Industry Careers: What's Out There…

... and how to get ready!

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 those valued in "Industry"?
- How do I best prepare myself to get a job in "Industry"

Job Example: Senior Scientist, Antibody Engineering

Job Description

The candidate will lead a group focused on the establishment and development of innovative recombinant antibody engineering technologies. Handle self-developed technologies in the areas of antibody discovery to support HGS Therapeutic protein and antibody programs in autoimmune, oncology and infectious disease areas. In addition, the candidate will manage internal collaborations with other HGS research and development groups on relevant projects as well as external collaborations/contracts with current or future HGS partners.

Desired Skills & Experience

Desired Skills & Experience

A PhD in Chemistry, Biochemistry, Molecular Biology or a related field is required in addition to a strong publication record in peer-reviewed journals, demonstrating significant postdoctoral and independent research. The candidate must also have at least five years of demonstrated leadership of an academic or industrial research lab group (research associate and Ph.D. scientist) with managerial skills and be able to independently plan, design and execute experiments as well as follow literature, interpret results and design new approaches. Likewise, he/she should be passionate about new engineering technologies and have hands-on experiences with all modern molecular biology techniques. The candidate should have broad knowledge of antibody structure and function and have extensive expertise in antibody/protein engineering. The candidate should also have good knowledge of the relevant literature and be able to develop innovative and creative solutions to scientific problems. Experience in the application and development of protein and antibody phage/yeast or other display methods and high throughput screening/selection are preferred. Strong interdisciplinary problem solving, communication, presentation and writing skills are essential.

Specifically…

Business Competencies
Relationship to your experiences
How to use those experiences in:
- Interviews
- Resumes
- Cover Letters
- Career Planning

Perception vs. Reality

What type of position do you expect to be in two years from now?

Source: The Scientist: March, 2010

Availability of Jobs

Source: AAAS Career Magazine, Aug 2010
Distribution of USA Science Jobs by Market (+/- 5%)*

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

In 2003, only 19.8% of PhDs were in tenure or tenure-track positions 4-6 years after receiving their degree**

* Source: AAAS Science Careers
** Source: Science, March 5, 2010

What’s Out There?

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

Typical Job Titles

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

Typical Job Titles

- Technical Writer
- Business Research Analyst
- Corporate Communications
- Patent Review
- Regulatory Affairs

Job Examples: MedImmune

Excellent References

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

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

Perceived Value of Doctoral Graduates in Industry

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 24 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 Investment
- Internal Rate of Return
- Determining performance metrics
- Managing the Balance Sheet

Competencies Interact

Behavioral Based Talent Mapping
Academic and Research Experience

PHD Behavior*
- Formulate a problem statement
- Research the problem
- Extend knowledge to new findings
- Cost/Benefit of a PhD
- 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, Social Intelligence

* Partial Listing

How do competencies vary with the Market?

<table>
<thead>
<tr>
<th>Competency</th>
<th>Academic</th>
<th>Government</th>
<th>NGOs</th>
<th>Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical/Scientific</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>Creating the Vision</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Developing People</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Execution</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Achieving Results</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Communications</td>
<td>++</td>
<td>++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Financial Acumen</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Competency</th>
<th>&lt;$100k</th>
<th>&lt;$200k</th>
<th>Global</th>
<th>&lt;$500k</th>
<th>&lt;$1M</th>
<th>&gt;$500k</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical/Scientific</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Creating the Vision</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Developing People</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Execution</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Achieving Results</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Communications</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Financial Acumen</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
</tbody>
</table>

Copyright © 2011 Human Workflows, LLC
Matching your Talent Map to Business Requirements by Function

<table>
<thead>
<tr>
<th>Competency</th>
<th>Executive</th>
<th>Mid level</th>
<th>Manager</th>
<th>Skill Support</th>
<th>Research</th>
<th>Operations</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical/Scientific</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating the Vision</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Developing People</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Execution</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achieving Results</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communications</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Acumen</td>
<td>+++</td>
<td>+++</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Career Planning

