



Overview of the Life Sciences Landscape in the Boston Area

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Outline

- Overview of Boston Area life sciences landscape
- Trends in research areas and companies in the area
- Financing trends
- Networking opportunities
- Smaller companies vs. larger ones
- Tips on connecting with companies



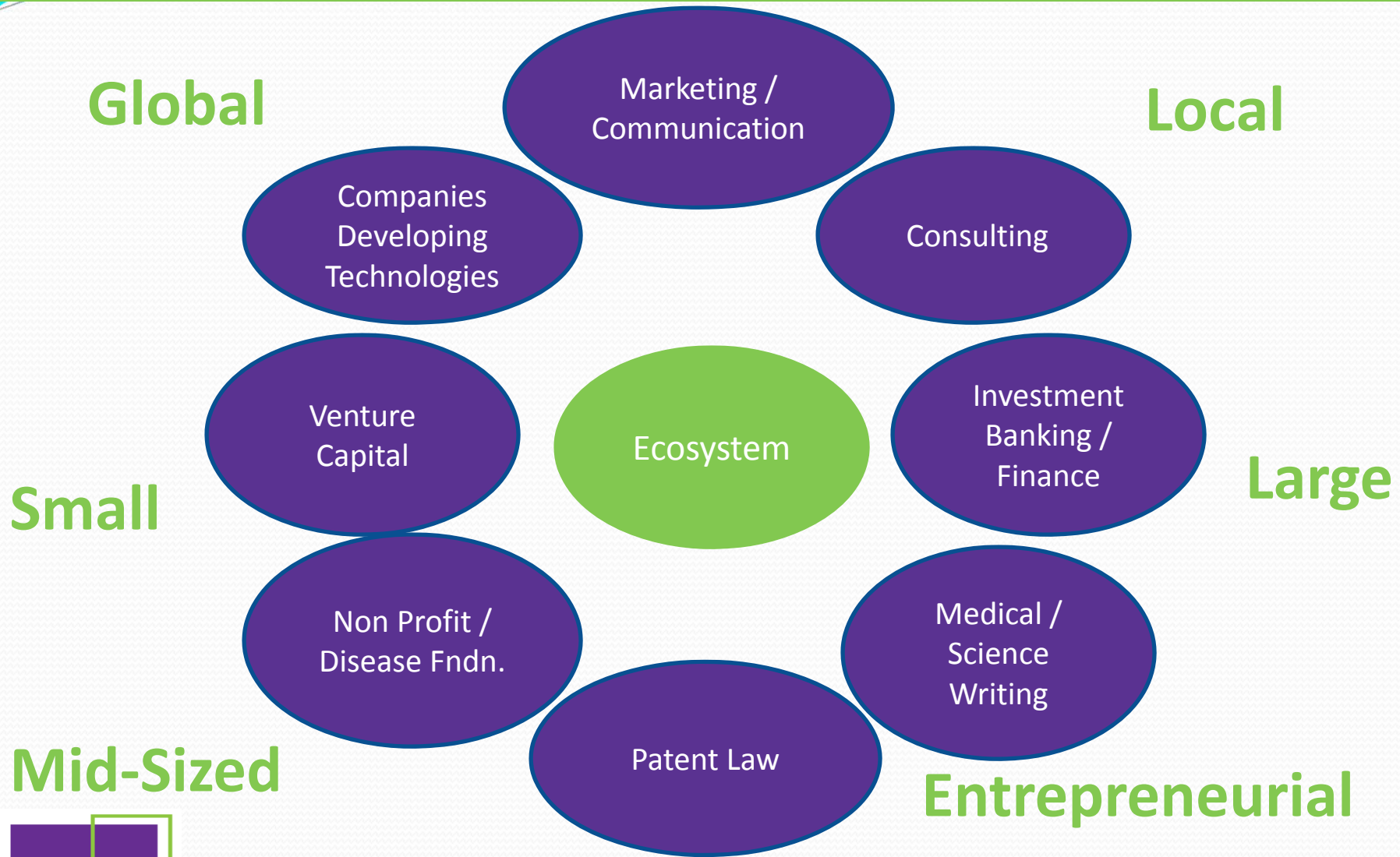
Career Searching is a Journey



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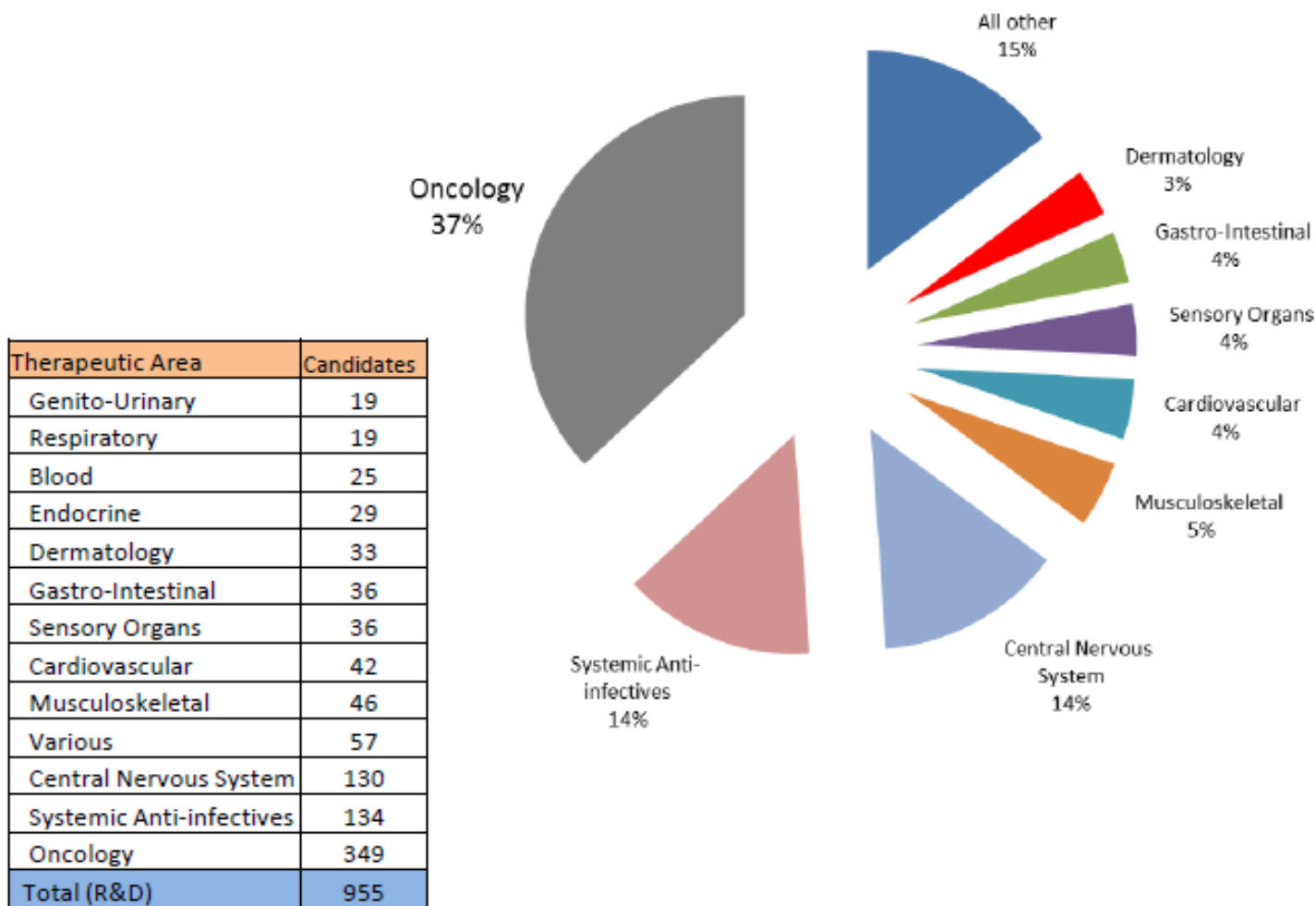
Types of Companies



