulate an overall project strategy for experimental design in the context of experimental results and scientific literature.

ESSENTIAL DUTIES:

1. Primary author for contributions to internal technical literature, abstracts, patents or journal articles.
2. Contribute to preparation or evaluation of patents.
3. Communicate problems, ideas and suggestions to appropriate person or group.
4. Direct others on a designated project.
5. Independently develop project plans and manage project timelines.
6. Recognized as scientific expert in multiple areas of specialization and provide scientific leadership.
7. Ability to suggest novel and innovative approaches.
8. Work at bench.
9. Understands and complies with ethical, legal and regulatory requirements applicable to our business.

Scientific ID

Business ID

Social ID

Senior Research Scientist 1 (Promega)

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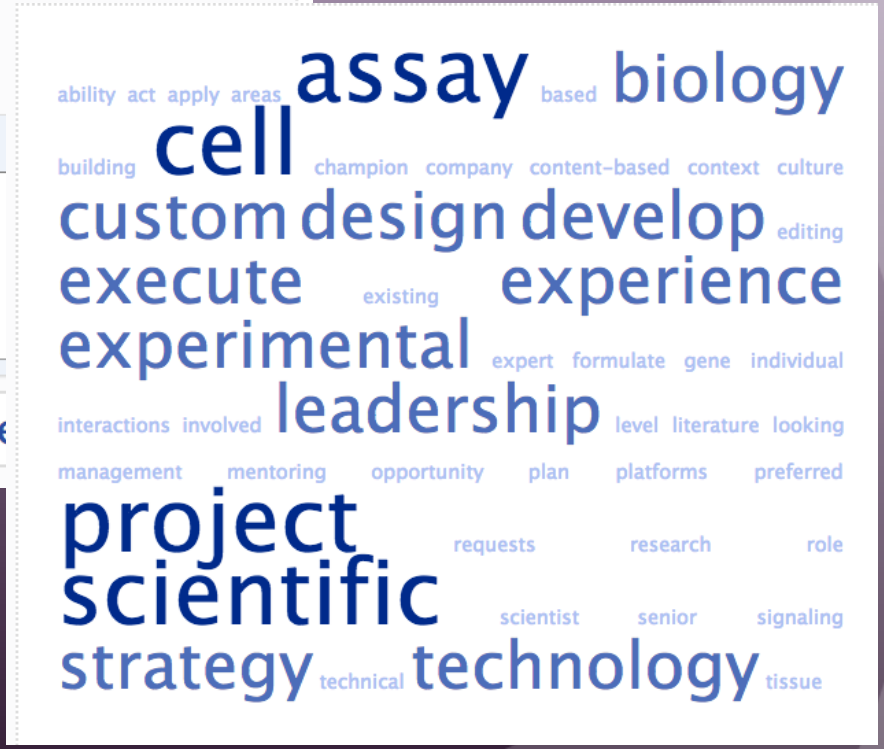
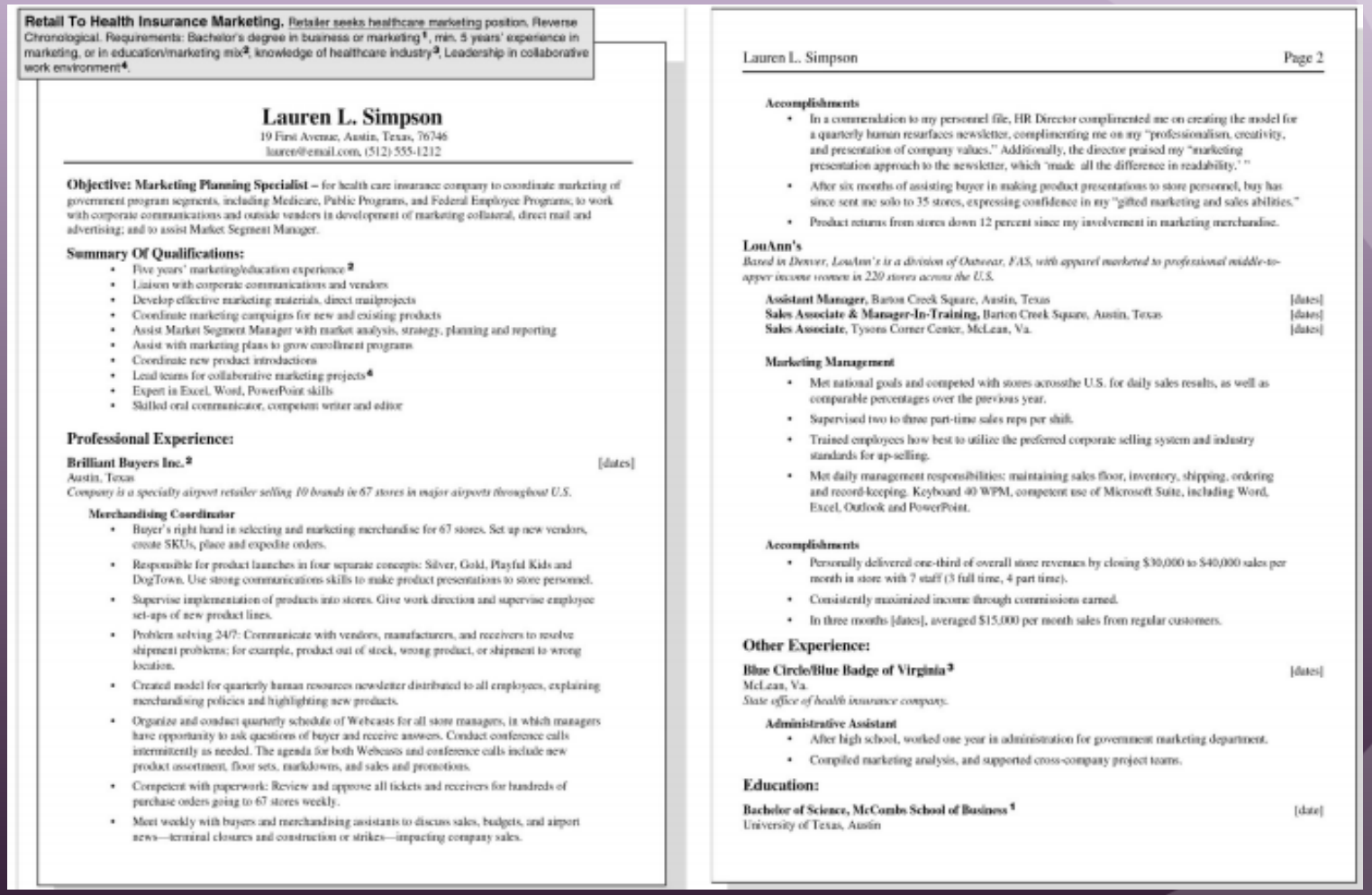
TagCrowd (http://tagcrowd.com/)



