



# Biology IAP Seminars 2022

## Staying at the Bench: Non-PI Careers that Keep You Doing the Work You Love

**Boryana (Bory) Petrova**, PhD, Instructor, Harvard Medical School

**Stuart Levine**, PhD, Director, BioMicro Center, MIT

**Christina Steadman**, PhD, Staff Scientist, Los Alamos National Laboratory

What if I want to keep doing science? Many post-PhD careers take trained scientists away from the bench, but that need not be the case. Hear about the perspectives and trajectories of three “staff scientists”—some of whom conducted postdoctoral research at MIT—and how their work overlaps and diverges from that of a PI at an academic institution.

Session organizers: Dylan McCormick and Alice Herneisen

**Tuesday, January 4<sup>th</sup>, 12:30–2:00 PM**

**Zoom link:** <https://mit.zoom.us/j/96695361761>

## How to Carve Your Path in the Biopharmaceutical Industry

**Tamara Reyes-Robles**, PhD, Associate Principal Scientist, Chemical Biology, Exploratory Science, Center, Merck

**Nina Leksa**, PhD, Distinguished Scientist, Lab Head, Hemophilia and Musculoskeletal Disease Research Center, Sanofi

**Amaris Torres Delgado**, PhD, Senior Scientist, Process Development, Amgen

**Cynthia Barber**, PhD, Senior Director, Program Management, Vertex

Amgen, Merck, Vertex and Sanofi are multinational biopharmaceutical companies with 20,000-100,000 employees generating numerous commercially available drugs. In this session, we will chat with scientists working in each of these companies to learn about their company culture, structure, and different career paths. Join us for an engaging discussion on what it takes to succeed in biopharma and learn about the challenges and benefits of working in such well established companies.

Session organizer: Fiona Aguilar

**Monday, January 10<sup>th</sup>, 3:00–5:00 PM**

**Zoom link:** <https://mit.zoom.us/j/94822544788>

## Impact of AI in Drug Discovery

**Dr. Pat Walters**, Senior VP of Computation, Relay Therapeutics

**Dr. Gevorg Grigoryan**, Co-founder and Chief Technology Officer, Generate Biomedicines

**Dr. Eric Ma**, Principal Data Scientist, Moderna

The impact of artificial intelligence in drug discovery is becoming more apparent as more and more biopharmaceutical companies are investing heavily in it as well as news of its significant roles in new drugs abound. The flexibility of AI has made it applicable in all areas of pharmaceutical research including small molecules, protein and RNA-based

therapeutics. This session will explore this impact with three of the fastest growing biotech companies that are pushing the boundaries of AI in Biology. Our speakers are leading scientific leaders from Relay Therapeutics—a leading company in AI-based small molecule drug design, Generate Biomedicines—a company invested in using AI to design protein-based drugs, and Moderna—a nearly household name that has been at the forefront of revolutionizing vaccine research with the help of AI.

Join us for a session where we learn how these three industry leaders are integrating AI and biology for faster and more effective drug discovery. They will each give a 15-minute talk about their specific research areas and the talks will be followed by an engaging panel discussion. Come learn about how you can position yourself to be part of the AI revolution!

Session organizer: Israel Desta

**Wednesday, January 12<sup>th</sup>, 1:30–3:00 PM**

**Zoom link:** <https://mit.zoom.us/j/98600056532>

## New Positions, New Perspectives

**Professors Olivia Corradin, Yadira Soto-Feliciano, Sinisa Hrvatin, Kristin Knouse, Hernandez Moura Silva, Sara Prescott, Francisco J. Sánchez-Rivera, Alison Ringel, and Harikesh Wong**

New faculty members joining the Biology Department this year bring with them fresh perspectives on their scientific journeys, strategies for pursuing an academic career, and visions for the scientific community. Join us for a discussion of their bold ideas and followed by a facilitated reception to get to know them individually.

Session organizers: Eliezer Calo, Aditi Shukla, Alice Herneisen

**Thursday, January 13<sup>th</sup>, 3:00–5:00 PM, 68-180/181**

## Arcadia Science: A New Institutional Model for the Research and Translation of Biological Discovery

**Dr. Prachee Avasthi**, PhD, Arcadia Science, Co-founder, Chief Scientific Officer, and Director of Cell Biology, Geisel School of Medicine at Dartmouth, Associate Professor of Biochemistry and Cell Biology

Arcadia Science is a new for-profit research institute distinct from traditional academic and biotech environments. Their mission is to uncover novel biology of non-model organisms and to directly commercialize impactful discoveries. Composed of scientists, engineers, and entrepreneurs, Arcadia Science is creating a unique environment to empower curiosity-driven discoveries that are also financially self-sustaining. Join us for this moderated Q&A with their Co-Founder and Chief Scientific Officer, Dr. Prachee Avasthi, to learn more about Arcadia Science.

Session organizers: Chris Giuliano and Alex Chan

**Thursday, January 20<sup>th</sup>, 12:00–1:30 PM**

**Zoom link:** <https://mit.zoom.us/j/96281958467>

## Using Your PhD to Combat Climate Change

**Dr. John York**, PhD, Impossible Foods, Chief Scientific Officer

**Dr. Hélène Berges**, PhD, Inari Agriculture, Vice President of Research and Development

The climate crisis has galvanized scientists to pursue bold ideas to both reduce carbon emissions, as well as adapt to a changing environment. Join us for a moderated Q&A to discover how we, as biologists, can leverage the skills that we have acquired to pursue industry research positions that are focused on sustainability. We will be speaking to Dr. John York, the Chief Scientific Officer at Impossible Foods, a company focused on developing plant-based meat substitutes, and Dr. Hélène Berges, Vice President of Research and Development at Inari Agriculture, a company harnessing AI and multiplexed gene editing to produce robust seeds for food production.

Session organizers: Alex Chan and Aditi Shukla

**Wednesday, January 26<sup>th</sup>, 2:00–3:30 PM**

**Zoom link:** <https://mit.zoom.us/j/98725240323>

## How to Navigate the Biotech Startup Network

**Ohad Yosefson**, PhD, Associate Director of Protein Sciences, Repertoire Immune Medicines

**Nathan Young**, PhD, Associate Director of Molecular and Cellular Oncology, Ikena Oncology

**Megan Warner**, PhD, Senior Scientist, Protein Sciences, CRISPR Therapeutics

The Boston biotech sector is booming with scientific innovation, investments, and company creation. In this session, we will chat with scientists from three different biotech companies to learn how to navigate a career in a constantly evolving company while managing expectations and responsibilities. Learn about their previous experiences and job roles and inquire about their thoughts on the biotech landscape.

Repertoire Immune Medicines is a series B funded Flagship Pioneering company seeking to rationally engineer T cell receptor (TCR)-antigen interactions. Ikena Oncology is a public company focusing on genetically defined or biomarker-driven cancer targets. CRISPR Therapeutics is a public gene editing company developing treatments for hemoglobinopathies, cancer, and diabetes. All three are clinical-stage companies at the frontline of innovation.

Session organizer: Fiona Aguilar

**Friday, January 28<sup>th</sup>, 3:00–5:00 PM**

Tentative: hybrid mode 68-181

Otherwise, **Zoom link:** <https://mit.zoom.us/j/95349775648>



**Talks with attendance by Zoom, Password is MITBiology**

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**Seminar organizers:** Fiona Aguilar, Alex Chan, Israel Desta, Christopher Giuliano, Alice Herneisen, Dylan McCormick, Aditi Shukla

<https://biology.mit.edu/about/iap>