Preparing postdocs for a career in the industrial (and nonprofit) sector

Lauren Celano
CEO, Propel Careers
Lauren@propelcareers.com
Postdocs Have Many Career Options in the Industry and Non-Profit Sector

- Research
- Clinical, Regulatory, Medical Affairs
- Business Development, Licensing,
- Intellectual Property
- Industry / Non-Profits
- Grant writing / Grant Administration
- Project / Product / Alliance Management
- Scientific / Technical Writing, Communications
- Consulting

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Ph.D. / Postdoc Program Provides Valuable Training:

- Excellent Scientific/Technical Foundation!
- Data analysis skills
- Ability to synthesize information/learn new areas
- Ability to ask questions
- Work ethic and drive
- Work independently and be accountable
Your Ph.D. or Postdoc is not only about science.
These Transferable Skills Define your Personal Brand

and help you standout from the crowd
Skills for Academic Success also apply to Industry and Non-Profits

- Publications and Presentations
- Thought Leadership (e.g.)
  - Peer Reviewing
  - Chairing conferences
  - Advisory Roles
- Grants Navigation / external funding
- Involvement in the University
  - IRB, IACUC, etc
  - Admissions committees
  - Departmental initiatives
- Collaborations
- Teaching
- Mentoring

Additional Skills Gained in Academia are relevant to other careers

- Writing / reviewing intellectual property
- Developing Business plans; market research
- Consulting clubs / case studies
- **Writing**: blogs, technical / non-technical writing
- **Software**: Illustrator, photoshop, indesign
- **Quantitative Skills**: SAS, Matlab, STATA, R, SPSS, Matlab, etc
- **Courses**: i.e. Drug discovery, entrepreneurship, finance, regulatory, etc
- Leadership roles in organizations
Organizations Value: Teamwork
Developing Teamwork Skills

- Lead collaborations with academia, industry, non-profits
- Initiate collaborations with labs (internal or external)
- Work on cross functional teams (for your research)
- Manage relationships with vendors
- Take leadership role in your Postdoctoral Association
- Leadership role in groups (internal / external to Univ.)
- Community Service
Organizations Value Leadership

- Organizations want to hire people who have technical skills AND who:
  - Can take a leadership role
  - Can develop people and care about this
  - Take initiative and make things better
  - Become involved in their community
  - Develop a network that they can tap into for advice, hiring, collaborations, etc
Developing Leadership Skills

- Leadership roles in groups internal and external to university
- Take leadership roles in collaborations
- Organize / co-organize a panel at a conference (i.e. Keystone, Gordon conference)
- Organize / co-organize a conference
Developing Leadership Skills

- Manage people to complete a task
- Manage a process
- Manage a relationship with a vendor
- Improve processes and efficiency (develop solutions)
- Set up new techniques, write protocols for them
- Train students, interns, lab members in techniques
- Mentor
Organizations Value Communication
Developing Communication Skills

- Present to technical audiences (i.e. conferences) and non-technical audiences (i.e. patient advocacy groups)
- Lead / contribute to grant writing opportunities
- Review colleagues papers, presentations, grants
- Lead or contribute to reporting activities for annual grant report process
- Become a spokesperson for your lab / give tours
- Present to collaborators
Developing Communication Skills

- **Write for:**
  - your university newspaper / news outlet / communications group
  - the (disease) foundation relevant to your research
  - your industry association / conferences
- **Teach (university, community college, high school, STEM outreach, etc)**
- **Journal reviewer**
- **Develop a Personal Blog**
- **Toastmasters**
Developing Additional Skills

- Organizational Skills – manage multiple projects or activities simultaneously
- Write patents
- Develop Design skills (Illustrator, photoshop)
- Develop programming skills (Perl, Ruby, Python, etc)
- Develop analytical skills (R, Matlab, SAS, STATA, etc)
- Manage a budget or purchasing process
- Take Courses:
  - Entrepreneurship, Finance, Regulatory, etc
Where to Build Skills
Building Skills - Internal to University

In addition to the postdoctoral fellow's own research, below are a few offices to reach out to for shadowing / internship experiences:

- Technology Transfer Office
- Communication / Public Relations Office
- Policy Office
- Grant Administration Office
- Corporate Relations Office
- Development Office
- Research Compliance Office
- Clinical Research Department
- Teaching Opportunities
Building Skills - Internal to University

BU's BEST EXPERIENCES

Currently Available EXPERIENCES

- Research Administrator Intern (Grants & Contracts)
- Student Mentoring/Scientific Writing
- Science Communication
Making Connections that Fuel Innovation!