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Therapeutic Trends in MA



Source: EvaluatePharma®

Source: The 2012 MassBio Industry Snapshot

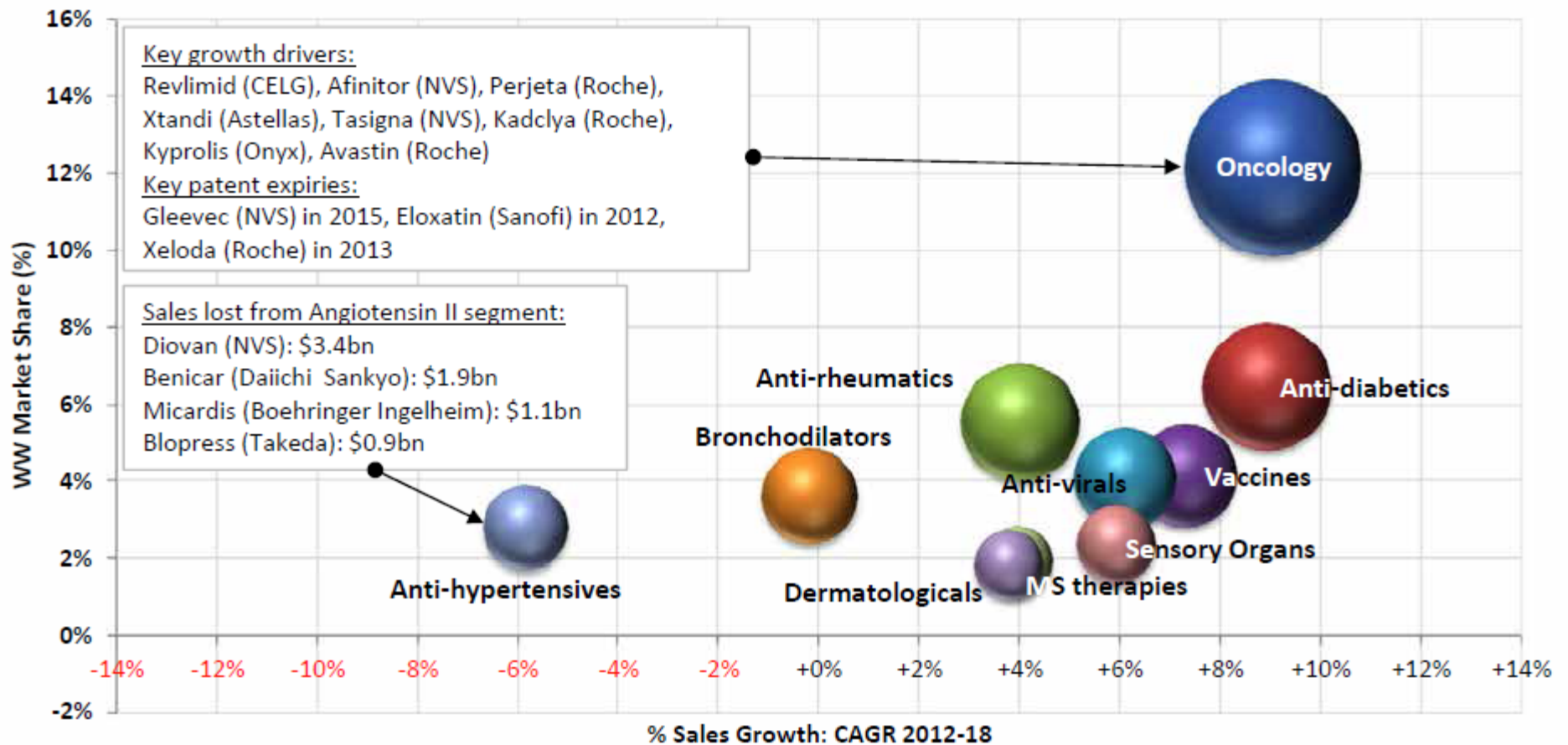


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Therapeutic Trends

Top 10 Therapy Areas in 2018, Market Share & Sales Growth

Source: EvaluatePharma® (23 JUN 2013)

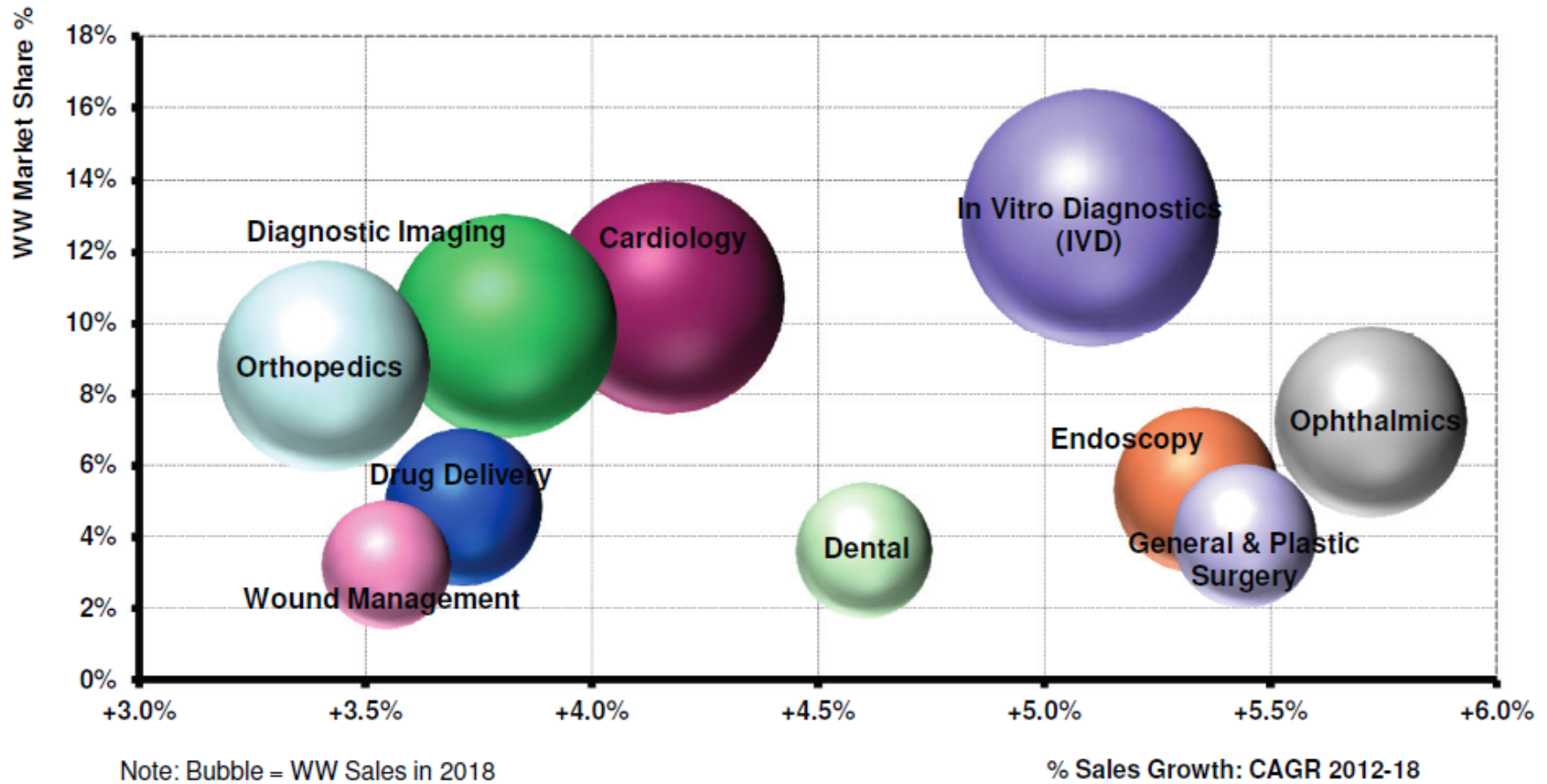


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Source: Evaluate Pharma World Preview 2013,
 Outlook to 2018 Report.
www.evaluategroup.com/wp2013

