According to a 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 (2014-2019)
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**

- Over 3000 life science and biopharmaceutical establishments
- 400 biotech companies
- 13 of the 20 largest biopharmaceutical companies globally
- 12 of the world’s top medical technology companies
- #3 state for R&D investment, and bioscience-related patents
- 22,000 life sciences graduates annually
Professional and Trade Support Abounds
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
Holistic Phased Programming

Individual development planning & mentorship
Career-specific courses
Professional shadowing

LinkedIn Profile review
Resume development
Interview preparation
Job placement and tracking

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

Phase 1 iNQUIRE

Phase 2 iINITIATE

Phase 3 iMPLEMENT

Phase 4 iINSTRUCT

Continued participation
Support and mentoring
Phase 1
Representative 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*

*Every Jan/Feb since 2015 - 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

- McCann Health
- Wiley Publishing
- Merck (5)
- Genewiz (3)
- Bristol-Myers Squibb (4)
- Novartis (3)
- GlaxoSmithKline (2)
- Regeneron (2)
- Eli Lilly (3)
- Celgene (2)
- Janssen (2)
- Commercial Center for Innv Tech (2)
- Inst for Life Sci Entrepreneurship (2)
- Enterprise Development Center
- Sanofi Aventis
- Covance
- Kashiv
- Ferring Pharmaceutical

- NJ Dept. of Health (3)
- Stryker
- Colgate-Palmolive (2)
- Envigo
- Ethicon
- McCann Health
- Bayer (2)
- PTC Therapeutics
- Nanion Technologies
- Hovione
- J&J Consumer
Representative Workshops: Job Simulation

- Health Economics and Outcomes Research – analyze a drug
- Technology Transfer – how to commercialize an invention
- Equity Research – decide if you should invest
- Project management – determine timeline and deliverables
- Entrepreneur – what is involved in starting a biotech
- Science Policy – write a policy memo
- Business Development – decide whether to acquire a new company
- Pharma R&D - design preclinical trial to optimize clinical success
- Publishing – decide whether to accept a manuscript
- 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
- Patent Law – rewrite patent to demonstrate originality
- Mergers and Acquisitions – decide how much to bid on a new company
Representative Workshops: Skill Primers

- Negotiation Skills
- Project Management
- R 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

- Job searching during the pandemic and virtual interviews
- Landing Job Referrals
- 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
- Coordinate with professional societies: Sino American Pharmaceutical Association, American Association of Pharmaceutical Scientists, and BioPharma Networking Group
- Rutgers and iJOBS alumni
BioNJ or SAPA iJOBS Career Fair

Spring 2015, 2016, 2017, 2018, 2019
exclusive for life science companies

Participating Recruiting Companies

- Accurant Biotech Inc.
- ACS Scientific Inc.
- Adlai Nortye
- Aleon Pharma International
- American International Group (AIG)
- Asychem Laboratories (Tianjin) Co., Ltd
- Aucta Pharmaceuticals
- Beijing Genomics Institute
- Bristol-Myers Squibb
- Celgene
- Endeavor Consulting Group, LLC
- ForDoz Pharma
- Frontage Laboratories, Inc.
- GenScript Biotech Corporation
- Hengrui USA
- Hodo/Yew Pharmaceutical Co. Ltd
- Kelun Pharma
- Legend Biotech
- Merck
- Nanotech Pharma Inc.
- Novartis
- Protheragen Inc.
- Regeneron
- Sanofi
- Simcere of America
- Sino Biological Inc.
- SunGen Pharma
- United Health Care
- WuXi AppTec

Please note: You can find the detailed job and role descriptions at the career section of SAPA website.
Representative Workshops: Science Policy with Eagleton Institute of Politics

- The Politics of Water and Lead
- The Politics of Gene Editing Technology
- Scientists in Politics - Assemblyman Zwicker, Caroline Weinberg
- Lead Toxicity and Public Policy - Communicating Risk Regarding Science and Health
- Opioid Abuse – Solutions in Science and Politics
- GMOs - Scientific Analysis in Policy Making with Stuart Shapiro
- Advocating for Science – Rush Holt
- Climate Change – Christine Todd Whitman with interactive workshop
- Zika Virus and Science Policy – Kathleen Hall Jamieson and workshop representing different constituents
- Transition to the New Administration and Science – AAAS, Rutgers, Princeton and workshop on how to lobby
iJOBS-Related Trainee Opportunities