Example of Targeted Resume



Retail To Health Insurance Marketing. Retailer seeks healthcare marketing position. Reverse Chronological. Requirements: Bachelor's degree in business or marketing [1], min. 5 years' experience in marketing, or in education/marketing mix[2], knowledge of healthcare industry[3], Leadership in collaborative work environment[4].

Lauren L. Simpson

19 First Avenue, Austin, Texas, 76746
lauren@email.com, (512) 555-1212

Objective: Marketing Planning Specialist – for health care insurance company to coordinate marketing of government program segments, including Medicare, Public Programs, and Federal Employee Programs; to work with corporate communications and outside vendors in development of marketing collateral, direct mail and advertising; and to assist Market Segment Manager.

Summary Of Qualifications:

- Five years' marketing/education experience [2]
- Liaison with corporate communications and vendors
- Develop effective marketing materials, direct mailprojects
- Coordinate marketing campaigns for new and existing products
- Assist Market Segment Manager with market analysis, strategy, planning and reporting
- Assist with marketing plans to grow enrollment programs
- Coordinate new product introductions
- Lead teams for collaborative marketing projects [4]
- Expert in Excel, Word, PowerPoint skills
- Skilled oral communicator, competent writer and editor

Professional Experience:

Brilliant Buyers Inc. [2] [dates]
Austin, Texas
Company is a specialty airport retailer selling 10 brands in 67 stores in major airports throughout U.S.

