Rutgers iJOBS Mid-Year Symposium

October 30, 2018
According to a recent report by the NIH Biomedical Workforce Working Group, approximately 23% of PhD graduates will pursue academic positions, while 77% will pursue other career options.
BEST Awardees

17 Universities
$2 million for 5 years
Infrastructure support
No direct fellow funding

1. Cornell U
2. Emory/Georgia Tech
3. NYU
4. U Mass Worcester
5. UC Davis
6. UCSF
7. U Colorado Denver
8. Vanderbilt U
9. Virginia Polytech
10. Wayne State

11. Rutgers U
12. U Chicago
13. U North Carolina
14. U Rochester
15. UC Irvine
16. Boston U
17. Michigan State

Common goals
Shared programming
Active evaluation
Process improvement
Excellent Professional Environment

The World’s Cure Corridor

New Jersey

Excellent Professional

• Over 3000 life science and biopharmaceutical establishments
• 400 biotech companies
• 13 of the 20 largest biopharmaceutical companies globally

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• 400 biotech companies
We Thank Our Partners
iJOBS Participation

Rutgers Graduate Students
- SGS (New Brunswick/Piscataway/Newark)
- GSN (Newark)
- GSC (Camden)

Rutgers Postdocs
- RWJMS
- NJMS
- SAS New Brunswick
- SoE
- SoP
- SEBS
- SAS Newark
- SAS Camden

Free shuttle transportation provided
Experienced Program Leadership

Martin Yarmush
Distinguished Professor of Biomedical Engineering
School of Engineering
Co-PI

James Millonig
Senior Associate Dean
School of Graduate Studies
Co-PI

Janet Alder
Assistant Dean for Academic & Student Affairs
School of Graduate Studies
Co-PD

Susan Engelhardt
Executive Director
Center for Innovative Ventures of Technologies
Co-PD

Doreen Badheka
Program Director
School of Graduate Studies
Co-PD
Phased Approach

Now that you are successful in your chosen career, share your experience with new trainees.

Sample the program to see if a non-academic career is for you; register for programming as meets your needs.

Ready yourself for career placement and search for a position.

Go forward and define your career focus. Apply for “trainee" status and, if accepted*, take advantage of individualized mentoring and career planning support.

Phase 1 iNQUIRE

Phase 2 iINITIATE

Phase 3 iMPLEMENT

Phase 4 iNSTRUCT

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Holistic Programming

Individual development planning & mentorship
Career-specific courses
Professional shadowing

SciPhD Leadership and Business Training
Site visits
Networking sessions
Career panels
Case studies
Primers
Workshops
Career fair
Web portal access

Phase 1
iNQUIRE

Phase 2
iINITIATE

Phase 3
iIMPLEMENT

Phase 4
iINSTRUCT

Resume development
Interview preparation
Job placement and tracking

Continued participation
Support and mentoring
Phase 1
Examples of Career Tracks

- Principal investigator
- Bench Research in Government, Pharma or Biotech
- Teaching-intensive careers in academia
- Science and Health Policy
- Patent Law
- Tech Transfer and Business Development
- Clinical Research
- Regulatory Affairs
- Health and Science Data Analysis
- Business Consulting
- Scientific Writing and Medical Communications
- Medical Affairs
- Non-profit and Foundations
- Finance and Equity Research
- Publishing
- Food safety
- Journalism
- Teaching Education Outreach
- Entrepreneur
SciPhD: Leadership and Business Skills for Scientists

Provided by Human Workflows, LLC

Winter 2015, 2016, 2017, 2018/35 hours

- The Business of Science
- Major Leadership Styles
- Successful Communications as a Scientist
- Developing Your People
- Networking and the Interview Process
- Team Performance Tools
- Negotiations
- Financial Literacy
- Strategic Project Management for Scientists
Representative Site Visits

- Merck (3)
- Genewiz
- Bristol-Myers Squibb (3)
- Novartis
- GlaxoSmithKline
- Regeneron
- Eli Lilly (2)
- Celgene
- Janssen
- Commercialization Center for Innovative Technology
- Enterprise Development Center
- Institute for Life Science Entrepreneurship
- Sanofi Aventis
- Covance
- Kashiv
- Ferring Pharmaceutical
- NJ Dept. of Health (3)
- Stryker
- Colgate-Palmolive
- Envigo
Representative Workshops: Job Simulation

- Patent Law – rewrite patent to demonstrate originality
- Pharma Market Research Analysis – report on whether drug is worth pursuing
- Medical Affairs – Medical Informaticist vs MSL role play
- Consulting – recommend approach to launch new clinical trial
- Regulatory Writing – prepare an Investigative Brochure
- Medical Communications – create slide deck for physician
- Entrepreneur - How to test your biotech business idea
Representative Workshops: Primers