Building Skills – External to University

- Internships / externships (Industry, Non-profit)
  - Research
  - Business
  - Communications / Writing
  - Policy
  - Quantitative data analysis
  - Intellectual Property
  - Etc

- Leadership roles in non-profits
- Scientific outreach, advocacy, STEM education, etc
- Leadership roles in disease or professional associations

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# Building Skills – External to University

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**To view internship opportunities outside of BU’s BEST:**

<table>
<thead>
<tr>
<th>Field</th>
<th>Organization</th>
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<tbody>
<tr>
<td>Communications</td>
<td>WBUR Internship</td>
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<tr>
<td>Communications</td>
<td>NPR Internship</td>
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<td>Law</td>
<td>BU Office of Technology Development</td>
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<tr>
<td>Teaching</td>
<td>Science from Scientists</td>
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<td>Research</td>
<td>Pfizer</td>
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<td>Research</td>
<td>Biogen</td>
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<td>Research</td>
<td>Vertex</td>
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Building / Highlighting Skills for Different Roles

**Research and Development**
- Solid Technical Foundation
- Translational research
- Manage / Initiate research collaborations
- Work cross functionally
- Write patents
- Intern with startup
- Develop business plans
- Write Grants

**R&D in an Entrepreneurial Organization**
- Set up a lab (with 1st time PI)
- Develop a new research direction for the lab
- Comfortable with very innovative research
- Wear many hats (vendor mtg, train people, budgeting)
- Initiate collaborations
- Secure own funding
- Do grant annual reporting
Building / Highlighting Skills for Different Roles

Marketing Communications
- Technical & non-technical writing
- Lab Public Relations
- Give Tours / Present
- Blog writing
- Design flyers or marketing materials
- Social Media
- Use programs i.e. Illustrator, photoshop

Medical Affairs, Clinical Research
- Translational disease research
- Collaborate with Clinicians/ Medical Teams
- Clinical research
- Clinical biomarkers
- IRB experience
- Regulatory submissions
- Regulatory / clinical courses
- Presenting a lot

Regulatory
- Develop / improve processes
- Develop SOP’s and protocols
- Train people on techniques
- QC data
- Contribute data to a regulatory filing
- Work with cross functional teams
Building / Highlighting Skills for Different Roles

Technical Sales / Application Specialist
- Manage relationship with vendors
- Manage the purchasing process
- Develop budgets
- Install equipment
- Train people on techniques
- Develop training materials

Policy
- Advocate for grad students / postdocs (i.e. head of grad student or postdoc association)
- Member of a groups advocacy committee like AWIS or your “professional association, i.e. AACR”
- Member of national postdoc association
- Improve policies within university

Data Science Roles
- Quantitative Skills i.e. SAS, STATA, R
- Data visualization tools
- Programming languages
- “big data analytics”
## Develop a Skills Development Plan

<table>
<thead>
<tr>
<th>Skill</th>
<th>Do you have it (Y/N)</th>
<th>If yes, in what context?</th>
<th>Is it needed for your Career Path? (Y/N)</th>
<th>If yes, how will you acquire it?</th>
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<tbody>
<tr>
<td>Transferable Skill 1</td>
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Contact Details: Connect with Propel

Lauren Celano
Founder and CEO
Propel Careers
cell: 215-370-2285
e-mail: Lauren@propelcareers.com

Twitter: @Propel_Careers
Facebook: Propel Careers
LinkedIn: Propel Careers
Web: www.propelcareers.com