Merchandising Coordinator

- Buyer's right hand in selecting and marketing merchandise for 67 stores. Set up new vendors, create SKUs, place and expedite orders.
- Responsible for product launches in four separate concepts: Silver, Gold, Playful Kids and DogTown. Use strong communications skills to make product presentations to store personnel.
- Supervise implementation of products into stores. Give work direction and supervise employee set-ups of new product lines.
- Problem solving 24/7: Communicate with vendors, manufacturers, and receivers to resolve shipment problems; for example, product out of stock, wrong product, or shipment to wrong location.
- Created model for quarterly human resources newsletter distributed to all employees, explaining merchandising policies and highlighting new products.
- Organize and conduct quarterly schedule of Webcasts for all store managers, in which managers have opportunity to ask questions of buyer and receive answers. Conduct conference calls intermittently as needed. The agenda for both Webcasts and conference calls include new product assortment, floor sets, markdowns, and sales and promotions.
- Competent with paperwork: Review and approve all tickets and receivers for hundreds of purchase orders going to 67 stores weekly.
- Meet weekly with buyers and merchandising assistants to discuss sales, budgets, and airport news—terminal closures and construction or strikes—impacting company sales.

Accomplishments

- In a commendation to my personnel file, HR Director complimented me on creating the model for a quarterly human resources newsletter, complimenting me on my "professionalism, creativity, and presentation of company values." Additionally, the director praised my "marketing presentation approach to the newsletter, which 'made all the difference in readability.'"
- After six months of assisting buyer in making product presentations to store personnel, buy has since sent me solo to 35 stores, expressing confidence in my "gifted marketing and sales abilities."
- Product returns from stores down 12 percent since my involvement in marketing merchandise.

LouAnn's
Based in Denver, LouAnn's is a division of Outwear, FAS, with apparel marketed to professional middle-to-upper income women in 220 stores across the U.S.

Assistant Manager, Barton Creek Square, Austin, Texas [dates]
Sales Associate & Manager-In-Training, Barton Creek Square, Austin, Texas [dates]
Sales Associate, Tysons Corner Center, McLean, Va. [dates]

Marketing Management

- Met national goals and competed with stores acrossthe U.S. for daily sales results, as well as comparable percentages over the previous year.
- Supervised two to three part-time sales reps per shift.
- Trained employees how best to utilize the preferred corporate selling system and industry standards for up-selling.
- Met daily management responsibilities: maintaining sales floor, inventory, shipping, ordering and record-keeping. Keyboard 40 WPM, competent use of Microsoft Suite, including Word, Excel, Outlook and PowerPoint.

Accomplishments

- Personally delivered one-third of overall store revenues by closing $30,000 to $40,000 sales per month in store with 7 staff (3 full time, 4 part time).
- Consistently maximized income through commissions earned.
- In three months [dates], averaged $15,000 per month sales from regular customers.

Other Experience:

Blue Circle/Blue Badge of Virginia [3] [dates]
McLean, Va.
State office of health insurance company.