Medtech Trends

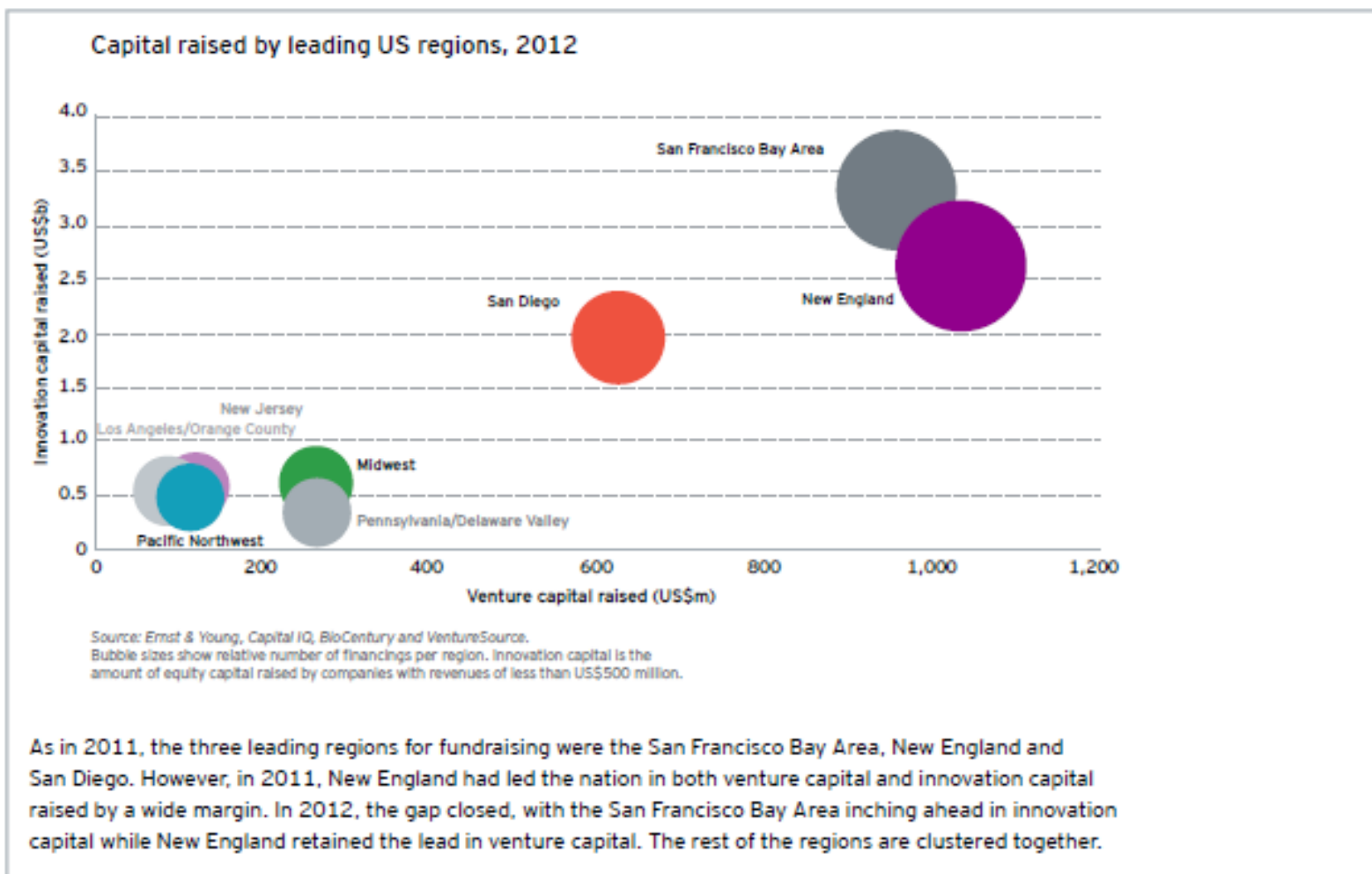
Analysis on Top 10 Device Areas in 2018, Market Share & Sales Growth (2012-18)
 Source: EvaluateMedTech™ (23 SEP 2013)



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Source: Evaluate Pharma The Future of Medtech Report World Preview 2013 Outlook to 2018 Report.
www.evaluategroup.com/MedTechWP2013

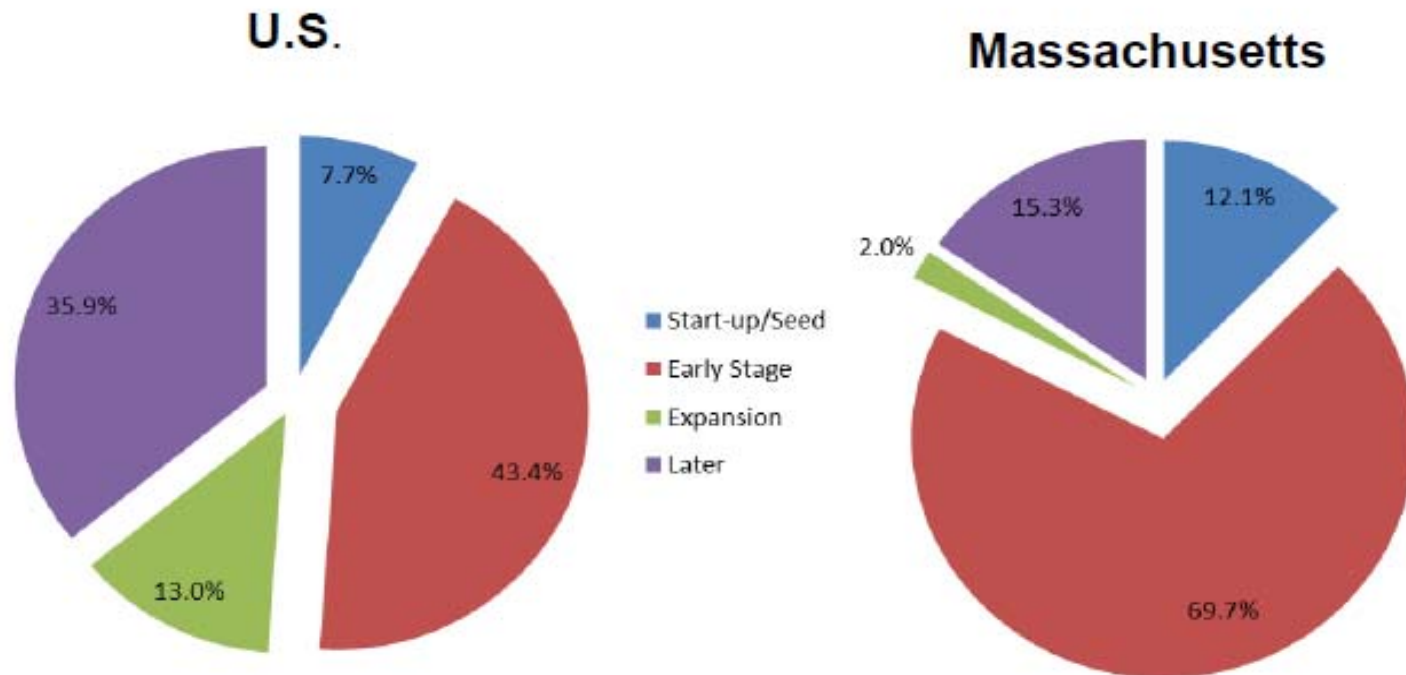
Capital Raised



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Source: Ernst and Young Beyond Borders Biotechnology Industry Report 2013

