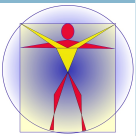# Industry Careers: What's Out There?
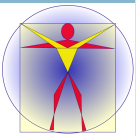
An Industry Overview

October 5, 2009

Randall Ribaudo

President, CEO

Human Workflows, LLC

Outline

❖ The realities of the job market

❖ What's available in "Industry"

❖ How do I relate my skills to the non-academic market?

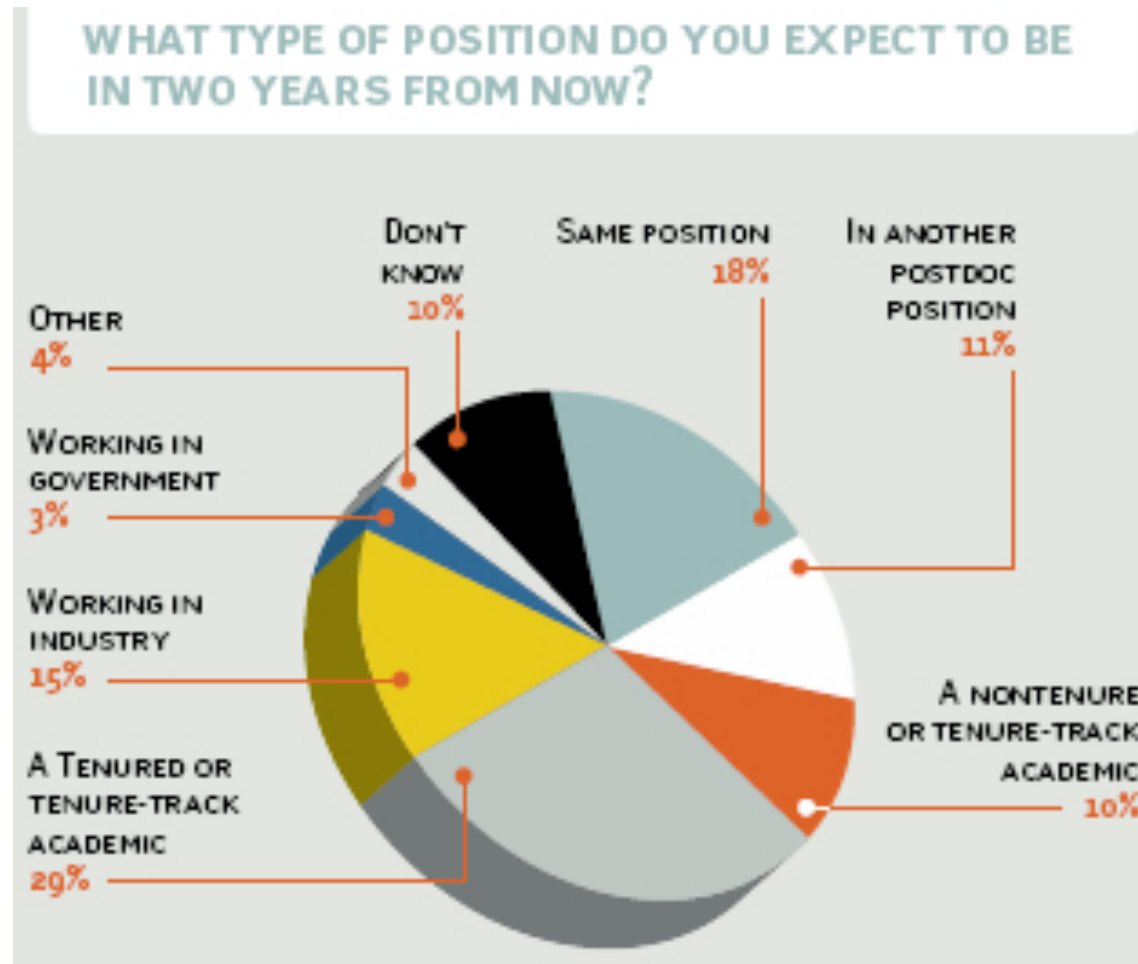❖ How do I best prepare myself to get a job in "Industry"

FAQs

- What jobs are available in Industry?
- How do I "break in" to non-bench jobs?
- What job does a PhD typically start out in?
- What are average salaries?
- What is the timeline for finding a job?
- How important are publications?
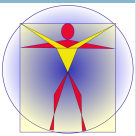- How do I prepare for interviews?

