

# Showcasing Careers in Biotech for the Next Generation



Have you ever wondered what it takes to start a career in biotechnology? For many of our colleagues, they weren't aware of what a career in biotech could look like until they had one. To help aspiring biotech professionals understand what a career in the industry may entail, we are showcasing the varied journeys of our colleagues.

## Introducing: Eliot Morrison

### Can you tell us a little about yourself and your role at Silence?

My name is Eliot Morrison, and I'm a Group Leader of Bioinformatics in our Molecular Design department. I lead a small scientific team, and our day-to-day involves using computational methods and writing code to predict the siRNAs that will be the most active, the most specific, and the safest. It also involves designing experiments to test scientific hypotheses and using state-of-the-art machine learning techniques. It is a very exciting and dynamic professional environment to be in, with plenty of challenges!

### When and how did you decide 'what you wanted to do' for your career?

For me, there was never a single "A-ha!" moment where I knew exactly what I wanted to do, and finding my current specialization was a gradual, stepwise process of re-evaluation and refining. After I chose to study science, I progressively narrowed my focus from a broad interest in chemistry to enzymatics/protein biochemistry to proteomics to mass spectrometry to bioinformatics. It was not until I was well into my doctoral project that it clicked into place that bioinformatics was the best fit for me, and since then I've found it quite rewarding!

In the path to becoming a research scientist, it is critical to continue one's academic career through to the PhD level. The major challenges of completing a PhD program - surveying a research field, formulating a relevant and novel research project, independently executing it, and publishing the results via peer review - are representative and mirrored in many of the day-to-day challenges of a research scientist in biotech. While this may sound daunting for someone early in their studies, I have been consistently surprised by the level of support and guidance offered to me throughout my career by mentors and colleagues – know that you will not be doing everything alone! Ask questions and seek help, and you will be surprised at how generous people can be.

Qualifications	University
<ul style="list-style-type: none"><li>• B.S. Biochemistry</li><li>• M.S Biochemistry</li></ul>	<ul style="list-style-type: none"><li>• Portland State University, USA</li><li>• San Francisco State University, USA</li></ul>
<ul style="list-style-type: none"><li>• Dr. rer. nat. Biochemistry</li></ul>	<ul style="list-style-type: none"><li>• Freie Universität Berlin, Germany</li></ul>

### Can you describe your career pathway in more detail?

I have definitely taken a circuitous path in my career! Believe it or not, I initially studied art, specifically classical hand-drawn animation. Think of the classical "Disney" style. However, I became unsatisfied with the commercial realities of working in an animation studio, so I did a "hard reset" on my career.

After moving to a new city and getting a job in a hardware store, I enrolled at a local university and began taking a wide range of courses, from music theory to botany. One of these was a general chemistry course with an emphasis on the chemical properties of everyday materials, like those found in one's kitchen. This ignited an intense interest in chemistry, and then biochemistry, which was ultimately combined with a life-long hobby of computers and coding to the final blend of bioinformatics. So it was not quite a direct point-A-to-point-B career path, but I think I'm all the better for it, and I have found it extremely gratifying.

### What are your interests in and outside of work? How have they influenced your career pathway?

A general thread through my interests is an intense love of learning new things and continuous improvement. This has absolutely influenced my career as a scientist, as such an outlook is critical for the role of research scientist; one can never (or rather, should never) be too complacent or rest on one's laurels.

It is also reflected in my hobbies - cooking, gardening, and homebrewing - in which there is always something new to learn, something to get better at, and new rabbit holes to get lost in. It can be incredibly humbling, but also incredibly exciting, to realise how little you really know about something and how much remains to be discovered.

### What is your proudest professional highlight to date?

One of the most gratifying projects I've worked on so far in my career was developing an algorithm for quantifying immunopeptidomics data. It was the first time I led a team through the early conception phase, development of the algorithm and platform, and the ultimate experimental validation. And when the small corner of that scientific community started to use our open-source tool, it was incredibly validating for me.

### What would you say are the top three skills you have developed over the course of your career?

I would say the top three skills are perseverance, a willingness to ask questions, and listening to and amplifying unheard voices. Perseverance - to move forward, it is unavoidable that one must fail many times. On the other hand, there are times to cut one's losses and look for alternative paths forward. It is a fine balance and tricky to manage.

A willingness to ask questions - nobody can know everything, and if something doesn't make sense to you, speak up and ask questions, even if you think it is foolish or obvious. For me, this is easier said than done, but well worth it.

Listening to and amplifying unheard voices - every person you encounter in your life has something to teach you, and every colleague you work with is no different. Listen to everybody in a thoughtful and open-minded way, no matter their job title, and try to amplify voices that are not being heard.

### If you could give a piece of career advice to your 21-year-old self, what would it be?

I would probably try to stress that every career path is unique and to expect, and possibly even embrace, deviations from a single, straight path. This is not to say that such deviations are always easy or painless, but they are opportunities for growth and perhaps a re-evaluation of one's priorities. At 21, one should try to not set too narrow a definition on what a successful career looks like.

One additional piece of practical advice I was not aware of early in my studies: many scientific PhD programs are fully funded, meaning that one gets a pay check every month while working to complete their research project and earn their degree. Quite an important piece of information for a student planning their finances that often doesn't get emphasized!

What advice would you give someone considering a career in a biotech company?

Biotech is an extremely exciting field to work in, and there are so many cross-disciplinary functions within it. I can only speak of entering it from the scientific direction, but my advice would be to anyone currently studying science: there are many more applications of your scientific experience than you may learn about in the environment of academia. The worlds of regulatory affairs, clinical science, intellectual property and business development, to name just a few, were hardly spoken about during my academic career, but are all stimulating and important aspects of biotech built on strong scientific foundations.

If you feel like academic science is not a good fit for you, look into the many ways you could apply your knowledge and expertise in biotech - you may be surprised at what's possible!