Administrative Assistant

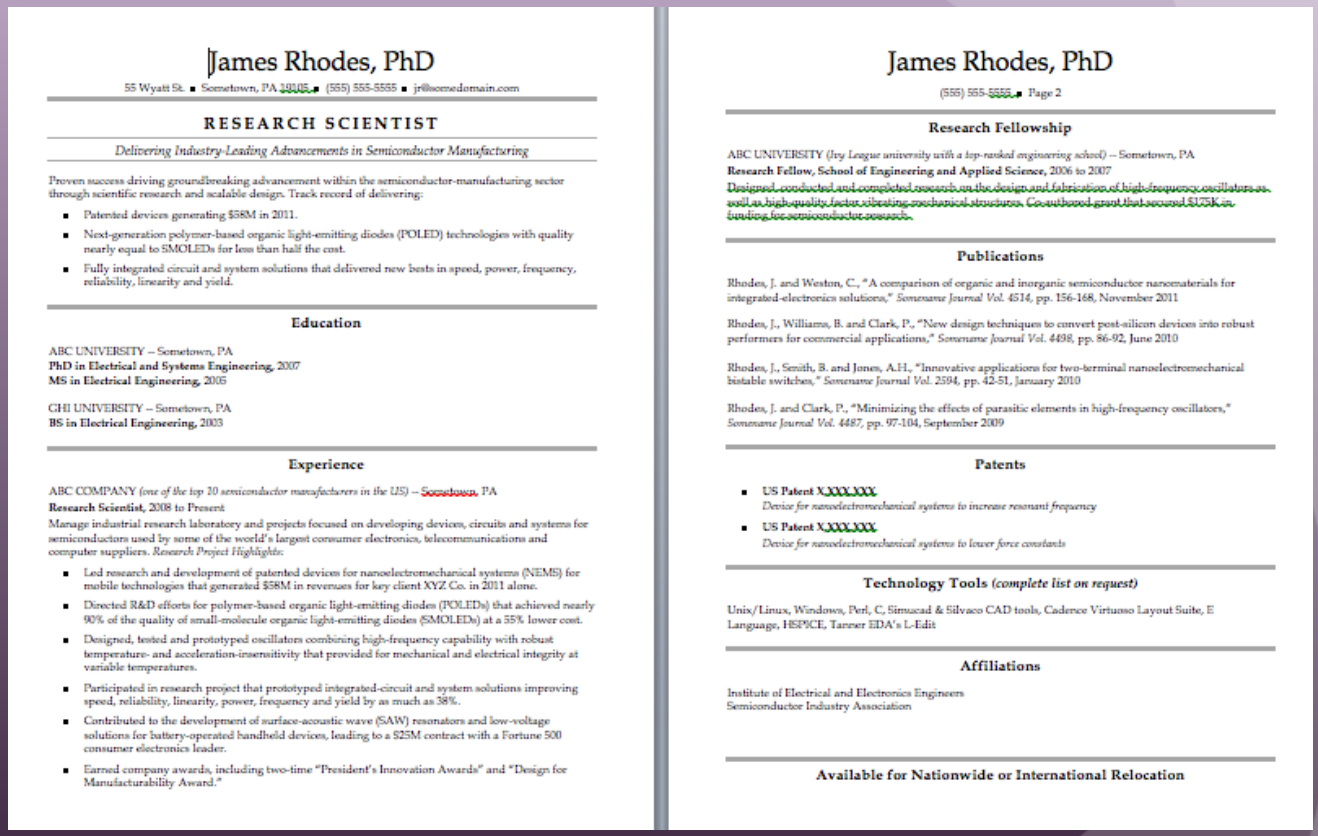
- After high school, worked one year in administration for government marketing department.
- Compiled marketing analysis, and supported cross-company project teams.

Education:

Bachelor of Science, McCombs School of Business [1] [date]
University of Texas, Austin

2nd Example of Scientist Resume

- 1-2 pages Max
- 1st and Last information most important (publications last)
- Taylor to job description specifically
- Have others review before application



James Rhodes, PhD

55 Wyatt St. ▪ Sometown, PA 19105 ▪ (555) 555-5555 ▪ jr@somedomain.com

RESEARCH SCIENTIST

Delivering Industry-Leading Advancements in Semiconductor Manufacturing

Proven success driving groundbreaking advancement within the semiconductor-manufacturing sector through scientific research and scalable design. Track record of delivering:

- Patented devices generating $58M in 2011.
- Next-generation polymer-based organic light-emitting diodes (POLED) technologies with quality nearly equal to SMOLEDs for less than half the cost.
- Fully integrated circuit and system solutions that delivered new bests in speed, power, frequency, reliability, linearity and yield.