Perception vs. Reality

WHAT TYPE OF POSITION DO YOU EXPECT TO BE IN TWO YEARS FROM NOW?

- DON'T KNOW 10%
- SAME POSITION 18%
- IN ANOTHER POSTDOC POSITION 11%
- OTHER 4%
- WORKING IN GOVERNMENT 3%
- WORKING IN INDUSTRY 15%
- A TENURED OR TENURE-TRACK ACADEMIC 29%
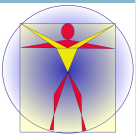- A NONTENURE OR TENURE-TRACK ACADEMIC 10%

Source: TheScientist Vol 23:3 p47, 2009

Distribution of USA Science Jobs by Market (+/- 5%)*

- 15% Academia
- 30% Government
- 20% Non-Governmental Organizations
- 35% Business

- For example:
- Maryland has 370 biotech companies employing 30,000 life science professionals**
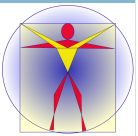
* Source: AAAS Science Careers
** Source: Baltimore Sun

What's Out There?

- ## Kinds of Companies
  - Large Pharma
  - Biotechs
  - Medical Devices and Diagnostics
  - Non-profits, NGOs

Typical Job Titles

- Research Scientist
- Applications Specialist
- Group Leader
- Project/Program Manager
- Technical Support Specialist
- QA/QC
- Business Development

Job Examples: MedImmune

Our Typical Careers

Learn more by searching jobs in the hiring area of your choice.

As a fully integrated biotechnology company, MedImmune offers a wide array of employment opportunities. Major hiring areas include:

Administrative

Business Development, Licensing, Ventures

Clinical Development

Clinical Operations

Clinical Product Development

Corporate Communications and Public Relations

Development - Analytical Biochemistry

Development - Formulation

Development - Manufacturing Sciences

Development - Operations

Development - Process Biochemistry

Development - Process Cell Culture & Fermentation

Environment Health & Safety

Engineering & Facilities

Finance

Government Affairs, Advocacy, Public Policy

Human Resources

Information Technology

Legal

Manufacturing and Production

Marketing

Medical Affairs

Operations - Quality

Operations - Supply Chain & Strategic Sourcing

Product Safety

Regulatory Affairs

Research - Antibody Development & Protein Engineering

Research - Infectious Disease

Research - Oncology

Research - Operations

Research - Respiratory, Inflammation, and Autoimmune

Research - Translational Science

Research - Vaccines

Sales

Sales Support

You need a Strategy

Short Term Strategy: 1-5 years

Long Term Strategy: 15 years


The typical "first job" lasts 1-2 years

The typical "second job" lasts 3-5 years

Two Rules of Business (USA)

- By definition, a Business must make a profit. The tax code requires a profit status. Investors require a profit status.

- A business must constantly compete globally and improve its products and services as well as productivity standards: revenue per employee, return on capital deployed, new drug success rate, …

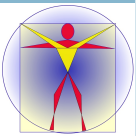Results in seeking employees with technical as well as business skills.
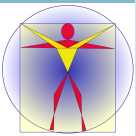
Skill Sets by Company Type

- Large Pharma
  - Technical expertise
  - Product-driven
- Biotech and smaller companies
  - Technical expertise
  - Business sense
  - Communications
  - Project Management

Critical Skills

- Good judgment
- Strong Communications skills
- Ability to work as part of a team

Value Characteristics of Scientist to Employers

Generally positive

- Education/learning
- Computer literacy
- Critical thinking
- Problem solving
- Technical writing
- Research a topic
- Self managed workflow
- Technical expertise
- Technical teams
- Work ethic
- Technical network

Generally need development

- Matrix team experience
- People communications
- Conflict management
- Supervisory skills
- Leadership skills
- Persuasion skills
- Relationship management
- Strategic thinking
- Financial acumen
- Performance acumen

Business Competencies:
The language of business success!

Competencies are coupled to the processes of business success;

- There are <u>23 business competencies</u> that are derived from performance standards and hiring criteria used throughout industry.