Biotech VC Financing by Stage



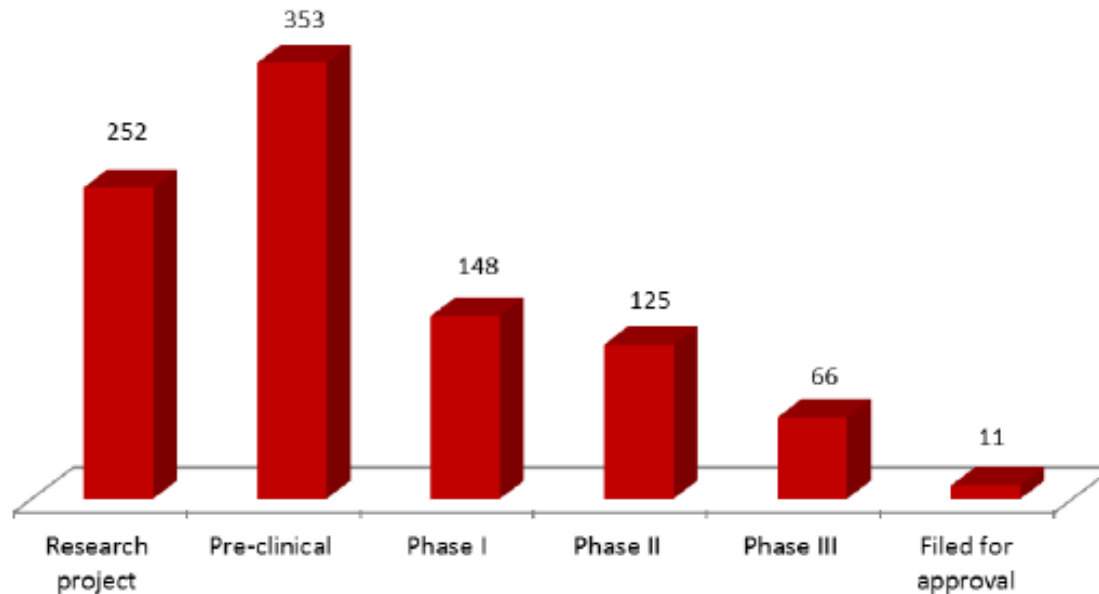
Sources: 2012 PricewaterhouseCoopers, National Venture Capital Association, MoneyTree™ Report, Historical Trend Data and Evaluate Pharma ©



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Drug Development Pipeline by Stage

Candidate medicines of Massachusetts-headquartered* companies, by clinical trials stage



* There are many drugs in development in Massachusetts by companies with headquarters located outside of Massachusetts. These candidate drugs are not included in this report.

Source: EvaluatePharma®

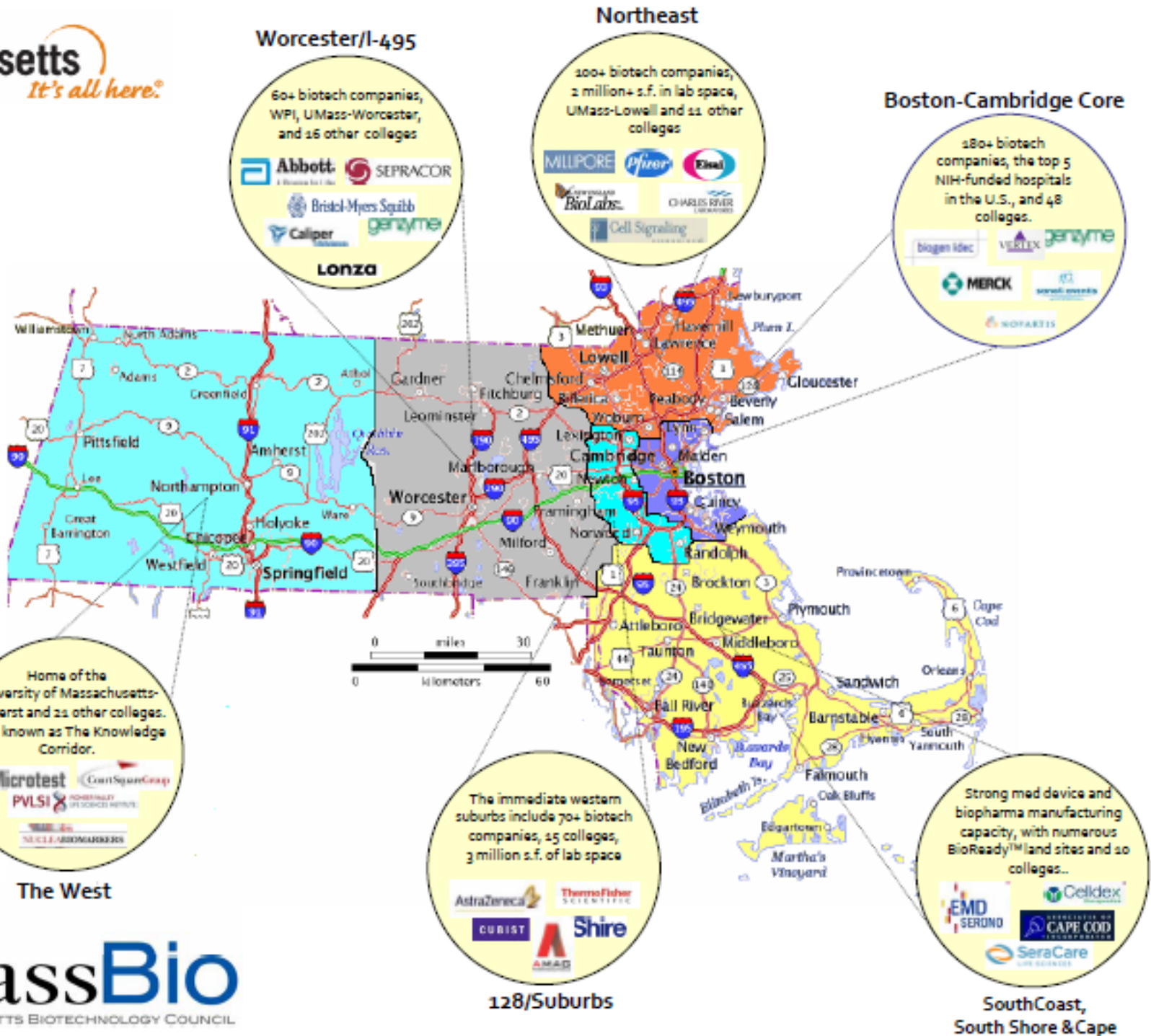


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Source: The 2012 MassBio Industry Snapshot

Massachusetts

It's all here.®



Big Pharma / Biotech Companies in MA include:

- Pfizer
- Novartis
- AstraZeneca
- Sanofi
- Merck
- Johnson and Johnson
- Eisai
- Millennium
- Vertex
- Biogen
- Cubist



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Big Medical Device Companies in MA include:

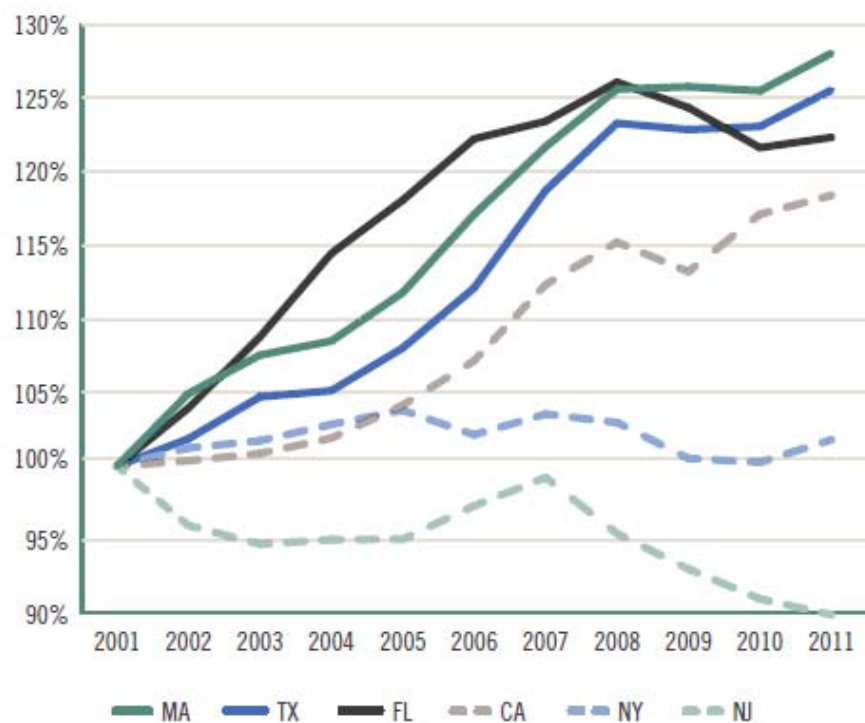
- Boston Scientific
- Covidien
- Abiomed
- Johnson and Johnson
- Philips
- MedTronic
- Baxter
- Perkin Elmer
- Hologis



