Welcome to Rutgers iJOBS Annual Symposium

Ice Breaker

• Introduce yourself and share the origin of your first, middle or last name (example, my grandfather's last name was Adler which means eagle in German but he switched it to Alder which is a kind of tree after he moved

to the USA in 1941 when my dad was 16).





Rutgers iJOBS Annual Symposium

October 30, 2025

9:30 AM – 10:00 AM Welcome and iJOBS Program Update

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iJOBS Program at Rutgers University

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11:00 AM - 11:15 AM Break

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Facilitated by Janet Alder, PhD, Co-Director iJOBS Program at Rutgers University

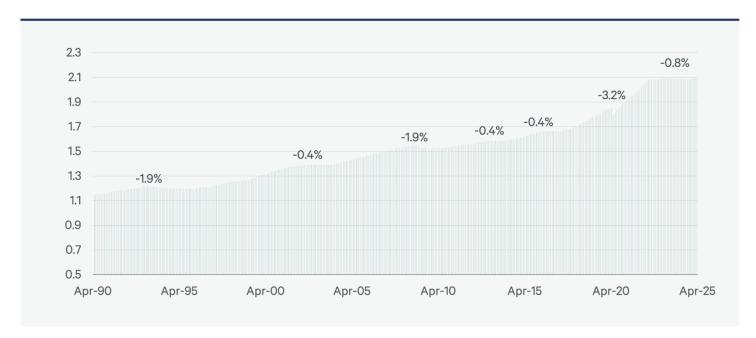
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Current Biopharma Job Market - reality check

Figure 1: Total U.S. Life Sciences Employment During Recent Economic Cycles



Source: Bureau of Labor Staistics, CBRE Research, Q2 2025.

Biotech career paths where demand is skyrocketing in 2025

- AI specialists in drug discovery
- Regulatory affairs specialists
- Gene therapy researchers and scientists
- Bioprocess/MSAT (Manufacturing Science and Technology) engineer
- Computational biologists
- Microbiologists
- CRISPR-based gene editing scientists

NIH BEST Grant that Inspired Rutgers iJOBS

17 Universities \$2 million for 5 years (2014-2019)

Maish Yarmush Jim Millonig Susan Engelhardt Janet Alder Doreen Badheka

- 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

- Over 3000 life science and biopharmaceutical establishments
- 400 biotech companies
- 14 of the world's 20 largest biopharmaceutical companies
- 12 of the world's 20 largest medical technology companies
- #3 state for R&D investment, and bioscience-related patents
- 22,000 life sciences graduates annually

Professional and Trade Support Abounds



Turning Discovery Into Health

iJOBS Participants

RUTGERS

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











Flexible and Phased Programming



Phase 1



Representative Career Panels

- Faculty position at R1 institution
- Faculty position at Primarily Undergraduate Institution
- Bench research in Pharma and Biotech
- Medical Devices
- Postdocs in Industry
- Contract Research Organizations
- NIH
- FDA
- Computational Biology
- Data Science
- Consulting
- Science and Health Policy
- Patent Law
- Tech Transfer and Business Development
- Clinical Research
- Regulatory Affairs
- Medical Affairs
- Project Management

- Scientific Writing and Medical Communications
- Non-profit and Foundations
- Finance and Equity Research
- Publishing and Editing
- Food and Fragrance Industry
- Journalism
- Teaching Education Outreach
- Entrepreneur
- Plant and Agriculture Industry
- Non-faculty Jobs in Academia
- Tech and Sales Support



Representative Site Visits

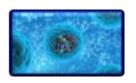
- Bristol-Myers Squibb (12)
- Novartis (5)
- J&J (6)
- Teva Pharma (2)
- GenScript
- Azenta
- Admera Health
- Genmab (2)
- Amgen
- WuXi Biologics
- Pfizer
- Becton Dickinson
- Siemens Healthineers
- Stryker (3)
- IPG Health (3)
- Genewiz (4)
- Merck (6)
- Wiley Publishing (2)
- GlaxoSmithKline (3)
- Regeneron (6)

