

RUTGERS

THE STATE UNIVERSITY
OF NEW JERSEY

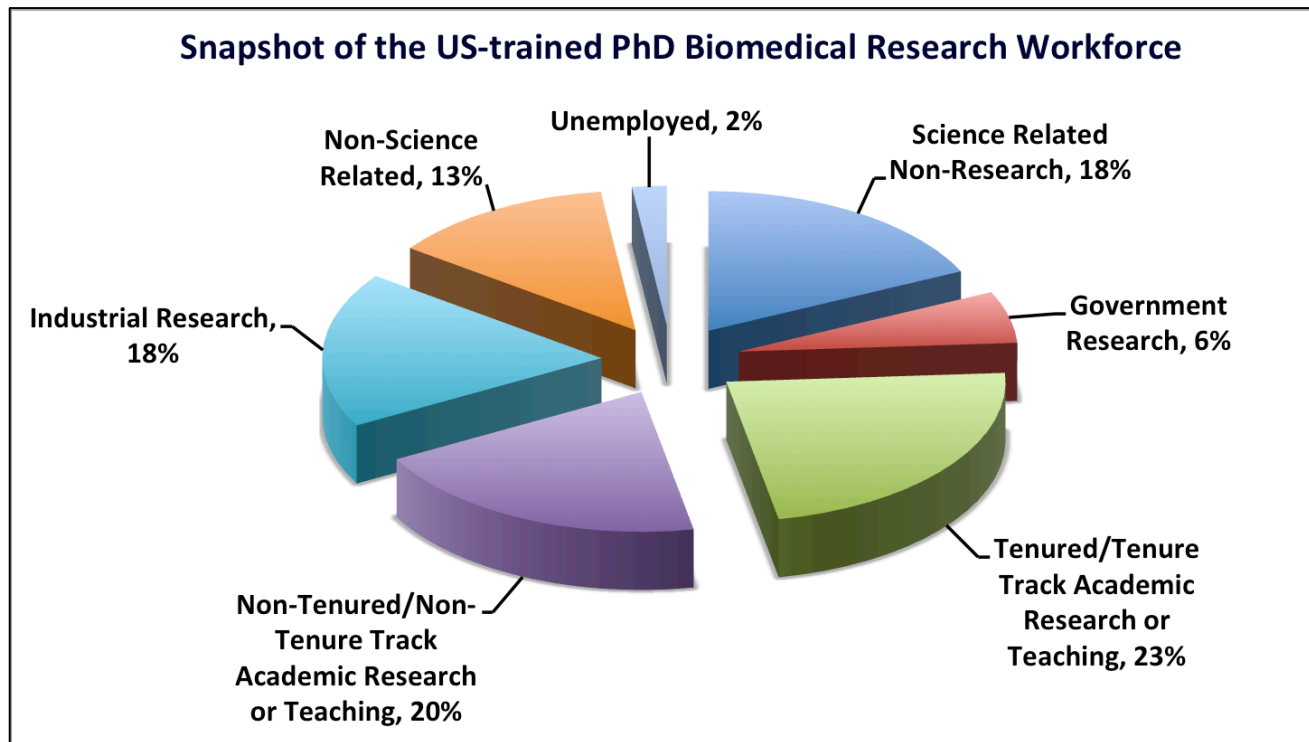
Rutgers iJOBS Mid-Year Symposium

October 30, 2018



Changing Times

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

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
- Over 3000 life science and biopharmaceutical establishments
- 400 biotech companies

We Thank Our Partners



iJOBS Participation

RUTGERS



STEVENS
INSTITUTE of TECHNOLOGY
THE INNOVATION UNIVERSITY



PRINCETON
UNIVERSITY

NJIT

Rowan
University

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

Newark



New Brunswick

**Free shuttle
transportation
provided**


COLUMBIA
UNIVERSITY


NYU

PENNSTATE


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.

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.