- These competencies are organized into 6 functional categories:

  1. Creating the Vision
  2. Developing People
  3. Execution
  4. Achieving Results
  5. Communications
  6. Financial Acumen

Universal Talent Practices- All Business Jobs
The Language of Business

Creating the Vision
- Strategic
- Technical/Scientific
- Innovative
- Risk Management
- Champion/Energy

Developing People
- Collaboration
- Enabling
- Empathy
- Rapport

Execution
- Structuring
- Control
- Tactical
- Delegation

Achieving Results
- Production
- Focus
- Competition

Communications/Learning
- Technical Literacy
- Style Flexibility
- Emotional Intelligence
- Social Intelligence

Financial Acumen
- Return on Investments
- Determining performance metrics
- Managing the Balance Sheet

Behavioral Based Talent Mapping
Academic and Research Experience

PhD Behavior*	Relates to:
__ Formulate a problem statement	Strategic
__ Research the problem	Innovation
__ Extend knowledge to new findings	Innovation
__ Cost/Benefit of a PhD	Risk Management
__ Manuscript/Grant Rejected	Champion/Energy
__ Manage advisors	Rapport
__ Design an experiment	Structuring
__ Adapt design to accomplish goals	Structuring
__ Self manage workflow	Control
__ Show progress, milestones	Control
__ Identify process limitations	Tactical
__ Systematic approach	Production
__ Meet deadlines, self-monitor	Production
__ Achieve PhD	Focus
__ Learn new content	Technical Literacy
__ Sell your hypothesis	Style Flexibility
__ Accept feedback	Emotional Intelligence

* Partial Listing

Behavioral Based Talent Mapping Academic and Research Experience

Research Team Behavior*	Relates to:
__ Coordinate task with team members	Collaboration
__ Use others input in decisions	Collaboration
__ Build consensus within team	Enabling
__ Accommodate needs of team members	Empathy
__ Show active concern for team	
__ Show loyalty to team	Empathy
__ Form close and supportive relationships with team members	Rapport
	Rapport
__ Delegate task to team	
__ Consult with superiors	Delegation
	Social intelligence

How do competencies vary with the Market?

Competency	Academia	Government	NGOs	Business
Technical/Scientific	++++	+++	+++	++
Creating the Vision	+	++	++	+++
Developing People	+	++	++	+++
Execution	++	++	+++	+++
Achieving Results	++	++	+++	++++
Communications	++	++	++++	++++
Financial Acumen	+	+	++	+++

Matching your Talent Map to Business Requirements by Employee Size and Revenue

Competency	<100 employees	<1,000 employees	Global	<$5M per year	<$500M per year	>$500M per year
Technical/Scientific	++++	++++	+++	++++	+++	+++
Creating the Vision	+++			+++		
Developing People	+++			+++		
Execution	+++	+++		+++		
Achieving Results	++++			++++		
Communications	++++	+++		+++	+++	
Financial Acumen	++++			+++		

Job example: Scientist

Science jobs from Monsanto Company: job description

Scientist

Location: St. Louis, MO

Monsanto, an Ag industry leader creating scientific breakthroughs around the world, is seeking a Molecular Geneticist/Plant Molecular Biologist to elucidate mechanisms of plant recombination which can be used to develop novel strategies for crop improvement. This position will be part of a research team responsible for the rapid development of scientific breakthroughs in recombination control to benefit a world class plant breeding program. Research will focus on elucidating the key regulators for the control and specificity of recombination. R&D efforts will be supported with the latest tools in sequencing, genotyping, plant transformation and field testing. The program will combine both reverse and forward genetic approaches and integrate lab and field experiments. The position will be located at our Creve Coeur, Missouri site.

Scientist: Required Skills

Required Skills/Experience/Attributes:

Ph.D. or equivalent.

Experience in genetics, breeding or molecular biology and at least 2 years of additional relevant experience.

Current understanding and a demonstrated research record in genetic recombination, meiosis, and/or DNA repair.

Experience in utilizing state-of-the-art tools such as high throughput sequencing, genotyping and bioinformatics analysis.

Communication and connectivity will be an important asset to work in a cross-functional environment where scientists with diverse expertise are being brought together to overcome obstacles and deliver innovative solutions to unsolved challenges.