- Eli Lilly (3)
- Celgene (2)
- NJ Innovation Institute
- Sanofi Aventis
- Commercial Center for Innv Tech (2)
- Inst for Life Sci Entrepreneurship (2)
- NJ Bioscience Center (3)
- Sanofi Aventis
- Covance
- Kashiv
- Hovione
- NJ Dept. of Health (3)
- Ferring Pharmaceutical
- Colgate-Palmolive (4)
- Envigo
- Ethicon
- PTC Therapeutics
- Nanion Technologies
- Covance
- Bayer (2)



Representative Workshops













- GLP and GMP Primer for Pharma
- FDA Drug Approval and Case Study
- Advice from an Immigration Attorney
- Negotiation Strategies
- How to Make Your PhD Work: A Guide for Creating Your Career
- Clarifying Your Mission
- What You Need to Know about PK/PD for a Job in Pharma
- Navigating Career Transitions
- Primer in Drug Discovery through Pre-Clinical Development
- Agile Project Management and Microsoft Project
- Python and Genomics Data Analysis by Data Carpentry
- Self assessments (Clifton Strengths)
- Targeted Resumes
- Online Networking and LinkedIn Profiles
- Finding and applying for an internship
- Emotional Intelligence and Influencing others
- Job search using staffing agencies

iJOBS Professional Development Workshops for Academia

- A Systematic Approach to Scientific Writing
- Navigating the Publication Process
- Developing an Effective Writing Process in Science
- Designing an Effective Chalk Talk
- Top Tips for Better Posters
- Top Tips for Publication Quality Figures
- Top Tips for Better Graphical Abstracts
- Tops Tips for Depicting Biological Pathways
- Grant writing workshops
- Mentoring Undergrads in Research

iJOBS Partnerships On and Off Campus



- Eagleton Institute for Science and Politics
- Erdos Institute Invitations to Industry
- I-CORPS at Rutgers
- What Can You Be with a PhD at NYU
- Nucleate GRO Biopharma Conference with NY Schools
- Regeneron Science to Medicine Forum
- From Science to Pharma MSL Preparation
- BioNJ
- Association for Women in Science
- Biogen Drug Development Conference
- Skills embedded into curriculum (communications, computational)

SciPhD: Leadership and Business Skills for Scientists

Provided by Human Workflows, LLC

January 14th (1-5pm), 15th (9am-5pm) and 16th (9am-5pm) 2026

The Business of Science
 Tean

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

Phase 2



iJOBS Program Registration

Phase 1

- iJOBS programming open to all pre and post-doctorates as well as recent alumni.
- Some events have limited capacity but put your name on the wait list

Phase 2

- Graduate students should have completed propositional qualifying exam. Postdocs are eligible at any time.
- Trainee application approval based upon Phase 1 participation (12 hours), letter of intent, letter of recommendation. PI approval for participation is required with application.
- Applications open every April and program starts in September for 1 year

Representative Career Track Skill Classes

Drug Development from Concept to Market

From Science to Pharma Medical Science Liaison Training

One 40-Hour Class

Technology Transfer

Communicating Science

Principles of Finance and Accounting

Business of Science: Molecules to Medicine

Python Methodologies

Practical Aspects of Clinical Trial Design

Fundamentals of Regulatory Affairs



Fundamentals of Regulatory Affairs

Project Management

Pharma Product Management

Organizational Behavior

Innovation and Entrepreneurship

Professional Shadowing and Mentoring



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





Ice Breaker

• Finish this sentence "Doing XXX would give me a sense of purpose in my future job..."



Dissemination, Evaluation and Outcomes

Communication Platforms

Email listserve: 1500 members



Website: ijobs.rutgers.edu



Trainee run blog:

grad.rutgers.edu/ijobs/blog



iJOBS Past Events with Recordings





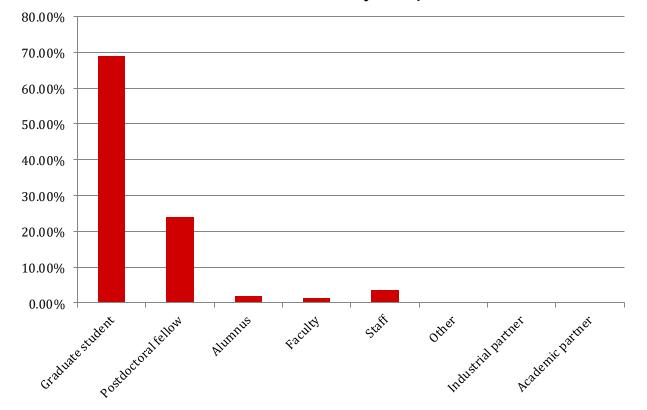


iJOBS Cohort Participation

From Sept 2020- Oct 2025, we have hosted 221 events with over 4,500 attendees

Trainee Academic Standing n = 1388

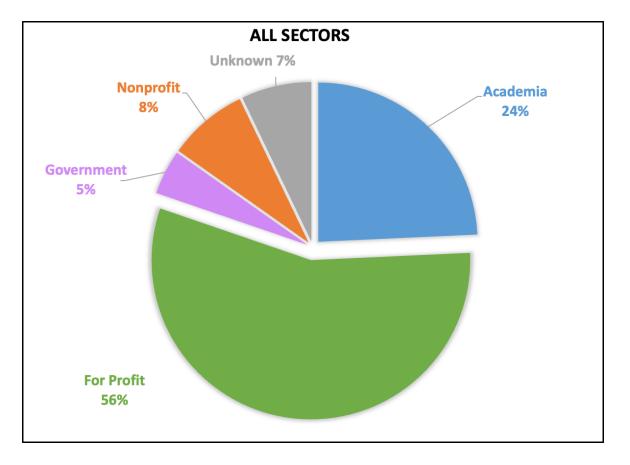
What best describes your position?

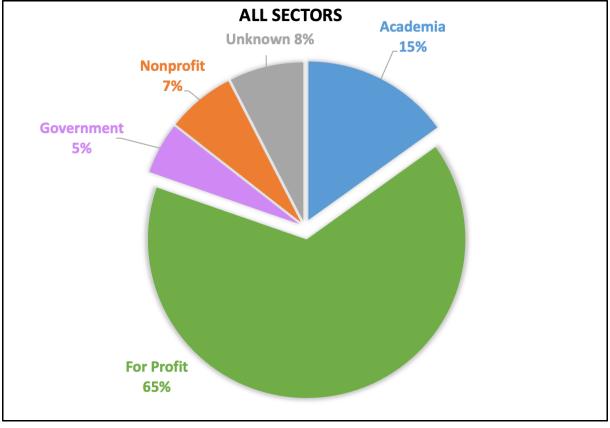


Total pool 68% predoc 32% postdoc

Positions of SciPhD Participants (n = 310)