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

**Phase 1
iNQUIRE**

**Phase 2
iNITIATE**

**Phase 3
iMPLEMENT**

**Phase 4
iNSTRUCT**

Holistic Programming



Phase 1



Phase 1
iNQUIRE

Examples of Career Tracks

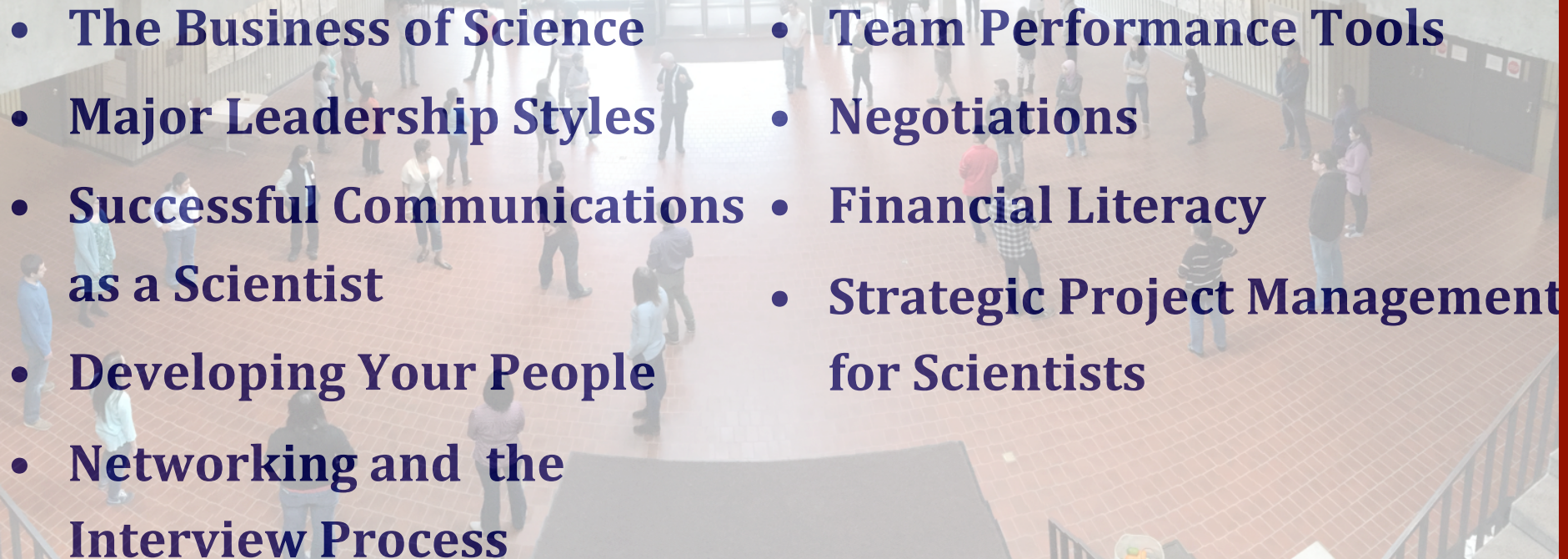
- Principal investigator
- Bench Research in Government, Pharma or Biotech
- Teaching-intensive careers in academia
- Science and Health Policy
- Patent Law
- Tech Transfer and Business Development
- Clinical Research
- Regulatory Affairs
- Health and Science Data Analysis
- Business Consulting
- Scientific 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

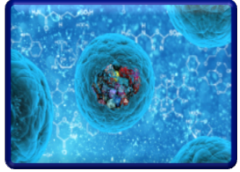
- 
- **The Business of Science**
 - **Major Leadership Styles**
 - **Successful Communications as a Scientist**
 - **Developing Your People**
 - **Networking and the Interview Process**
 - **Team Performance Tools**
 - **Negotiations**
 - **Financial Literacy**
 - **Strategic Project Management for Scientists**

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

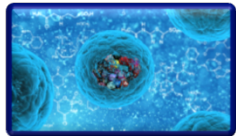
- **Medical Communications** – create slide deck for physician

- **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 Pharmacodynamics (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 others¹⁶