- Project Management
- Python with DataCarpentry - programming and how to deal with large datasets
- Good Laboratory Practice (GLP)
- Pharmokinetics and Pharmodynamics (PK/PD)
- Immuno-oncology Research
- Communicating Science with Alan Alda - elevator pitch and improv to connect with audience
- Scientific Storytelling
Representative Workshops: Job Search

• Targeted resumes
• LinkedIn profiles with photo shoot
• Networking skills
• Transferrable skills
• Interviewing skills
• Informational interviews
• Job search using staffing agencies
• Finding and applying for an internship
• Goal setting and time management
• How to prepare for job fairs
• International students seeking employment in USA
• Self assessments (StrengthsFinder, Birkman)
• Emotional Intelligence and influencing others
Networking Events

• All career panels, site visits and workshops have networking component since they are in person
• Coordinate with professional societies: Sino American Pharmaceutical Association, American Association of Pharmaceutical Scientists, and BioPharma Networking Group
• Rutgers and iJOBS alumni
BioNJ/iJOBS Career Fair
April 2015, 2016, 2017, 2018
exclusive for life science companies
Trainee Opportunities through iJOBS Sponsorship

- Board Certification in Medical Affairs
- From Science to Pharma MSL Preparation
- What Can You Be with a PhD at NYU
- GRO Biopharma Conference with NY Schools
- BioNJ Inspiring Women in STEM
- Association for Women in Science
- Regeneron Science to Medicine Forum
- Biogen Drug Development Conference
Phase 2

Phase 2 INITIATE
Career Track Example
Skill Classes
One 40-Hour Class

Drug Discovery through Preclinical Development

Introduction to Public Administration; Public Policy Formation

Clinical Trials, Adverse Event Reporting, Post-Marketing

Practical Aspects of Clinical Trial Design

Bioengineering in Biotech and Pharma Industries

Fundamentals of Regulatory Affairs

Programming Methodologies for Numerical Computing

Project Management; Perspectives in Drug Development

US Healthcare System and Pharma Managed Markets

Drug Development: From Concept to Market

Project Management

Pharma Product Management

Organizational Behavior

Innovation and Entrepreneurship
Professional Shadowing and Mentoring

• Each trainee is matched to a mentor and a shadowing opportunity relevant to their chosen track with industrial, institutional or governmental partners. 72 hours over a whole semester or over 2 weeks.

• Each trainee is assigned a professional mentor and uses the Individual Development Plan (IDP) as a framework for growth.
It’s a Win-Win Program

Partners have:

- Access to highly trained local talent pipeline
- Vet potential hires through shadowing
- Promotion of their company brand
- Community and education outreach/service

“I have a better appreciation of how I am able to positively influence someone interested in starting out in industry. Those of us who have been in industry for a some time, take for granted the knowledge base and relationships we’ve developed. It’s nice to stop, take a breather, and pay attention to the details of our everyday work and relationships. It’s also important to give back to those starting out and offer opportunities to those interested in entering the industry.”
It Shall Be Logged...

- **Influencing Person and Functional Role:** Person that influenced this entry, (could be shadow host, or someone within their/your network) and their functional role.

- **Observation and Impact on Career Focus:** What was it that you observed and how did it influence your career focus? Example entries are inter-departmental dialogue during an observed meeting, renewed understanding of work products based upon shadow discussions, other.

- **Implementation:** What steps will you take to integrate these observations/influences with your planned career journey?

- **Documentation:** How are these observations recorded in your Individual Development Plan?
It Shall Be Surveyed...

1. What are/were some of the most beneficial trainee activities and/or discussions experienced?
2. Please comment on the trainee’s performance (in terms of knowledge of the field, preparation for the position, skill set, problem solving ability, work ethic, communication skills, interpersonal skills other).
3. What is the most beneficial change you identified in the trainee as a result of your relationship?
4. Has your perspective changed as a result of serving as an iJOBS shadow host? If so, what changes will you make as a result of this relationship?
5. Please recommend ways that this partnership could be more effective.
6. Are there recommendations you’d make to other iJOBS shadow/mentor pairs? If so, please comment below.
7. Please indicate your overall satisfaction with the trainee.
8. Would you consider working with another Rutgers iJOBS trainee in the future (yes/no, other).
## Representative Experiences

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<tr>
<th>Role</th>
<th>Experience</th>
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<tr>
<td>Large Pharma Director of Project Management</td>
<td>Followed a single asset through basic research, biostatistics, portfolio analytics, business development, project management. Gained knowledge of team process, negotiation and strategy &amp; option development -&gt; senior level decision-making.</td>
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“Since 90% of PM is associated with soft skills, I focused on 1:1 meetings with my “go-to” colleagues.”

-Shadow Host

“She brought her outside knowledge to the office and was able to (better) understand the healthcare policy issues that I focus on.”