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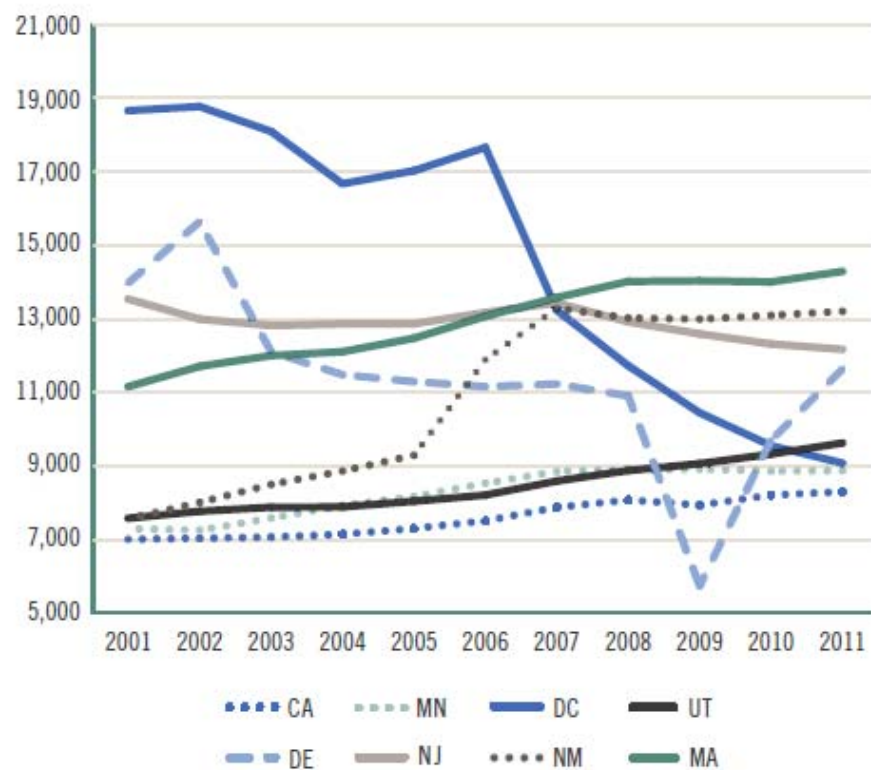
MA Compared to other States

FIGURE 9
Employment in Life Sciences Indexed to 2001, Massachusetts vs. Big Competitor States



Source: Author's Analysis from BLS data

FIGURE 10
Life Sciences Jobs per 1 Million 2010 Population Top 8 States in 2011, by Year



Source: Author's Analysis from BLS data

Source: Life Sciences Innovation as a Catalyst for Economic Development: The Role of the Massachusetts Life Sciences Center Report



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Industry Reports



World Preview 2013, Outlook to 2018
The Future of Medtech

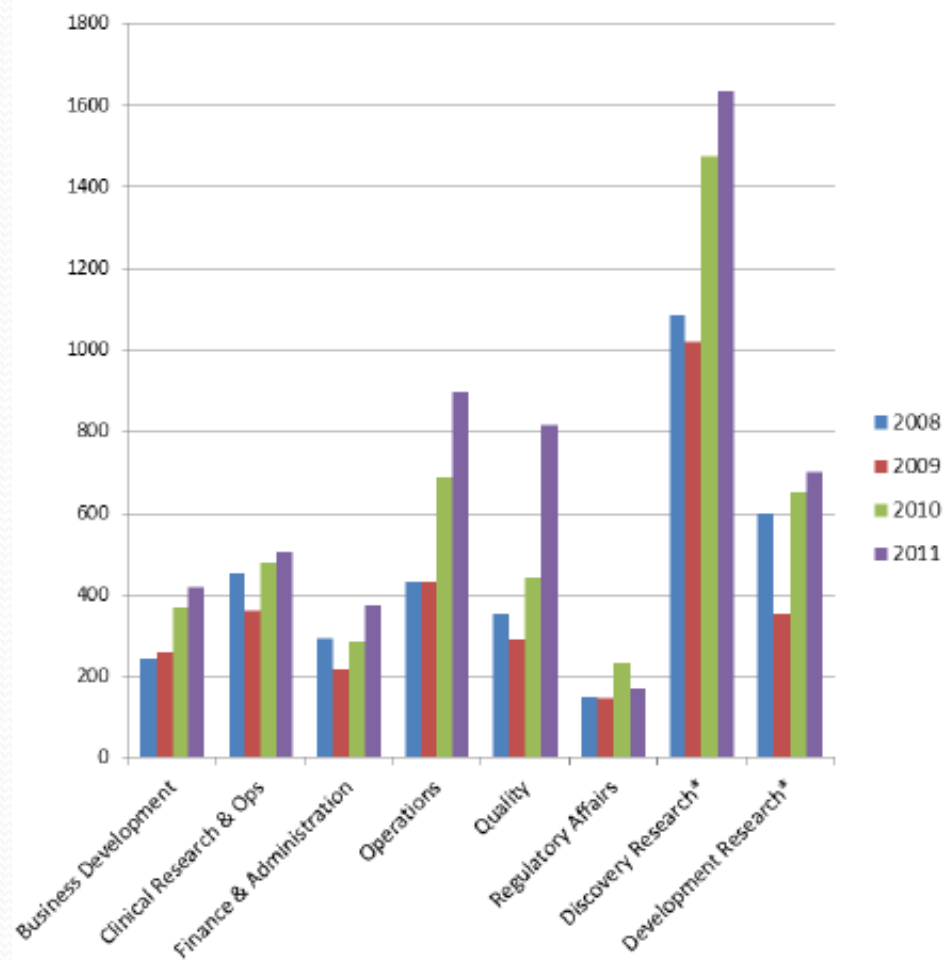
 EvaluateMedTech™



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Job Trends by Area



**% change
in major job categories,
2010-11**

Quality	84.4%
Finance & Administration	30.4%
Operations (including MFG)	30.2%
Business Development	13.6%
Research (Discovery)*	10.8%
Research (Development)*	7.3%
Clinical Research & Ops	5.6%
Regulatory Affairs	-27.0%

*See endnotes for clarification.

Source: Massachusetts Biotechnology Council

Source: The 2012 MassBio Industry Snapshot



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Types of Roles

Technology Development Firms

R&D

- Basic Science
- Preclinical or Development
- Engineering
- Product Development
- Epidemiologist
- Regulatory Affairs
- Clinical Research
- Clinical Data Analysis
- Drug Safety
- Medical Affairs
- Biostatistician
- Bioinformatics

Commercialization

- Marketing
- Product Management
- Project Management
- Market Research
- Sales
- Business Development
- Market Access / Reimbursement
- Pharmacoeconomics
- Medical Science Liaison
- Medical / Clinical Communications
- Medical Writing
- Health Policy