Education

ABC UNIVERSITY – Sometown, PA
PhD in Electrical and Systems Engineering, 2007
MS in Electrical Engineering, 2005

GHI UNIVERSITY – Sometown, PA
BS in Electrical Engineering, 2003

Experience

ABC COMPANY *(one of the top 10 semiconductor manufacturers in the US)* – Sometown, PA
Research Scientist, 2008 to Present
Manage industrial research laboratory and projects focused on developing devices, circuits and systems for semiconductors used by some of the world's largest consumer electronics, telecommunications and computer suppliers. *Research Project Highlights:*

- Led research and development of patented devices for nanoelectromechanical systems (NEMS) for mobile technologies that generated $58M in revenues for key client XYZ Co. in 2011 alone.
- Directed R&D efforts for polymer-based organic light-emitting diodes (POLEDs) that achieved nearly 90% of the quality of small-molecule organic light-emitting diodes (SMOLEDs) at a 55% lower cost.
- Designed, tested and prototyped oscillators combining high-frequency capability with robust temperature- and acceleration-insensitivity that provided for mechanical and electrical integrity at variable temperatures.
- Participated in research project that prototyped integrated-circuit and system solutions improving speed, reliability, linearity, power, frequency and yield by as much as 38%.
- Contributed to the development of surface-acoustic wave (SAW) resonators and low-voltage solutions for battery-operated handheld devices, leading to a $25M contract with a Fortune 500 consumer electronics leader.
- Earned company awards, including two-time "President's Innovation Awards" and "Design for Manufacturability Award."

James Rhodes, PhD

(555) 555-5555 ▪ Page 2

Research Fellowship

ABC UNIVERSITY *(Ivy League university with a top-ranked engineering school)* – Sometown, PA
Research Fellow, School of Engineering and Applied Science, 2006 to 2007
Designed, conducted and completed research on the design and fabrication of high-frequency oscillators as well as high-quality factor vibrating mechanical structures. Co-authored grant that secured $175K in funding for semiconductor research.

Publications

Rhodes, J. and Weston, C., "A comparison of organic and inorganic semiconductor nanomaterials for integrated-electronics solutions," *Somename Journal Vol. 4514*, pp. 156-168, November 2011

Rhodes, J., Williams, B. and Clark, P., "New design techniques to convert post-silicon devices into robust performers for commercial applications," *Somename Journal Vol. 4498*, pp. 86-92, June 2010

Rhodes, J., Smith, B. and Jones, A.H., "Innovative applications for two-terminal nanoelectromechanical bistable switches," *Somename Journal Vol. 2594*, pp. 42-51, January 2010

Rhodes, J. and Clark, P., "Minimizing the effects of parasitic elements in high-frequency oscillators," *Somename Journal Vol. 4487*, pp. 97-104, September 2009

Patents

- **US Patent X,XXX,XXX**
  Device for nanoelectromechanical systems to increase resonant frequency
- **US Patent X,XXX,XXX**
  Device for nanoelectromechanical systems to lower force constants

Technology Tools ***(complete list on request)***

Unix/Linux, Windows, Perl, C, Simucad & Silvaco CAD tools, Cadence Virtuoso Layout Suite, E Language, HSPICE, Tanner EDA's L-Edit

Affiliations

Institute of Electrical and Electronics Engineers
Semiconductor Industry Association