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

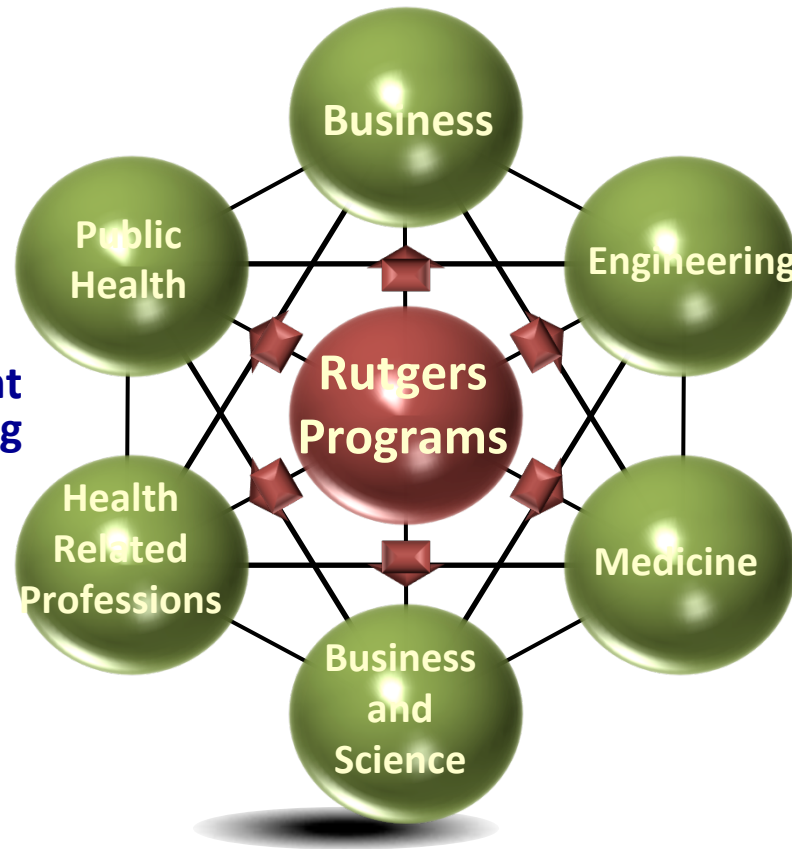
Phase 2



Career Track Example

Skill Classes

One 40-Hour Class



Programming
Methodologies for
Numerical Computing

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

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 every day 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

Large Pharma

Director of
Project
Management

Followed a single asset through **basic research**, biostatistics, **portfolio analytics**, business development, **project management**.

Gained knowledge of team process, **negotiation** and strategy & option development -> **senior level decision-making**.

“

*“Since 90% of PM is associated with soft skills, I focused on 1:1 meetings with my “go-to” colleagues.”
-Shadow Host*

Policy
Consulting
Firm

Director of
Public Affairs

Followed HC-related legislation for clients
Attended hearings and advocacy days at Statehouse
Attended press conferences
Performed client policy research

Gained understanding of local government’s role in health care policy legislation and advocacy.

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

”

Representative Experiences (cont'd)

Large Pharma
Executive Director, Health Systems & Medical Affairs

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

Law Firm
Co-Chair of Global Patent Prosecution Group

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.

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

”

Representative Experiences (cont'd)

Consulting Firm

Senior
Consultant

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**.

“

“I better understand the lifestyle of consultants and what they expect from a recent Ph.D. graduate.”
-iJOBS Trainee

Academic Food
Center

Associate
Director

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

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

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

”

Representative Experiences (cont'd)

Publishing
House

Publishing
Director

Hands-on experience
screening a
submitted
manuscript, wrote
short bylines for
social media postings
and met to solicit
content for Current
Protocol journals.

Gained an
understanding of the
“other side” of the
publishing world
after a manuscript is
submitted to a
journal for
consideration.”

“

*“[So that she could
best learn,] I gave her
background about
issues we were having
before any relevant
meetings.”
-Shadow Host*

Large Pharma
VP, Global Site
Management

Attended meetings
related to clinical
trial safety,
regulatory affairs;
met with staff
involved in clinical
pharmacology,
medical writing,
and preclinical
development.

Learned that there
are multi-
dimensional
aspects of drug
development and
different skills
contribute to
different areas.