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Additional Roles

Consulting Firms, Investment Banks, Venture Capital

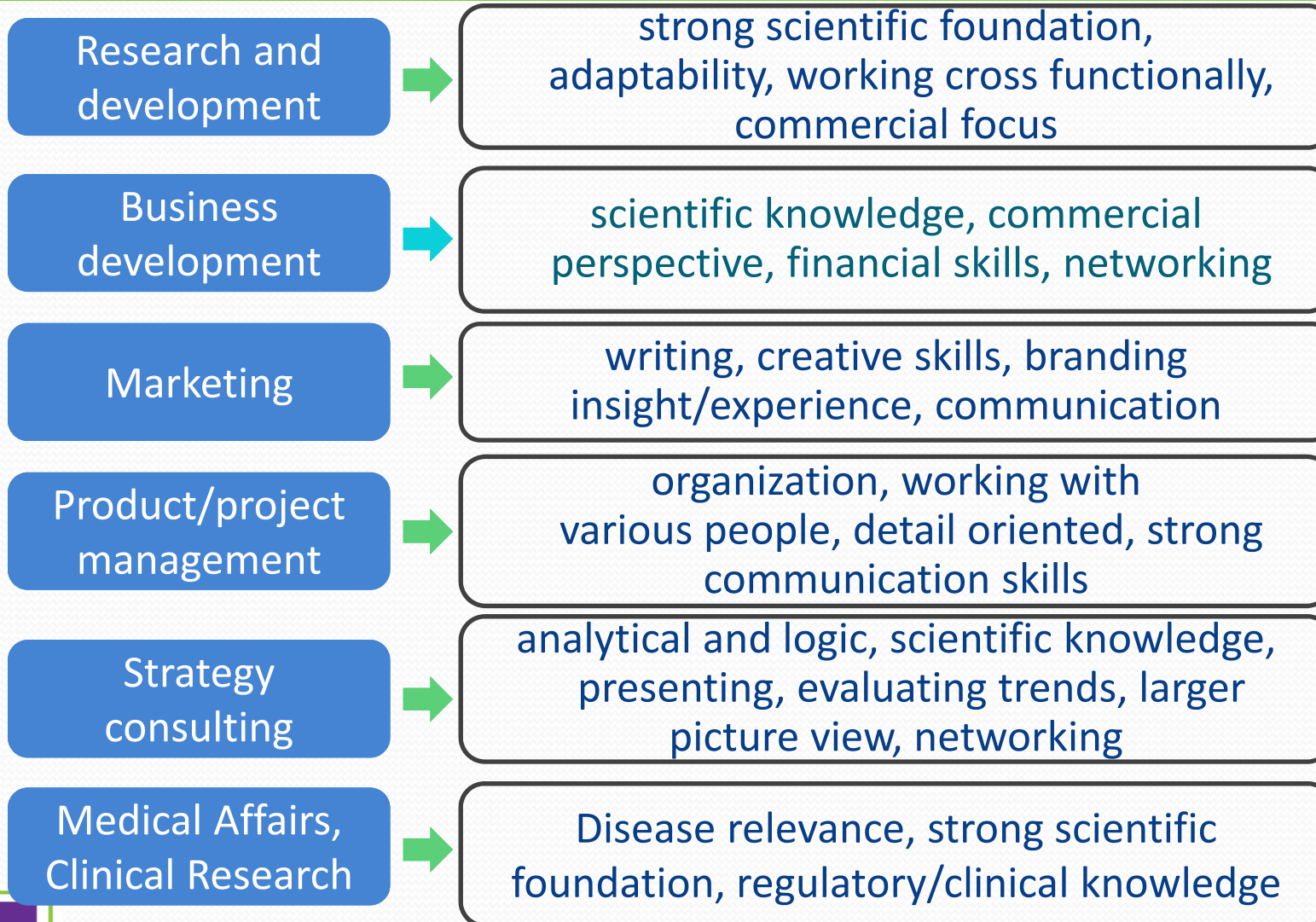
Consulting

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



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Transferable Skills for Specific Roles



How to Build Skills

Research and development



Translational research, drug discovery / development course, intern with startup, write patents, business plans

Business development



Tech Transfer Internships, Intern at Startup, Business Development Plans, Business Course(s)

Marketing



Write Blogs, Social Media, programs i.e. Illustrator, take courses, design flyers, i.e. networking groups

Product/project management



Organize/Lead collaborations or activities, work with people of different backgrounds, gain “big picture”, manage budgets, Gantt charts,

Strategy consulting



Consulting club, case competitions, business courses, leadership roles in organizations, tech transfer internships

Medical Affairs, Clinical Research



Translational disease research, clinical research, IRB's, regulatory / clinical courses

Networking



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State Organizations



www.massbio.org



www.masslifesciences.com



www.massmedic.com



www.cleanenergycouncil.org



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Connections Through Organizations

- **Local Networking Groups**
 - i.e. AWIS, WEST, HBA, AAPS, AACR
- **National Organizations**
 - Biotechnology Industry Association (Bio)
- **Industry Associations**
 - i.e. Drug Information Association (DIA), American Association of Pharmaceutical Scientists (AAPS), American Institute of Chemical Engineers (AIChE)
- **Sector Specific**
 - i.e. Oncology focused, Medical Device focused, Drug Metabolism Focused, etc



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Women's Networking Groups Include



<http://womeninbio.org/>



<http://www.westorg.org/>



<http://www.awis.org/>



<http://www.hbanet.org/>



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Financing Organizations

Venture Capital Organizations Including:

 EXCEL VENTURE MANAGEMENT

 THIRD ROCK
VENTURES

 FAM
VENTURES

 POLARIS
VENTURE PARTNERS

 HealthCare Ventures LLC

 FLAGSHIP VENTURES

 FLYBRIDGE
CAPITAL PARTNERS

 SV Life Sciences™

Corporate Venture Funds Including:

 novartis
venture
funds

 MedImmune

 SANOFI



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Connections with Smaller Companies

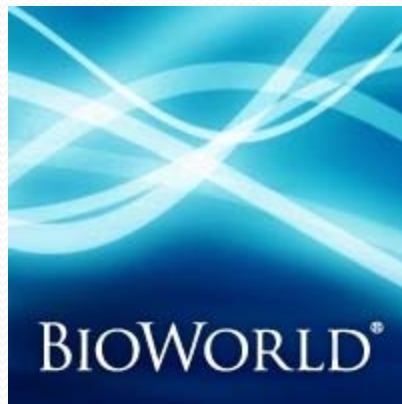
Incubators/Incubator Spaces

- 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
- HealthBox



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Networking through News Sources



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International Consulates for Networking

- > 40 International Consulates in Boston
- Tremendous Networking Opportunities
- Utilize Language and Cultural Skills
- Many with active Life Sciences Engagement
 - Swiss, French, and UK most active



International Events

Monday, October 28^t 2013

6th PIB Biomedical Series Event: Policies on Biomedical Research, Italian and American Models

Event Organizer: Professionisti Italiani a Boston and the Consulate General of Italy in Boston

Location: American Academy of Arts and Sciences, Cambridge MA

Time: 6:00pm-9:00pm

For more information: <http://www.piboston.org/>

Previous events

SWISSnex 
boston
Consulate of Switzerland

Swiss Life Sciences Night 2013: Career opportunities in

 **ENCUENTROS**
INSPIRING INNOVATION

June 2013 at MIT – Chilean Scientists Meeting



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2013 Futures in Life Science Events

- **Life Sciences Overview of Career Paths:** Jan 15, 2013
- **Consulting Career Paths:** Feb 19, 2013
- **Commercialization 1** - (Marketing, Product Management, Business Development): March 19, 2013
- **Research and Development:** April 16, 2013
- **Clinical Development, Regulatory, Medical Affairs:** May 21, 2013
- **Bio-Informatics, Modeling, Systems Biology:** Sept 17, 2013
- **Commercialization 2** - (Reimbursement, Market Access, Pharmacoeconomics, Patient Advocacy): Oct 15, 2013
- **Finance, Legal, Operations:** Nov 12, 2013



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Networking with Non-profits

STRENGTH, SCIENCE & STORIES OF INSPIRATION

BENEFIT EVENT – SEPTEMBER 14, 2013

**JOIN A NEW GENERATION'S FIGHT AGAINST NEUROMUSCULAR
DISEASE!**

9th Annual ALS TDI Leadership Summit



**Thursday, October 3, 2013 @ The Westin Copley
Place Hotel**

The latest science, the PALS' perspective, and advice from the world's most accomplished pharma, biotech, and venture leaders for the ALS community.

[View the Awards](#)

[View the Presentations](#)



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Additional Networking Opportunities

- Scientific Conferences
- Law Firms
- Finance Firms
- Consulting Firms
- Realty Firms
- Etc

**Making connections happens in many ways
Be creative – your career will benefit from this.**



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Branding Yourself



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Elevator Pitches



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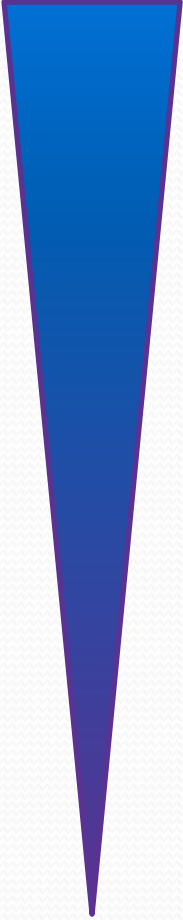
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Sample Elevator Pitch

I am a (postdoc) at (Harvard) focusing on (prostate cancer research). I will be finishing in (6 months) and looking for a (research role) in a (entrepreneurial firm) in (Boston).