First Position



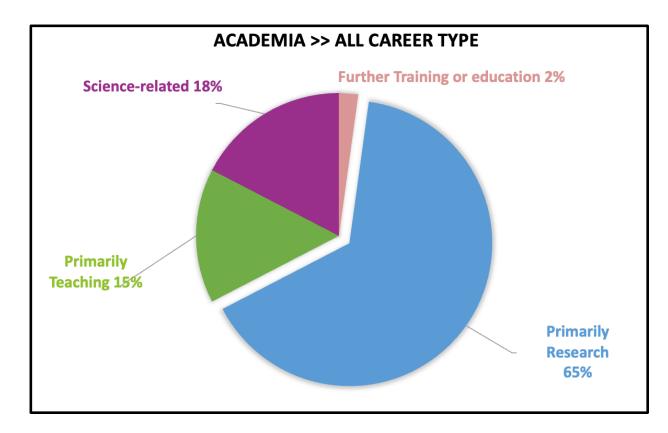


Data analyzed by Janell Mason and Tracy Scott

Academia – All Career Types

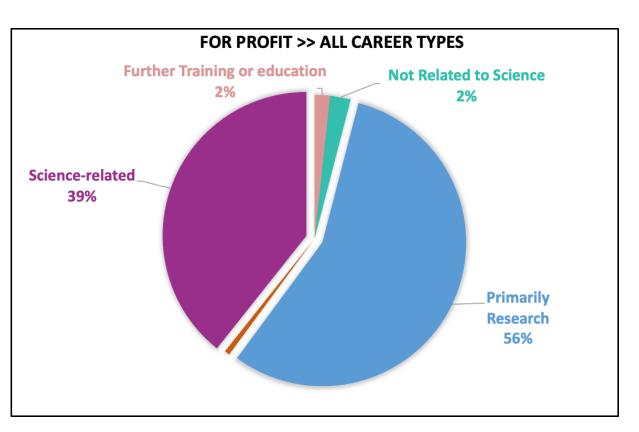
First Position

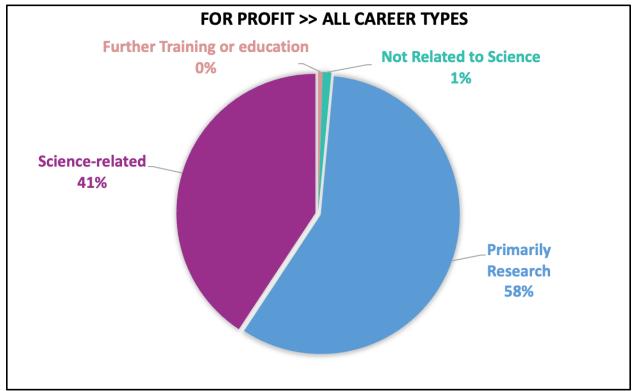
ACADEMIA >> ALL CAREER TYPE Science-related 7% Further Training or education 4% Primarily Teaching 12% **Primarily** Research 77%



