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%
- Working in government 3%
- Working in industry 15%
- A non-tenure or tenure-track academic 29%
- A tenured or tenure-track academic 10%
- Other 4%

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

Source: MedImmune website
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
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

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Business Competencies:
The language of business success!

Competencies are coupled to the processes of business success;

There are 23 business competencies 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

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### PhD Behavior*

- Formulate a problem statement
- Research the problem
- Extend knowledge to new findings
- Cost/Benefit of a PhD
- Manuscript/Grant Rejected
- Manage advisors
- Design an experiment
- Adapt design to accomplish goals
- Self manage workflow
- Show progress, milestones
- Identify process limitations
- Systematic approach
- Meet deadlines, self-monitor
- Achieve PhD
- Learn new content
- Sell your hypothesis
- Accept feedback

### Relates to:

- Strategic
- Innovation
- Innovation
- Risk Management
- Champion/Energy
- Rapport
- Structuring
- Structuring
- Control
- Control
- Tactical
- Production
- Production
- Focus
- Technical Literacy
- Style Flexibility
- Emotional Intelligence

* Partial Listing
Behavioral Based Talent Mapping
Academic and Research Experience

**Research Team Behavior**

- Coordinate task with team members
- Use others input in decisions
- Build consensus within team
- Accommodate needs of team members
- Show active concern for team
- Show loyalty to team
- Form close and supportive relationships with team members
- Delegate task to team
- Consult with superiors

**Relates to:**

- Collaboration
- Collaboration
- Enabling
- Empathy
- Empathy
- Rapport
- Rapport
- Delegation
- Social intelligence

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How do competencies vary with the Market?

<table>
<thead>
<tr>
<th>Competency</th>
<th>Academia</th>
<th>Government</th>
<th>NGOs</th>
<th>Business</th>
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</thead>
<tbody>
<tr>
<td>Technical/Scientific</td>
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<td>+++</td>
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<td>Creating the Vision</td>
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<td>Execution</td>
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<td>Achieving Results</td>
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<td>Communications</td>
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<tr>
<td>Financial Acumen</td>
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</tbody>
</table>
Matching your Talent Map to Business Requirements by Employee Size and Revenue

<table>
<thead>
<tr>
<th>Competency</th>
<th>&lt;100 employees</th>
<th>&lt;1,000 employees</th>
<th>Global</th>
<th>&lt;$5M per year</th>
<th>&lt;$500M per year</th>
<th>&gt;$500M per year</th>
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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

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
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:
- Project definition and design goals, project strategy, risk analysis, timeline and budget
- Communication of project status and issues to stakeholders
- 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 Requirements Essential: Educated to BSc level or equivalent in a Biological Science
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

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Maryland Technology Incubators

**CURRENT INCUBATORS**
1. bwtech@UMBC
2. Chesapeake Innovation Center
3. Emerging Technology Center@Cantons
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
22. Maryland Technology Development Corporation (TEDCO)

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Networking: Linked-In

www.linkedin.com
Linked-In connections
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

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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