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Degree: When, where, what, and what in?

In 2013, I earned my PhD in biochemistry at the Max-Planck-Institute for Marine Microbiology in Bremen, Germany. My thesis focused on linking molecular biology with mass spectrometry, allowing me to discover an ecologically important group of marine cyanobacteria (UCYN-A) living in symbiosis with a eukaryotic cell and to provide the first physiological insights into this unique relationship.

Did you stay in academia at all, and if so, for how long?

After my PhD, I completed a 1.5-year postdoc position at the Woods Hole Oceanographic Institution (WHOI). During my tenure at WHOI, my work focused on open-ocean environments where I investigated the microbial phosphorus redox cycle. I also worked on a project to understand how bacterial infochemicals impact particle degradation in the ocean.

How did you go about searching for a job outside of the university setting?

When I started my search, I knew I wanted to be a bench scientist. I began by reading job descriptions to determine what skills were required for an industry position, and then comparing those requirements to my own skill set. This early research helped me define what jobs interested me outside of academia and what proficiencies were needed to be a viable applicant. In parallel, I reached out to individuals who held relevant industry positions to learn about their careers, day-to-day work responsibilities, and transitions into the private sector. I strongly recommend the “informational

interview” approach, as the conversations are relaxed and no one feels pressured to discuss specific job offers—this approach helps you build a professional network outside academia that can result in specific job referrals down the road. I also spent time networking as part of a local biotech “meet up” group, and I attended seminars at nearby universities relating to careers outside academia.

Is this the only job (post-academia) that you’ve had? If not, what else did you do?

This is my second job outside academia. My first role was a research scientist position in the R&D department at Thermo Fisher Scientific in San Jose, California, where I tested and developed technologies to link capillary electrophoresis to mass spectrometry for protein analysis (e.g., ZipChip Interface coupled to QE-Biopharma instrument). This position was very similar to my academic endeavors, as I spent most of my time in the lab and also presented project developments to my team members. I enjoyed this work, but was also interested in learning more about the business side of Thermo Fisher’s operations.

What is your current job? What path did you take to get there?

I am a Scientist III in the Verification & Validation department at Thermo Fisher Scientific in South San Francisco, California. My main responsibility is to assure that products under development (e.g., capillary electrophoresis instruments) meet distinct quality and performance requirements before official release. I meet with colleagues from the R&D and business departments at



Thermo Fisher in order to get both sides to agree regarding product specifications, which I then use to design, plan, and execute test protocols for upcoming products. Day to day, I spend some time in the lab trouble-shooting instruments and software. The remaining time I spend interfacing with others in my department to discuss results and key findings. There are also opportunities to develop and write research proposals internally at Thermo Fisher to acquire internal funding for additional innovative projects.

What did your oceanographic education (or academic career) give you that is useful in your current job?

My current job requires that I work effectively in an interdisciplinary environment with teams from various backgrounds such as engineering, biochemistry, and product management. I also need to be comfortable using and connecting new technologies with one another and translating scientific data into written forms and presentations. My academic background gave me experience in all of the above. Specifically, I give credit to the numerous hours I spent in the lab tinkering with new instruments, as well as the time I dedicated to publishing my projects.

Is there any course or other training you would have liked to have had as part of your graduate education to meet the demands of the job market?

If I were to go back to graduate school, I would take courses in product management and financial planning for commercializing products from the R&D stage to market. These are areas I touch upon on a daily basis, and have had to learn more about as I go along.

Is the job satisfying? What aspects of the job do you like best/least?

My job is satisfying because I can learn about cutting-edge technologies, especially ones that are not yet publicly available. I also find it rewarding to interact with teams who bring in expertise from R&D, business, marketing, and sales. Navigating through such terrain can be challenging, as I need to convey information to audiences with different agendas and vocabularies, but at the same time these challenges enable me to constantly gain new knowledge and skills.

Do you have any recommendations for new grads looking for jobs?

Identify aspects in your graduate role you like the most—what excites you? Conduct informational interviews, and network inside as well as outside academia. This will give you valuable information about the types of positions out there and the skills needed to help you strategize your next steps to land the job you like. 📍