Three Levels of Elevator Pitches

- 
- **The overview pitch** – networking events, cocktail hours, people who don't know much about your area
 - **The deeper dive** – meant for someone who knows a little about your area
 - **The really deep dive** – meant for someone who knows your specific area



Resumes - a Few Points to Consider...

- Resumes tell a story
- **Customize each resume for each job application**
- Make it easy to read
- Pay attention to formatting
 - Bullet points, fonts, size, ease of reading, etc
- Put your **first and last name** in resume file name
- Two pages are okay, if you have enough experience
- Include email address and phone # in your resume
- Academic CVs are different from industry resumes



A Few More Points to Consider...

- If you want to do Research
 - Highlight research experiences, skills, techniques
 - **Research Techniques Section in Resume**
- If you want to do non-research
 - Highlight teaching, presentation, organizational, volunteer, team work, mentorship experiences
- Industry values skills such as
 - Communication, team work, organizational skills



FIRST, LAST, Ph.D.

Address

City, State, Zip

Email: NAME@hotmail.com

Home Phone

Cell Phone

Professor: Course for subject area in genetics

- Course 1
- Course 2

Research:

Specialist in research area focusing on neurobiology

Expert in animal models of disease states

Extensive knowledge in research area with >20 peer-reviewed publications

Professional Experience

2010- Present

Harvard School of Medicine, Boston, MA

Instructor and Course Director for Graduate Classes

2004–2009

Harvard School of Medicine, Boston, MA

Postdoctoral Research Associate at the Department of NeuroBiology

1999-2003

University of Pennsylvania, Philadelphia PA

Research Fellow

1995-1998

University of Pennsylvania, Philadelphia PA

Research Assistant

Education

2003

Ph.D. in NeuroBiology, University of Pennsylvania

1995

B.A. in Molecular Biology, UCSD, CA

Awards

2006-2007 Exploratory research grant RXX XXXXX from NIH

2004-2006 Postdoctoral Research Fellowship Award

FIRST LAST Ph.D.

ADDRESS, CITY, STATE, ZIP

Phone, EMAIL: Name@hotmail.com

SUMMARY OF QUALIFICATIONS

- Experienced scientist with focus on neurobiology an signaling pathways involved in development
- Skilled in gathering, analyzing and synthesizing data and developing/testing of new hypotheses
- Excellent writing, verbal communication and presentation skills
- Experienced in scheduling, budgeting and leading projects for nonprofit organizations
- Demonstrated ability in writing successful grants, teaching materials and engagement proposals

PROFESSIONAL EXPERIENCE

Harvard School of Medicine, Boston, MA 2010- Present
Instructor

- Directing Research Seminar focusing in Developmental Neurobiology
- Developing the content (lectures and case studies) for the coursework
- Taught two courses each semester, 25 graduate students per course

Harvard School of Medicine, Boston, MA 2004 –2009
Postdoctoral Research Associate, Department of Neurobiology

- Published the first report on the involvement of novel receptor to neural development and growth
- Unraveled the molecular mechanism utilizing XX research areas
- Reported on novel receptor for its functional implications for conditional gene inactivation
- Demonstrated the involvement of this receptor in a specific disease state
- Presented research at the annual NSF conference
- Experienced in other research areas such as XX, XX, and XX

University of Pennsylvania, Philadelphia, PA 1999-2003
Research Fellow

- Investigated mechanisms of intracellular signaling pathways of growth factors.
- Conducted cloning and biochemical characterization of proteins involved in neural development
- Performed assays including XX, XX, and XX
- Established a mammalian/insect cell-based transient and stable cell lines for protein expression, purification and protein interaction studies

SCIENTIFIC ACCOMPLISHMENTS

- Demonstrated the role of novel receptor in neural development
- Unraveled the mechanism by which the receptor is controlled
- Developed an animal model to evaluate efficacy

PRESENTATIONS

- NSF conference, "Novel Receptor and it's Importance" 2008
- Keystone Research Conference oral presentation 2006

EDUCATION

University of Pennsylvania, Philadelphia, PA 2003
Ph.D. in NeuroBiology



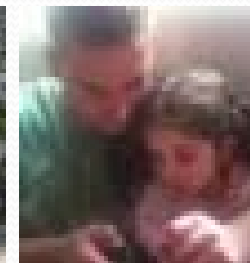
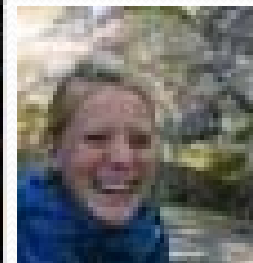
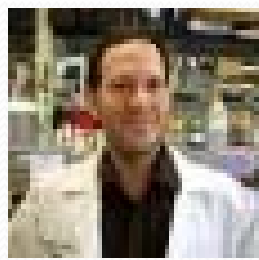
Using LinkedIn

- **>30% of jobs are filled using LinkedIn**
- This is not just for filling jobs...
 - Networking event follow-up
 - Informational Interviews
 - Keeping in touch
 - Searching for types of roles / companies to gain insight



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Your Brand Matters



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Build out Your Profile

LinkedIn



Lauren Celano
Co-Founder and CEO, Propel Careers
Greater Boston Area | Biotechnology

Current	<ul style="list-style-type: none"> • Founder and CEO at Propel Careers
Past	<ul style="list-style-type: none"> • Team Leader at Boston University • Sr. Acct Manager, Business Development at SNBL USA • Account Manager, Business Development at Aptuit, Inc <p style="text-align: right;">see all...</p>
Education	<ul style="list-style-type: none"> • Boston University - School of Management • Gettysburg College • University of East Anglia
Recommendations	3 people have recommended Lauren
Connections	500+ connections

Lauren Celano's Summary

Successful business development professional with a proven track record of establishing strong relationships, growing existing client relationships, and managing complex projects. Diverse knowledge of drug discovery and development areas and experience with small and large molecule development programs.

Lauren Celano's Experience

Founder and CEO Propel Careers

Privately Held; Human Resources Industry
April 2009 – Present (2 years 2 months)

Propel Careers is a recruitment firm focused on delivering a wide array of placement and career development services in the life sciences sector. Whether you are an undergraduate or graduate student, a recent graduate, or experienced professional, Propel's resources and network can be an asset to your career growth. The Propel website (www.propelcareers.com) contains information on how we can assist you with:

- Recruiting services for full-time positions with leading life sciences companies
- Securing a project based opportunity or internship in the life sciences sector
- Identifying a seasoned professional who can serve as a mentor
- Career counseling and resume review
- Networking

Please contact me at Lauren @propelcareers.com with any questions about how we might be able to help you.

Experience

Associate Director - Global Marketing

Public Company; ; Biotechnology industry
May 2008 – Present (3 years 1 month)

Product Manager - Oncology -

Public Company; 10,001+ employees; Pharmaceuticals industry
January 2007 – May 2008 (1 year 5 months)

Cardiovascular specialty sales

Public Company; , Pharmaceuticals industry
September 2003 – January 2007 (3 years 5 months)

Sales representative for cardiovascular portfolio at covering the Washington, DC territory.

Senior Account Executive

Public Company; Marketing and Advertising industry
August 2001 – July 2003 (2 years)

Managed marketing and advertising for pharma and biotech clients in Oncology.