- Self-assessment
- Match skills to opportunities
- Relate experience to competencies
- Identify gaps in long-term goal required skills

- In-house training
- Local colleges
- Internships

- New responsibilities
- Broadened experience
- Promotions

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

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

Key Skills

Human Workflows, LLC

- Marketing
- Business Development
- Financial Acumen
- Communications skills
- Relationship management
- Strategic planning
- Building a network

Our Unique Perspective

Our Unique Perspective

The SciPhD Online Self-Assessment introduces critical Business Competencies

Self Assessment

Understanding what I’m good at…

… and what I’m not so good at
Job Example: Senior Scientist, Antibody Engineering

Job Description
The candidate will be a group focused on the establishment and development of innovative recombinant antibody engineering technologies. He/she will develop novel technologies in the areas of antibody discovery to support HGS therapeutic protein and antibody programs in autoimmune, oncology, and infectious disease areas. In addition, the candidate will manage internal collaborations with other HGS research and development groups on relevant projects as well as external collaborations/contracts with current or future HGS partners.

Desired Skills & Experience
A PhD in Chemistry, Biochemistry, Molecular Biology or a related field is required in addition to a strong publication record in peer-reviewed journals, demonstrating significant postdoctoral and independent research. The candidate must also have at least five years of demonstrated successful leadership of an academic or industrial research lab group (research associate and PhD scientist) with managerial skills and be able to independently plan, design and execute experiments as well as follow literature, interpret results and design new approaches. He/she should be knowledgeable about new engineering technologies and have hands-on experiences with all modern molecular biology techniques. The candidate should have broad knowledge of antibody structure and function and have extensive experience in antibody/protein engineering. The candidate should also have good knowledge of the relevant literature and be able to develop creative solutions to scientific problems. Experience in the application and development of protein and antibody phage display or alternative display methods and high-throughput screening/selection are preferred. Strong interdisciplinary problem solving, communication, collaboration and writing skills are essential.
Gap Analysis

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

How do I Sell Myself

Strategies in applying for jobs

- 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

The Importance of Growing in your job

Linked-In connections

Source: CareerXroads
Job Description:
VP Device Fabrication

Pacific Biosciences is seeking a highly skilled, driven and experienced Executive to manage our Semiconductor Device Research and Development group. This group is responsible for the design, development and implementation into high volume manufacturing environments of semiconductor structures using advanced geometries that are used in single molecule, real-time detection applications. This position reports to the Sr. Vice President of Research and Development. The successful candidate will be responsible for managing a group of engineers and scientists that are focused on component design, fabrication, integration, metrology development and transfer into both domestic and overseas high volume manufacturing environments. This group must also develop and maintain close working relationships with other internal and external R&D teams, and activities including optics, instrument engineering, biochemical, enzymology and molecular biology and must be comfortable working in a multi-disciplinary, fast paced R&D environment. This candidate will also be expected to identify, develop relationships and negotiate working relationships with established industry foundries and other critical suppliers, and be able to assess the capabilities of potential suppliers that will be used to develop, fabricate and supply critical components for our product lines. This candidate will also serve as a critical contributor to developing both the short and long term technology roadmaps to ensure that Pacific Biosciences remains at the forefront of single molecule, real time detection applications.

Job Description:
Research the position

Use the network to find out information
• Google the company
• Find out who that Sr. VP you're reporting into would be (from job description)
• Leverage Linked-In to find more information
• BE AS PREPARED AS YOU CAN BE!

Summary

• Industry Cares About Business Skills
• Industry Does Not Assume PhDs Have Business Skills
• Map Your Experience to Business Skills
• Map Your Business Skills to Jobs
• Emphasize Your Strengths
• Develop Short and Long Term Career Plans
• Develop Your Network

Thank You

Questions & Feedback
info@sciphd.com