



Nathan Kuhlmann (NIH Trainee 2017-19)



### Getting In The Door

Last year, I completed a twelve-week internship at C4 Therapeutics, a small Biotechnology company located in Watertown, MA. I worked on the Biochemistry and Biophysics team in the pre-clinical drug discovery department of the company with Gunther Kern and Austin Elam, two senior research scientists. I identified the internship by attending the BTP Fall Symposium in Fall 2017. One of the speakers was Dr. Stewart Fisher, the Chief Research Officer at C4. I was interested in the work at the company and approached him after the event was over and told him about BTP and about the research I was working on at the time. I asked him if C4 did internships, to which he told me that they had never had a graduate student intern at C4. I stayed in contact with him over the course of two months until the hiring of new interns came along. I sent him my CV which highlighted specific technical and professional skillsets that would be of value to the company's research program. I was invited for an on-site interview, and soon after they offered me a position on their biochemistry/biophysics team to work on high-throughput screening of small molecule compounds using biophysical assays to help build my expertise in protein biophysics.

### Experience Gained

I worked on two main projects during my time at C4. The first project was improving the thermal stability of different protein drug

targets using differential scanning fluorimetry (DSF) and studying protein-compound interactions using this assay. The second project involved developing an assay for screening compound formulation solutions for their ability to dissolve high doses of drugs about to be tested in animal models. This project in particular was quite stimulating and progressed very rapidly towards the end of my internship. I also helped the company do routine experiments and tasks, such as purifying recombinant proteins and characterizing protein-compound interactions using isothermal titration calorimetry (ITC).

### Advice

The best advice I would give to students looking for an internship is to talk to everyone you know about potential internships and take advantage of the opportunities the BTP program provides for networking. These opportunities include the BTP Fall Symposium, the lab modules, and the Biotech tAles event. Meet as many people as you can and go to as many networking events as you can, and make sure to keep an open mind when you are having conversations with new individuals. The faculty and the students at UMass are an invaluable resource for finding job and internship opportunities, and that includes past alumni of UMass graduate programs (Chemistry, MCB, Chemical Engineering, Biology, etc.). In my experience people are generally willing to help you, but you have to take initiative and find or even make the opportunities yourself. Finally, find a company that will make the most of your skillset and that shares your research interests and values. The BTP internship was an invaluable experience that has helped shaped my career mentoring network and clearly define my short-term and long-term career goals.