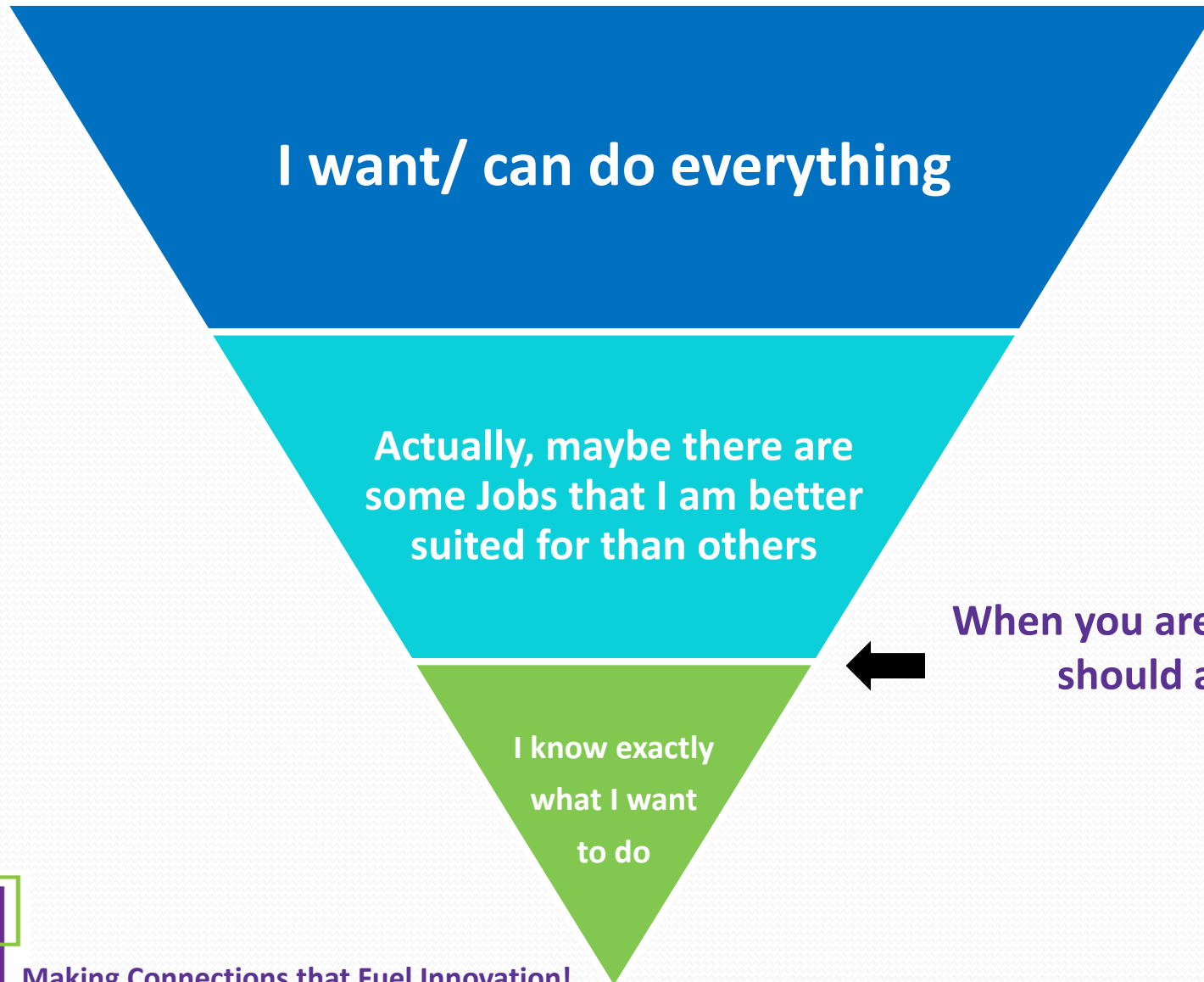
VS



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Job Searching: The Funnel Effect



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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



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Job Search Tips – Companies to Apply to

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			

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.



An informational interview is not a job interview.



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Informational Interviewing

Particular Job

Company

Career
Progression

Career Entry



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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



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Prepare for Informational Interviews

Email the person you will be speaking with an idea of what you are looking for and questions ahead of time.

I am looking to learn more about:

- What your role is like, day to day
- What skills are needed to be successful (so that I can build these)
- What you like best about your role
- What you would change
- What is a typical career path
- What is your company culture



Small Company



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Small Company

Research

Training
Scientists

Grants

Managing
Collaboration

Interact with
Vendors

Fix machines

Write SOP's

Prepare
presentations
for Business
Group

Etc...



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Large Company



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What Organizations Look For

- Passion and interest in the company/role
- Relevant skills
- Team work, organizational, analytical skills
- Excellent Interpersonal skills
- A personal connection to the company/people in the company, is huge



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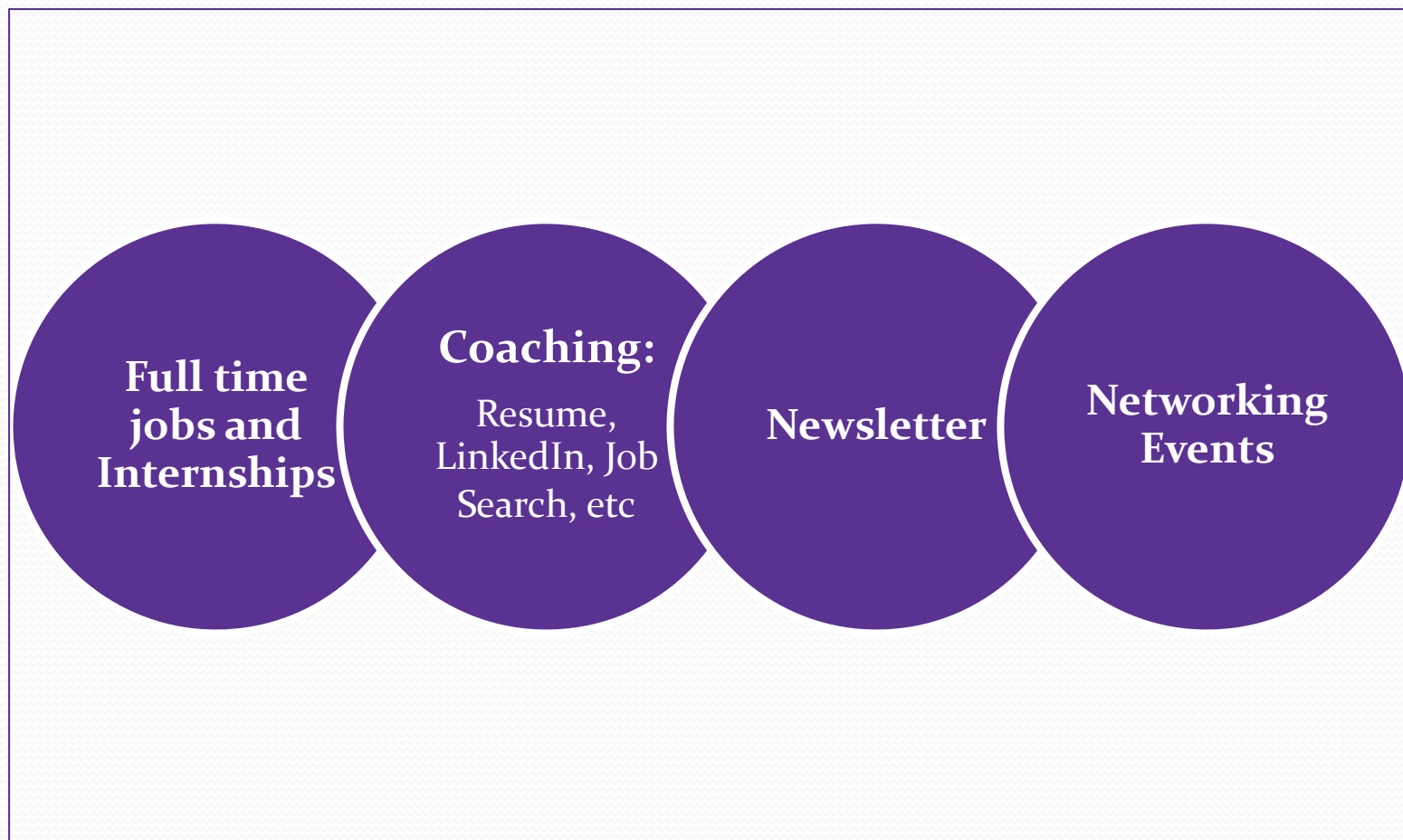
Propel Careers

Propel Careers is a life science search and leadership development firm that specializes in connecting innovative, entrepreneurial companies and like-minded professionals in a more efficient and personal manner

www.propelcareers.com



Connect with Propel



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Contact Details

Lauren Celano

Founder and CEO

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Twitter: http://twitter.com/Propel_Careers

Facebook: [Propel Careers](#)

Linked in: [Propel Careers](#)

Fueling Innovation. Fostering Leaders.

www.propelcareers.com



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