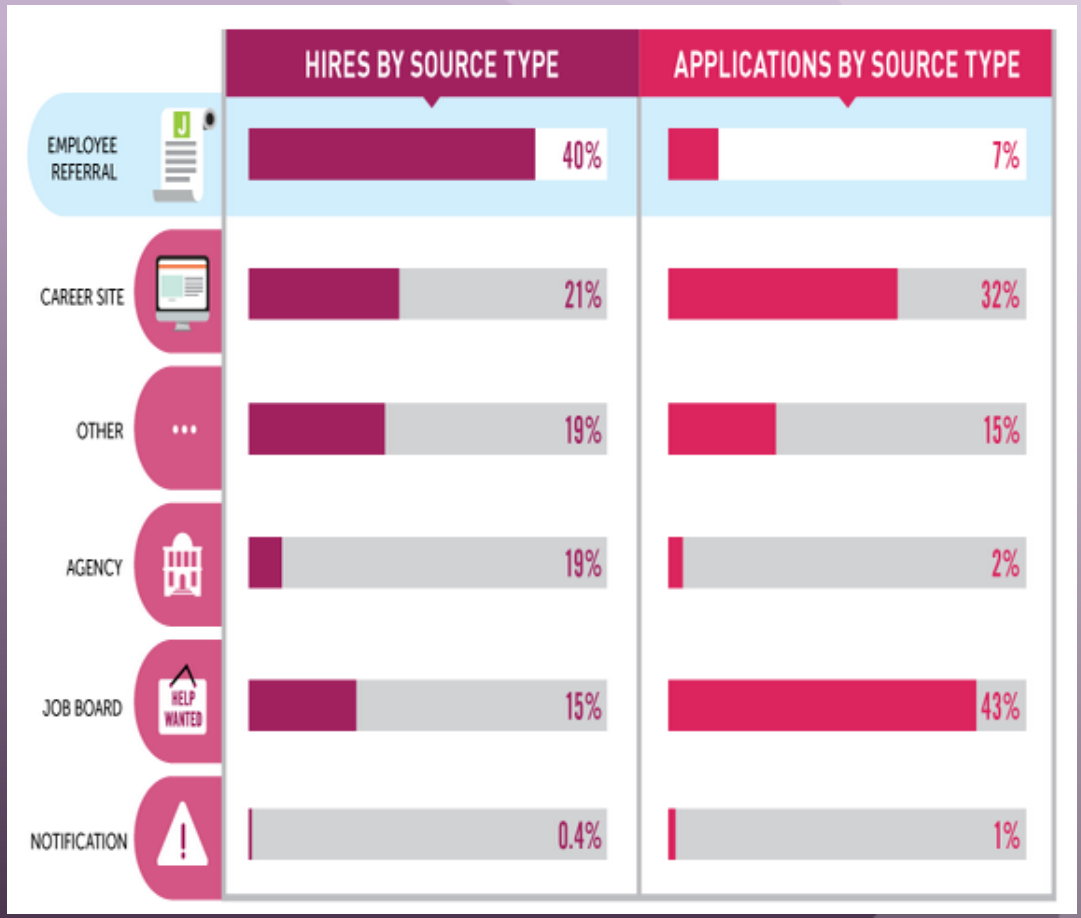
Available for Nationwide or International Relocation

Coverletter

- Coverletter
  - My Resume Includes…
  - In addition I have these *business skills*
  - Use *Social ID* keywords
  - Contact Info

Networking with Targeted Resume

- Do not ONLY apply online
- Only 7% of applicants are referred but this accounts for 40% of hires (nearly half!!)
- Try to get a referral or contact HR to validate that the job ad is accurate and complete
- Gain company intelligence to get resume in the right hands
- NEVER Burn bridges if you do not get an interview or do not get chosen for the job. Ask to be considered for future positions.



Who do I network with?

- Current Job People (Grad School/Post Doc/ within Medical Center)
- Previous Job People
- Social Contacts
- Alumnae
- Other Scientists (National/International meetings)
- Local Organizations

Make Business Cards

Picture is helpful for International/ large meetings

Contact info- Should survive past current position

Use Powerpoint (cheapest)

Professional (FedEX Starting at $19.99)

Preparing for Interview

- Give yourself DAYS to prepare for an interview
- Research
  - Company and players (or PI and Lab members)
  - Interviewers
  - Understand company products (or Research Projects)
  - Research the Science
  - Express skill sets in terms of what the company or lab needs
  - Relate personal experience with business-centric traits (manage multiple projects simultaneously, identified success criteria and managed such that reached goal on time and on budget)

Preparing for Interview

- Practice main questions:
  - Why should we hire you?
  - What are you interested working on in the lab, company, etc?
  - What would you do if… (something horrible happens)
  - Tell me about the time that you handled disaster
    - Situation
    - Task (what was it that you had to achieve)
    - Activity (what did you do)
    - Result (what was the outcome)
- General Rules
  - Be polite, be engaging, be your best professional self.
  - Only drink one beer at lunch if they order one.