- Eagleton Science and Politics Fellow in NJ
- 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
- Skills embedded into curriculum (communications, computational)
Phase 2

Phase 2
INITIATE
Representative Career Track Skill Classes

- Drug Development from Concept to Market
- Principles of Communication and Leadership
- Principles of Finance and Accounting
- Clinical Research Informatics
- Python Methodologies
- Clinical Trials Overview: Methods and Practices
- Fundamentals of Regulatory Affairs
- Organizational Behavior
- Innovation and Entrepreneurship
- Perspectives in Translational Pharmacology
- Clinical Trials Overview: Methods and Practices
- Fundamentals of Regulatory Affairs
- Project Management
- Pharma Product Management

One 40-Hour Class

Rutgers Programs

- Business
- Engineering
- Medicine
- Business and Science
- Public Health
- Health Related Professions
- Business and Science
Professional Shadowing and Mentoring

- Each trainee is matched to a shadowing opportunity relevant to their chosen track with industrial, institutional or governmental partners. 72 hours over several months

- Each trainee is assigned a professional mentor and uses the Individual Development Plan (IDP) as a framework for growth.
Phase 3
Job Search Preparation

• One on one mentoring sessions with Juliet Chin Hart to refine resume and cover letter
• LinkedIn Counseling with Penny Pearl at 2Actify
• Strategize on job search approach
• Prepare for interviews
Dissemination, Evaluation and Outcomes
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 ProStaff 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 bio's for this event.

22 June 2016
iJOBS Career Panel: Identifying and Protecting Emerging Technology/New Business for Pharma
Hear from two Rutgers alum 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 bio's, please click here.

14 June 2016
iJOBS Site Visit: Celgene
Visit the manufacturing site for the cellular therapeutics branch of Celgene. Hear from Greg Russotti, PhD Vice President of Tech Ops and hear from other Celgene employees. To view the agenda and speaker bio's, please click here.
Positions of SciPhD Participants (n = 189)

First Position

- For Profit: 54%
- Unknown: 7%
- Academia: 27%
- Government: 5%
- Nonprofit: 7%

Current Position

- For Profit: 64%
- Unknown: 7%
- Academia: 20%
- Government: 4%
- Nonprofit: 5%
For-Profit – Research vs Science-Related

First Position

Current Position
First Position

Current Position

**ACADEMIA >> ALL CAREER TYPE**

- Primarily Teaching: 6%
- Science-related: 8%
- Primarily Research: 82%
- Further Training or education: 4%

**ACADEMIA >> ALL CAREER TYPE**

- Primarily Teaching: 11%
- Science-related: 8%
- Primarily Research: 76%
- Further Training or education: 5%
Research Job Functions

First Position

Current Position
Science-Related Job Functions

First Position

Current Position
## Representative Job Placement

<table>
<thead>
<tr>
<th>Company</th>
<th>Position</th>
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<td>Contract Scientist</td>
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<td>Celularity</td>
<td>Research Scientist</td>
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<tr>
<td>Mgr. Global Regulatory Affairs</td>
<td>Account Executive</td>
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<td>Arbutus</td>
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<td>Pepper Hamilton</td>
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<td>Sr. Upstream Dev. Engineer</td>
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<td>Sr. Manager, Health Economics and Outcomes Research</td>
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<td>Director of R&amp;D/Product Development</td>
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<td>Scientific Strategist</td>
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<td>Quantitative Pharma Senior Scientist</td>
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</table>
iJOBS Participants Have Decreased Time to Defense and Increased Total Publications

Measuring Effects of Trainee Professional Development on Research Productivity: A Cross-institutional Meta-analysis, Brandt et al., submitted PLOS Biology
iJOBS Benefits

Rutgers University
- Recruiting of graduate students
- Takes burden off of faculty for advising towards careers with which they are not familiar
- Student mental health, motivation, productivity
- NIH Training grants require career development component
- Increased interaction between Rutgers and industry

Industry Partners
- Access to highly trained local talent pipeline
- Ability to influence curriculum
- Vet potential hires through shadowing/externship
- Promotion of company brand
- Interactions with academia
- Community and education outreach/service

Teaches leadership, business, teamwork, and communication skills necessary for ALL careers.
Questions?

janet.alder@rutgers.edu