*“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

RUTGERS
 Interdisciplinary Job Opportunities
 for Biomedical Scientists

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The Rutgers University iJOBS Program, funded by the National Institute of Health, prepares biomedical scientists for a range of careers in **five professional tracks**: i) science and health policy, ii) business management, iii) intellectual property management, iv) clinical and regulatory sciences, and v) health and science data analysis. The program is designed to complement time spent outside of lab and to maintain research as the primary trainee focus, while offering programming to broaden trainees' perspectives, experiences and knowledge to facilitate pursuit of non-academic careers. Elements include core professional skills training, site visits to partnering companies, didactic courses relevant to the five career tracks, shadowing experiences and career placement support. [Click to learn more about iJOBS.](#)

[Get involved...](#)

7 September 2016

iJOBS Workshop: Job Search Using Staffing Agencies

Hear from representatives from companies such as Aerotek, Hays and Pridestaff 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.

PODCAST

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 bios, please [click here](#).

PODCAST

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 bios, please [click here](#).

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 Bachelors, 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 case studies so that they understand how industry operates and can make informed decisions about their career. [Click to learn more about iJOBS.](#)

[Rutgers iJobs Career Resources](#)



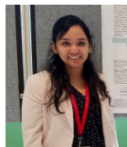
iJOBS Candidates: Build Profiles



Irene Raitman Khutorskoy
[iJobs Profile](#)
[LinkedIn Profile](#)



Kalyan Chavda
[iJobs Profile](#)
[LinkedIn Profile](#)



Prerna R. Nepal
[iJobs Profile](#)
[LinkedIn Profile](#)



Maryam Alapa
[iJobs Profile](#)
[LinkedIn Profile](#)



Aminat Saliu Musah
[iJobs Profile](#)
[LinkedIn Profile](#)



Nisha Mittal
[iJobs Profile](#)
[LinkedIn Profile](#)

OPEN POSITIONS

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JOB TITLE	COMPANY	LOCATION
Senior Scientist	Celvive Inc.	South Brunswick, NJ
Manager, Supply Chain and DRP – Hospital Products	Mallinckrodt Pharmaceutical	Bedminster, NJ
Junior Analytical Scientist	Teligent	Buena, NJ
Senior Analytical Scientist	Teligent	Buena, NJ
Sr Vice President of Quality	Teligent	Buena, NJ
Microbiologist	Teligent	Buena, NJ
Process Engineer	Teligent	Buena, NJ
Training Administrator	Teligent	Buena, NJ
Science Project Lead	Students 2 Science	Newark, NJ
Senior Research Scientist	Teligent	Buena, NJ

Representative Jobs and Internships

Rob Connacher scientist at Merck. Fei Wang data scientist at Gartner Inc. **Sarah Misenko** GSK leadership program position. *Dharm Patel* position at Leo Pharma. Gangotri Dey Tech Transfer internship. *Peter Swiatkowski* job at Celvive. **Nisha Mittal** at Kashiv Pharma. Anna Hader postdoc at Johnson & Johnson. Almin Lalani co-op at Huron, internship at Novartis, postdoc at NCI. Eileen Oni Christine Mirzayan Fellow and AAAS Fellowship. Ina Nikolaeva Nucleus Global position. **Kristina Hernandez** MediTech Media position. **Winder Perez** Stryker Corp Assistant Microbiologist. Andrea Gray FDA/Center for Biologics Evaluation position. **Myka Ababon** Wiley Publishing copyeditor volunteers and job at Caudex Medical Writing. Azadeh Jadali 3D Biotek position. *Serom Lee* consulting position at *Defined Health*. Harita Menon 3D Biotek position. Eva Rubio-Marrero Lilly internship and job at Celgene. Jimin Zhang Scientist position Insmed. Lisheng Zhou Genewiz internship and bioinformaticist job at Mt. Sinai. Eva Rubio Marrero internship Eli Lilly and Job at Celgene. Chenchao Gao internship FDA Office of Clinical Pharmacology and job at Seattle Genetics. **Yuan Liu** Genentech internship. Jennifer Therkorn Rutgers Eagleton Institute of Politics Fellowship. Shanique Edwards Biology Science Writer at Draw it to Know it. Christina Ramirez internship at the Institut Pasteur Korea and Eli Lilly. **Ileanna Marrero-Berrios** internship at Celgene. Xiaowei Zhang internship at CSL Behring in the Clinical Pharmacology & Pharmacometrics.



Questions?

www.ijobs.rutgers.edu