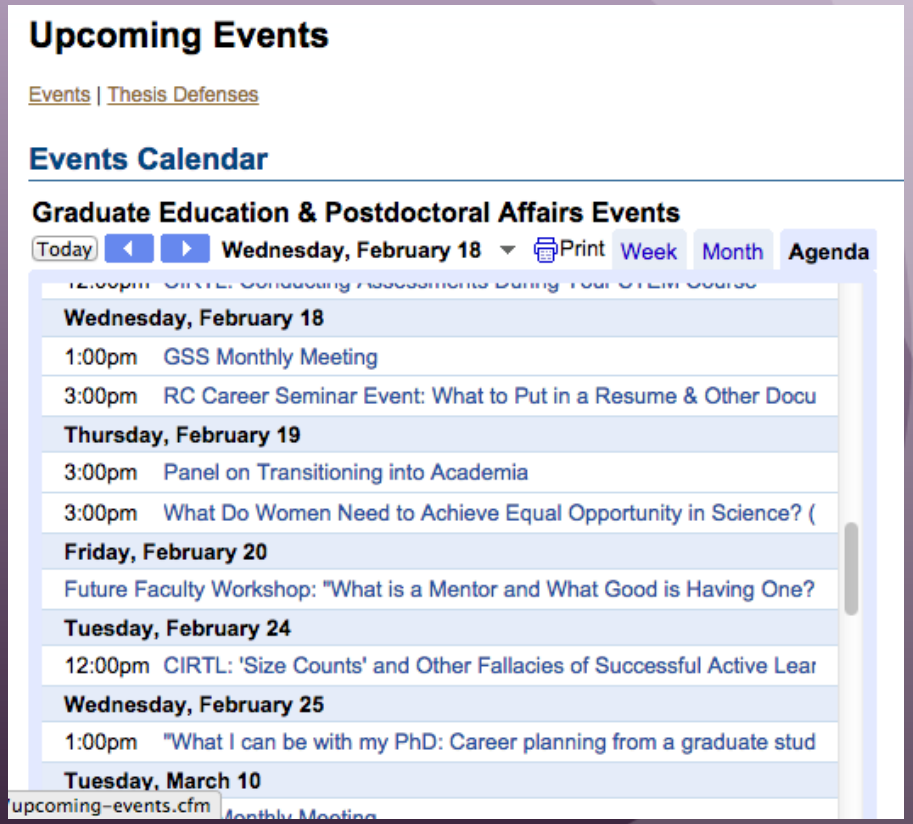
You're Hired! Negotiate!

- Negotiate the whole package, not just salary
- Research the position
  - Glassdoor – enter anything about the company you used to work for, shows salaries etc. per company
  - Salary.com

Center for Professional Development

- They are here to help YOU for FREE!!
  - Courses
  - Individual Support
  - Writing Support
  - Lending Library
  - Seminars and Workshops