In a dynamic business environment, the successful candidate is expected to be flexible and adept at shifting priorities and research directions in order to leverage emerging opportunities identified through genotyping platform discoveries.

- Exceptional teamwork skills are required to promote team synergy, leverage resources cross functions, and proactively collaborate with internal and external technical experts.

Applications Specialist

Applications Specialist

Join a dynamic team selling the market leading product to an industry that will transform our society over the next decade.

As a core member of Geospiza's sales and marketing team you will provide technical expertise and life science market knowledge to drive sales and adoption of Geospiza's suite of data management and analysis platforms. The primary responsibility of the Applications Specialist will be to work closely with the sales team to evaluate, educate, and guide customers throughout the sales process, provide live demonstrations of product capabilities, evaluate and manage demonstration projects, and provide applications support to the sales force as needed.

Additionally, the Applications Specialist will interface between customers and marketing/product teams to provide critical input for product requirements and monitor emerging applications and technologies. Significant customer interaction is required. Position may require travel.

Qualifications:

- Background in the life sciences/molecular biology, particularly in the areas of genomics and next generation DNA sequencing (including related applications)
- Significant experience in customer-facing roles, including technical pre-sales of new technologies and customer relationship management
- Outstanding written and verbal communication skills; ability to present technical materials to a technical audience
- Demonstrated ability to develop written materials and technical tools to support job functions and/or related products
- Strong analytical and problem solving skills 3-5 years of laboratory experience

Required:

- B.S. or B.A. in life science-related field; advanced degree preferred
- U.S. citizenship required
- English: Fluent

Project Manager

Title: Project Manager
Location: Hayward, CA
Req: 01617

Position Summary:

The Translational Sciences Project Manager will be responsible for the operational management of Translational Sciences project teams, engage in critical communication with TS senior management and other functional and cross-functional teams, and contribute to the establishment of the project management organization.

Major Duties and Responsibilities (including supervising others):

• Working with the scientific leadership of all areas of Translational Sciences, across multiple therapeutic areas, the Project Manager plans and manages projects throughout the entire drug development process, in accordance with the vision set forth by senior management in support of corporate goals. The project complexity is high.
• Using collaboration and influencing skills, the Project Manager guides the Translational Sciences sub-team of the Product Development Team through project goal setting, strategy development, risk analysis and mitigation, decision-making and problem-solving activities in order to evaluate viable project progression alternatives and maximize portfolio success rates.
• With strong communication skills, the Project Manager will be responsible for clear and efficient communication of project status, progress to plan and issues to all stakeholders, including preparation of reports, presentations and other required documentation relating to tracking project progression, dissemination of key messages through multiple channels across different departments and sites. The project Manager will work closely with Research Project Management, Research Portfolio Management, Corporate Project Management, Product Development Team Leadership, project schedulers within Translational Sciences and the MedImmune governance committees.
• The Project Manager will assist in developing and optimizing project management processes for coordinated project management, information flow / key project documentation and budgeting across Translational Sciences and work to implement these processes within the TS Sub-teams and the Research organization.

Position Requirements

Experience:

Essential: Demonstrable experience in the pharmaceutical or biotechnology industry and a solid understanding of the detailed stages of biologic drug discovery and development, from early research phase activities through clinical development
Demonstrable experience in leading complex project teams in a dynamic environment
A demonstrated ability to apply a broad and integrated perspective when planning, problem-solving, and assessing impact across functional areas; including the identification of the critical steps, activities, upstream / downstream processes in Research drug discovery
Desirable: Experience managing teams in a global organization
Experience working within a PMO

Special Skills/Abilities:

Essential: Significant project management and project planning expertise:

„X Project definition and design goals, project strategy, risk analysis, timeline and budget
„X Communication of project status and issues to stakeholders
„X Value assessment of project and portfolio placement
Managerial courage and conflict management
Able to influence widely, and develop relationships regardless of level
Facilitation and matrix team building
Negotiation and relationship development skills
Excellent oral and written communication competencies
Strong analytical / problem solving abilities
Well organized with excellent time management
A strong leader, but a team player first
Able to deal with ambiguity and respond effectively and decisively to change

Desirable: Experience with OPX2 or other EPM system

Job Complexity: High

Supervision: Able to work effectively with minimal supervision
(supervision required, level of independence)

Educational Essential: Educated to BSc level or equivalent in a Biological Science
Requirements Desirable: Advanced degree, at MBA, PhD or MS-level

How do I Sell Myself

- Research the company
- Understand its products
- Express your skill-sets in terms of the company's needs
- Relate your personal experience with business-centric traits
- Emphasize your understanding of their products and services from a user perspective

What Jobs do I apply for?