For-Profit - Research vs Science-Related

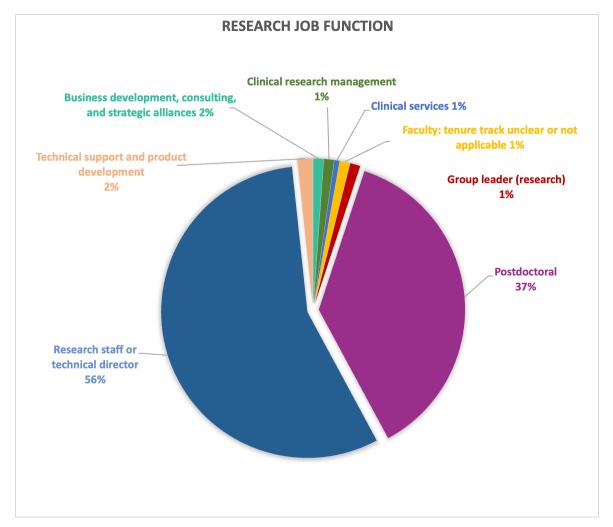
First Position

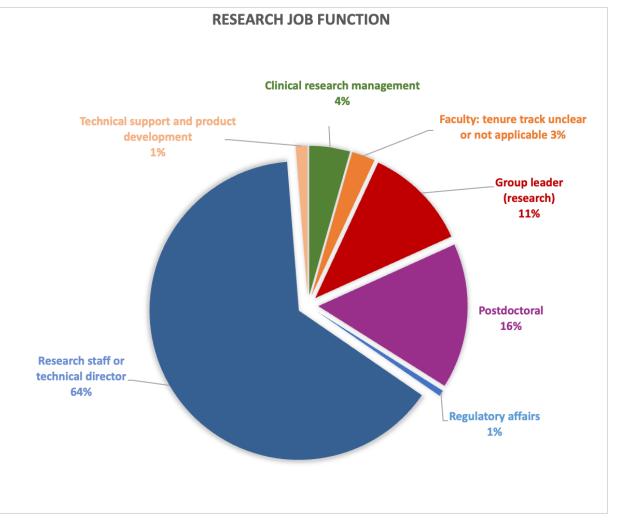




Research Job Functions

First Position

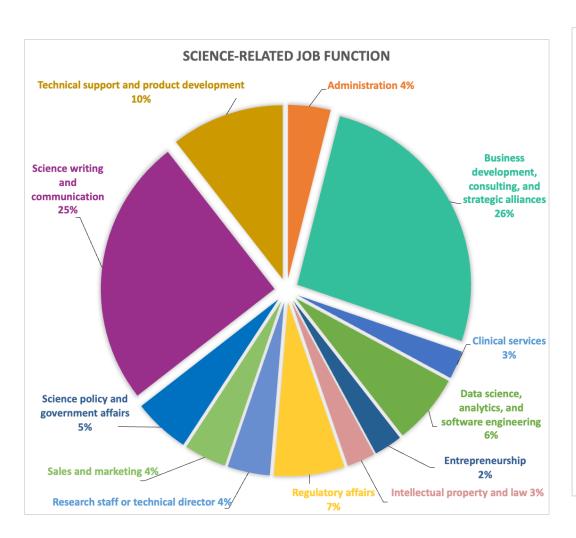


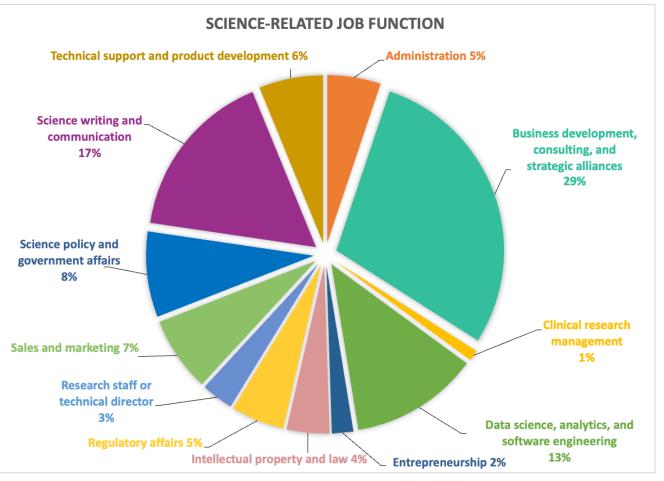


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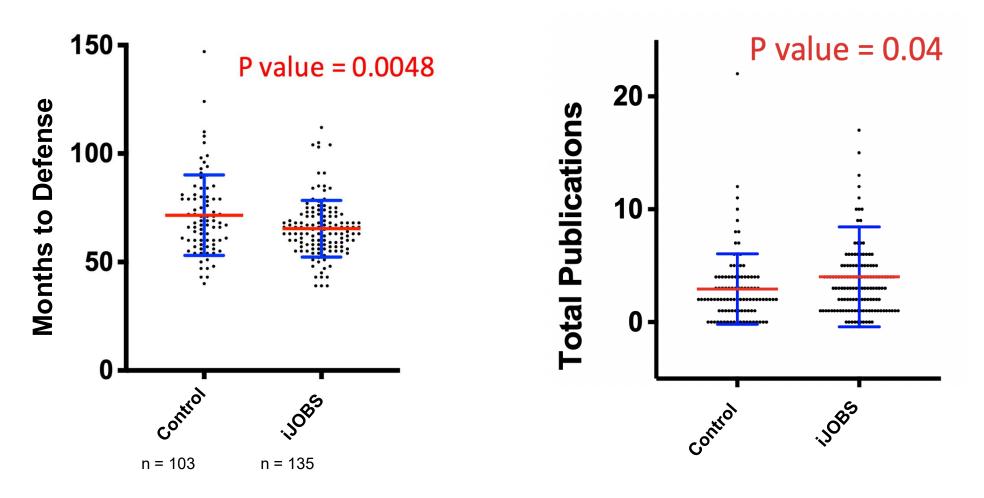
Science-Related Job Functions

First Position





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., PLOS Biology, 2021

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.

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Congratulations to Our Current Phase 3 Trainees!

- Eduardo Artur Trojan*
- Hanna Caiola
- Anna Fateeva*
- Sebastian Fine
- Elena Forzisi
- Nora Jaber
- Mary Lally*
- Christopher Morris
- Jingyun Qiu*



- Mayra Romero
- Shams Shams*
- Rebecca Shear
- Sangeev Vellappan



iJOBS Phase II Experience: Anna Fateeva

Careers of interest: life science consulting and clinical trial management

Course:

Marketing Assessment for Business and Science

Key learning points:

- Basics of sales and market analysis
- Familiarization with business terms
- Introduction to using AI for business development, content generation, research, etc.