http://www.urmc.rochester.edu/education/graduate/professional-development/



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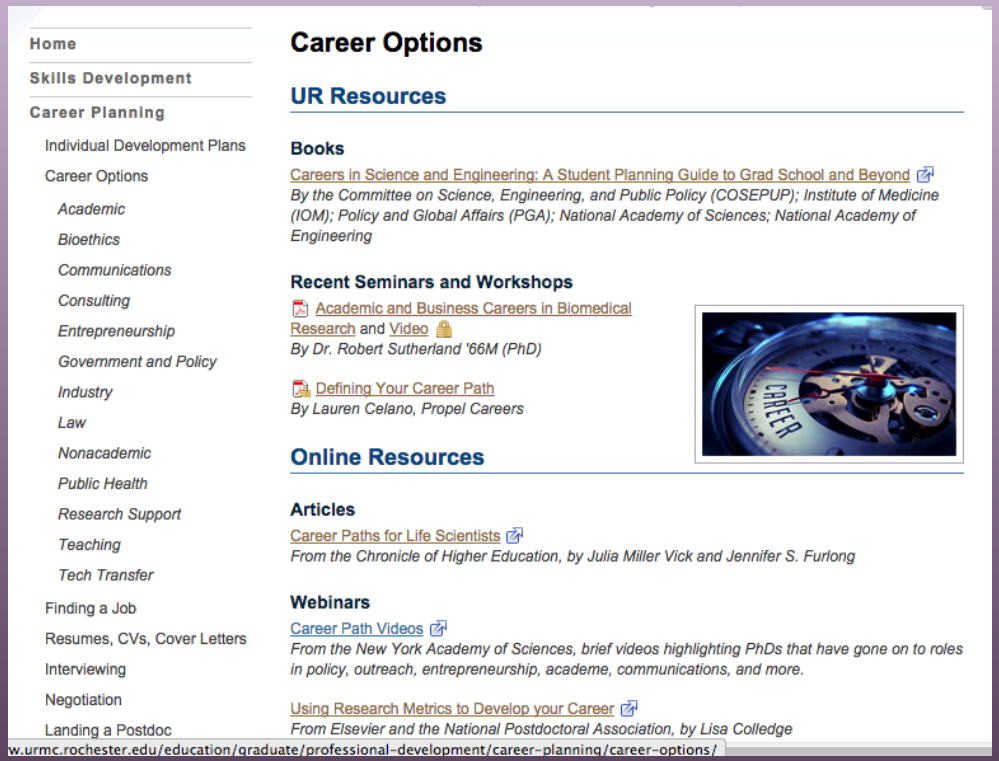


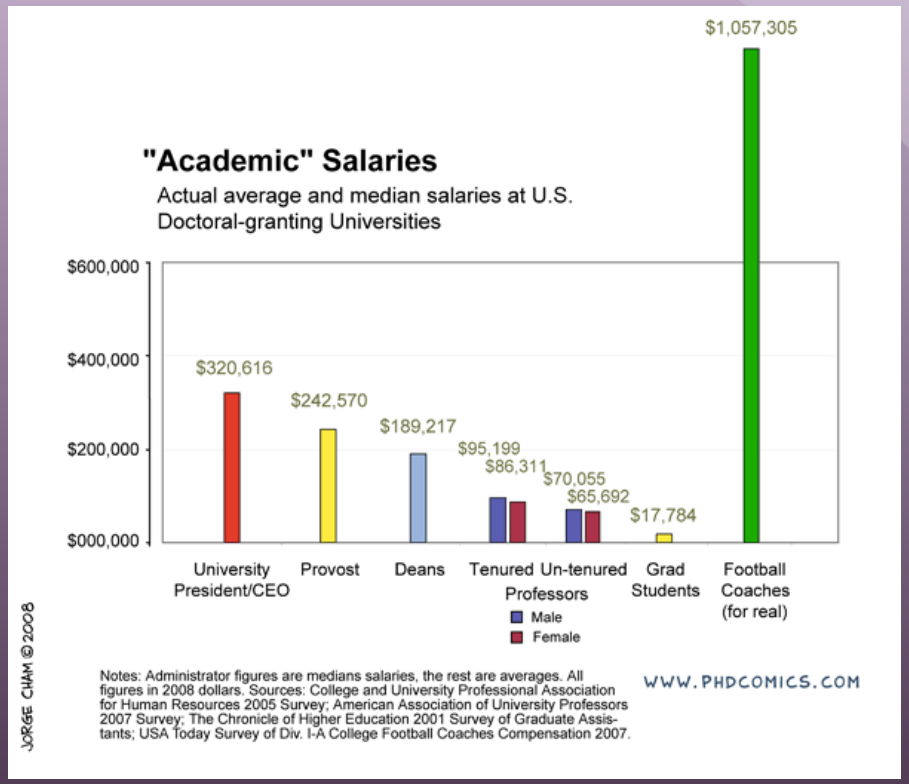
This powerpoint will be posted under:
"Recent Seminars and Workshops"

Or email me and I can send it to you directly.

Schedule in a time to research your career options, you will feel more in control and prepared for the future!

Thank you and Best of Luck!

Special Thanks to:
Randy Ribunado, PhD.
Sharon McCullough
Amy Perazzo
Tracey Baas, PhD.



Contact me if you have questions:
Alison_Billroth-MacLurg@urmc.rochester.edu, x32902