-Shadow Host
Participated in patent application review. Research for “white space patent opinion.” PTO examination interviews.

Established a good basic understanding of patent law and continued to build his tool box and apply new concepts.

Networked with MSLs, medical affairs directors, medical information professionals and discussed best practices, tech. use, KOL engagement.

Learned regulatory and financial challenges within the oncology therapeutic areas.

“I got to talk with many people across various functions and now understand what such a career entails.”
-iJOBS Trainee

“I have a better grasp of the field of patent law and look forward to using this knowledge as my career matures.”
-iJOBS Trainee
Consulting Firm
Senior Consultant

Attended certificate program for preventive control of human foods, networked at supplier’s expo, audited food safety policy classes at Montclair.

Academic Food Center
Associate Director

Established a solid basic understanding of patent law and continued to build tool box and apply new concepts.

Participated in new hire training and worked with the asset evaluation team regarding its disease overview, drug development pipeline, and safety & efficacy data.

Gained knowledge in forecasting, quantitative and qualitative research and market access and reimbursement.

“...learned to regard food safety from all stakeholder perspectives. Built important professional connections and found full-time employment!”
-iJOBS Trainee

“I better understand the lifestyle of consultants and what they expect from a recent Ph.D. graduate.”
-iJOBS Trainee
### Representative Experiences (cont’d)

<table>
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<tr>
<th>Publishing House Publishing Director</th>
<th>Hands-on experience screening a submitted manuscript, wrote short bylines for social media postings and met to solicit content for Current Protocol journals.</th>
<th>Gained an understanding of the “other side” of the publishing world after a manuscript is submitted to a journal for consideration.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Pharma VP, Global Site Management</td>
<td>Attended meetings related to clinical trial safety, regulatory affairs; met with staff involved in clinical pharmacology, medical writing, and preclinical development.</td>
<td>Learned that there are multi-dimensional aspects of drug development and different skills contribute to different areas.</td>
</tr>
</tbody>
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“[So that she could best learn,] I gave her background about issues we were having before any relevant meetings.”

-Shadow Host

“I gained insights to importance of work ethic and collaborative teaming and how the corporate environment differs from [that in] academia.”

-Shadow Host
Phase 3
**Job Search Preparation**

- One on one mentoring sessions with Juliet Chin Hart to refine resume and cover letter
- LinkedIn Counseling with 2Actify
- Strategize on job search approach
- Prepare for interviews
Communication Platforms

**Email listserve:** 1500 members

**Trainee run blog:**
ijobs.rutgers.edu/blog.php

**Website:** ijobs.rutgers.edu

**iJOBS Past Events and Resources**

**7 September 2016**

iJOBS Workshop: Job Search Using Staffing Agencies

Hear from representatives from companies such as Aerotek, Hays, and ProfitStaff to learn how staffing agencies work and how to best utilize them in your job search at different phases in your career. There will be an opportunity to meet with the representatives after their presentations to get general feedback.

*Click here* to view the speaker bios for this event.

**22 June 2016**

iJOBS Career Panel: Identifying and Protecting Emerging Technology/New Business for Pharma

Hear from two Rutgers alumni who now work as a Senior Manager of Global Business Insights and Competitive Intelligence at Celgene and an Associate in Life Sciences for IP Group, Inc. To view the agenda and speaker bios, please *click here*.

**14 June 2016**

iJOBS Site Visit: Celgene

Visit the manufacturing site for the cellular therapeutics branch of Celgene. Hear from Greg Ruscitti, PhD, Vice President of Tech Ops and hear from other Celgene employees. To view the agenda and speaker bios, please *click here*.

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iJOBS University Talent Pipeline on BioNJ

BioNJ University Talent Pipeline

The University Talent Pipeline, a new service provided by BioNJ, looks to connect New Jersey’s life sciences employers with students who may be searching for internships and recent graduates from local colleges and universities who are looking for their first industry job. Many NJ employers in the biotechnology, pharmaceutical, medical device and clinical operations industries are looking for entry level talent with Bachelor’s, Masters or PhD in a life sciences concentration so we created this tool to zero in on exactly that type of talent.

Employers: "Interested in marketing your available career opportunities and internships to students and recent graduates?" Click here to create an account or log in today.

View BioNJ’s Featured University Partners Below:

About iJOBS

The Rutgers University iJOBS Program, funded by the National Institutes of Health, prepares biomedical PhD students and postdocs for a range of non-academic careers so that their job onboarding is more successful. Skills covered in over 40 hr of workshops include communication, teamwork, leadership, finance, and project management. Trainees are also exposed to various career options through panels, site visits, shadowing, and site studies so that they understand how industry operates and can make informed decisions about their career. Click to see iJOBS.

iJOBS Candidates: Build Profiles
Representative Jobs and Internships

Questions?

www.ijobs.rutgers.edu