Shadowing:

Life Science Consulting Lumanity Shadowed Dr. Elissa Everton, Brian Caffrey, Tyler Nellos, Olivia Dineen on 4+ projects

- Learned consulting terminology and structure of common projects
- Gained insight into secondary analysis in excel, KOL interview calls, and financial research
- Networked with professionals in consulting

Mentoring:

Dr. Mike Patrizii
Associate Director, Clinical
Trial Transparency and
Disclosure



- Discussed different career paths in a pharmaceutical/biotech company
- Talked about setting priorities and expectations when choosing career and future workplace
- Received valuable resume advice

iJOBS Phase II Experience: Mary Lally

5th year PhD Candidate (Microbiology & Molecular Genetics)

Course: Project Management for the Scientific and Technical Practitioner

- Project Management Professional (PMP) Exam preparation; 100% online and asynchronous
- Key points:
 - Covered the strategic, business, financial, political, operational, and conceptual issues faced by modern project managers
 - Learned how to develop a project management plan for a biotechnology company
 - Gained membership to the Project Management Institute (PMI)

Mentoring: Consultant (Host: Courtney Grady, ClearView Healthcare Partners)

- Learned about the day-to-day as a biomedical sciences consultant
- Developed career growth plans and workshopped resume

Shadowing: Program Management (Host: Nancy Molina, Regeneron Pharmaceuticals, Inc.)

- Gained firsthand knowledge of clinical trial protocols, regulatory requirements, and budget management
- Reviewed program management tools to track clinical trial progress
- Met with Regeneron employees in the following roles: Development Program Management, Research Program Management, Post-Doctoral Fellowship, Clinical Scientist, Pharmacology, Regulatory Affairs, Toxicology







Jingyun Qiu- iJOBS Phase II Experience

PhD Candidate, Cell and Developmental Biology



Course

Data Science Boot Camp

Steven Gubkin, PhD Alec Clott, PhD

- Online & asynchronous
- Well-structured lectures covering core data science concepts
- Hands-on practice sessions
- Team project
- Certificate of Completion for the Data Science Bootcamp
- Applied new skills directly to my own research projects



Shadowing

Kubra Karagoz, PhD

Oncology Translational Research Data Scientist Lead

- Weekly individual meetings with Kubra
- Virtual team meetings & Onsite visits
- Gained insights in clinical trials, drug development, and Genmab's pipeline (e.g., epcoritamab)
- Informational interviews (Genomics and AI Lab, Translational Science, Medical Affairs, Clinical Pharmacology, Discovery, and HR)

Bristol Myers Squibb®

Mentoring

Silky Kamdar, PhD

Cell and Gene Therapy Technical Lead

- Several one-on-one virtual meetings throughout the iJOBS Phase II
- Reviewed and helped develop my iJOBS IDP
- Reviewed my CV and provided detailed suggestions on how to tailor it for different positions
- Discussed career development and strategies
- Provided advice on networking

iJOBS Phase II Experience: Eduardo Artur Troian

6th year PhD Candidate (Microbial Biology)



Course: The Business of Science (Fall 2024)

- Learned the basics aspects of drug development from different experts
- Connected with scientist lecturers working for pharma



Shadowing (Spring 2025)

- Shadowed Dr. Vinam Puri (Formulation Scientist at BMS)
- Got exposed to different aspects of formulation and drug development



Mentoring (Fall 2024 – Spring 2025)

- Dr. Yonghong Yang (Sr. Director, Quality Control Analytics at Prime Medicine)
- Learned about quality control, discussed certifications and reviewed resume

iJOBS Phase II Ex

Postdoctoral Associate – Rutgers University



ns, PhD





iJOBS

interdisciplinary Job Opportunities for Biomedical Scientists

iJOBS training involves exposure to academic and non-academic career options with a PhD in life sciences as well as training in leadership, business, and communication skills.

Practical experience includes company externships, case studies and coursework in the area of interest.

Granted: October 30, 2025

Janet Alder

D&BRONERA

iJOBS Co-directors: Janet Alder, Doreen Badheka

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Career Cluster Meetings and Networking

Questions to prompt discussion:

- 1) What sparked your interest in this career path?
- 2) If I could do take one concrete action prior to my job search to help me get into this field specifically, what would that be (e.g. practice case studies, get teaching experience, get a certification, build a writing portfolio, learn a specific lab technique that is in high demand)?
- 3) What do you think is one challenge or negative aspect of this career path?
- 4) What personal attributes and transferrable skills are most essential for success in this career path?