- Jobs that will excite you
- Don't take prerequisites too literally
- Get a foot in the door
- Your first job is NOT your permanent job
- Have a plan

Networking

- Get involved in local business
  - Learn
  - Gain Visibility
  - Make connections

- Business Networking sites
  - Links to companies with jobs
  - References

Networking: Local Business

Rockville Innovation Center

ACTiVATE®

NIH

The newest ACTiVATE® program will target postdocs and others who want to partner with them to start technology companies.

http://www.umbc.edu/activate/nih.htm

Maryland Technology Incubators

MARYLAND TECHNOLOGY DEVELOPMENT CORPORATION
Maryland Technology Incubators

CURRENT INCUBATORS

1. bwtech@UMBC
2. Chesapeake Innovation Center
3. Emerging Technology Center@Canton
4. Emerging Technology Center@Johns Hopkins Eastern
5. Frederick Innovative Technology Center@Hood
6. Frederick Innovative Technology Center@Monocacy
7. Garrett Information Enterprise Center
8. Germantown Innovation Center
9. Higher Education and Applied Technology (HEAT) Center
10. NeoTech Incubator
11. Prince George's County Technology Assistance Center
12. Rockville Innovation Center
13. Shady Grove Innovation Center
14. Silver Spring Innovation Center
15. Tawes Incubator Allegany Business Center
16. Technical Innovation Center at Hagerstown Community College
17. Technology Advancement Program at University of Maryland
18. TowsonGlobal
19. UMB BioPark BioInnovation Center
20. Wheaton Business Innovation Center

INCUBATORS UNDER DEVELOPMENT

21. White Oak Innovation Center

★ Maryland Technology Development Corporation (TEDCO)

November 2008

Networking: Linked-In
www.linkedin.com

Linked-In connections

Networking: Plaxo
www.plaxo.com

Case Study

Randall K. Ribaudo

Timeline:

1988 Ph.D. Immunology

1988-1993   Post Doctoral Fellowship NIAID

1993-1997   Principle Investigator, NCI

1997-2000   Scientific Applications Specialist

2000-2005   SAS, BD, Project Management

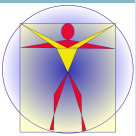2005-present   Business owner

Key Skills

Ph.D. Immunology

➢ Scientific/Technical

➢ Writing

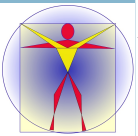➢ Oral Expression

Key Skills

Post Doctoral Fellowship

➢ Scientific/Technical

➢ Writing

➢ Oral Expression

➢ Team work

➢ Mentoring

➢ Communications

Key Skills

Principle Investigator, NCI

➢ Team Lead/Supervisory skills

➢ Mentoring

➢ Leadership skills

➢ Strategic Thinking

➢ Persuasion skills

➢ Conflict Management

➢ Financial Acumen

Key Skills

Scientific Applications Specialist
Small biotech

- ➢ Profit/Loss
- ➢ Communications skills
- ➢ Listening
- ➢ Relationship management
- ➢ Strategic planning
- ➢ Building a network

Key Skills

Celera Genomics

➢ Business Development

➢ Communications skills

➢ Project and Product Design/Management

➢ Listening

➢ Relationship management

➢ Strategic planning

➢ Building a network

FAQs

- What jobs are available in Industry?
- How do I "break in" to non-bench jobs?
- What job does a PhD typically start out in?
- What are average salaries?
- What is the timeline for finding a job?
- How important are publications?
- How do I prepare for interviews?

Summary

- Have a short and long term strategy
- Emphasize skills based on company type
- Use language of business
- Be creative in describing qualifications
- Do your Research
- Network, Network, Network