

## Career Trajectories in the Industry Setting for Cancer Research

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While academia is commonly referred to as the “traditional” path in research, it is becoming increasingly more common for early-career researchers to decide that it is not their aspiration. As the reality of the academic job market confirms that only a small minority of PhD graduates transition to a tenure-track position (10-20% overall, but the numbers can differ according to the field of specialization), awareness of and interest in non-academic career paths have increased, as noted for example in the [most recent postdoctoral survey from Nature](#).

I sat down with past Associate Member Council (AMC) Chair, Francesco Caiazza, PhD to hear about his experience in research, as well as his transition into his current position as senior scientist in the Translational Science Department at CytomX Therapeutics in South San Francisco.

KC: We hear of individuals “going to the dark side” or adventuring into an “industry” position, but this can define many different career trajectories and roles. What does industry mean? And what kind of jobs or roles might a job in industry look like?

FC: That is something that I only started to fully comprehend once I started working in industry. Like everyone, I assumed that lab work in academia or lab work in industry were essentially comparable. In reality, while my academic training had prepared me for the wet lab work in industry, I also had opportunities to leverage and strengthen so-called “complementary skills” (e.g., strategic planning or scientific communication), and came to realize that there are so many other responsibilities and opportunities within the organization at large. It is more common than I had assumed that, once you’re inside a company, you can get opportunities to explore other functions and different roles, either through networking with people in the organization or through cross-functional collaborative work and sometimes realize those other roles might be a better fit for you. I witnessed colleagues successfully pursuing these “horizontal career changes,” and I think it’s a lot less compartmentalized than what we’re used to in academia.

For the purpose of this conversation, I think “industry” generally refers to biotech and pharma, since that’s where a lot of the R&D is, and where it’s easier for an early-career researcher with an academic background to land an entry-level position as a bench scientist. But this term can encompass a large number of different positions beside bench scientists, from clinical operations to regulatory affairs, from patent law to business development and program management. There are also opportunities for scientific industry roles in tech, particularly for data scientists.

KC: What did the transition to your current industry role look like, and what was your motivation to pursue a career in industry?

FC: I think I had somewhat of a non-traditional experience (even though it is becoming more and more common), where I initially slowly transitioned into an early-stage start-up company that was spinning out from my academic post-doctoral research at UCSF. That gave me an opportunity to witness firsthand how a biotech company is formed, and to leverage the entrepreneurial ecosystem of the Bay Area to learn many of the non-scientific skills that are useful for success in startups. That experience allowed me to have a preview of what a position in industry might look like and, importantly, also to expand my network to people outside of academia.

A career in industry was a possibility I had been thinking about for a long time, as my training progressed and I was asking myself if pursuing an independent role in academia was a good fit for me. When I first arrived in the U.S. from Europe, I was supported by a fellowship specifically for a collaborative project between academia and industry, which is how I ended up transitioning to the startup. While I knew that it was something that I wanted to explore, I was fortunate to have the opportunity to do so, thanks to the biotech collaboration as well as a lot of exposure to entrepreneurs and venture capitalists during my time at UCSF.

I finally transitioned into my current industry role because it provided an opportunity to be more directly involved in clinical and translational research, and the chance to make an impact on patients' lives developing new drugs. I find it funny that whenever I talk about my career transition the first comment I receive is often about money, but compensation (although very important) was never my main motivator for going into industry. I was mostly striving to find recognition for my work, growth opportunities, and a better work-life balance, all of which I have been lucky to find in my current position.

KC: What advice would you give to trainees who are considering whether they should pursue a career in industry?

FC: I realize a lot of people like me may come to this decision later in their career, but if you have the opportunity I would recommend trying to get exposure in different ways during your training, for example through a specific fellowship such as the one I received, or choosing a PhD or postdoc lab that has a history of collaborating with industry so that you may have a chance to work on those projects. I would also leverage as much as possible any career development resources that your academic institution may provide, as an opportunity to learn about careers in industry and expand your network.

Networking is the most important skill you should be cultivating during your training. Some people, like me, are naturally introverted and may find this very difficult, but if you work on it methodically, your future self will thank you. Use informational interviews to connect with people in industry and understand what their day-to-day looks like, and consider whether that is appropriate for you. An informational interview is just structured networking with someone that has the type of position you're interested in, where you can ask specific questions about their work and their career trajectory. It helps to prepare a standard set of questions for all the interviews, to provide objectivity, but there are [many ways to do informational interviews](#). I leveraged the AACR Annual Meetings 2-3 years before I planned on transitioning, to connect with people to interview.

Finally, the world isn't black and white—people assume that if they decide to take an industry position, they can't go back to academia, but there are [many examples](#) of individuals who have gone back and forth between these two settings.

KC: How did you leverage your mentoring team before and during your transition?

FC: There is a general misconception that outside of academia, there is not a lot of interest in mentorship and career development, and that's not the case. There are several people in my company who I consider my mentors, and that spans from the chief scientific officer to colleagues at my career level, some of whom have been at the company longer than me and have provided crucial advice, especially during the first year. One of my postdoc mentors in Ireland also shared crucial advice from her direct experience in industry, as well as supporting me to pursue the fellowship that led me to work at UCSF. Another former colleague and mentor from my last postdoc, who had transitioned to industry 4 years before me, helped me to make the initial connection with the hiring manager for my current position. It is incredibly prevalent in industry to maintain academic relationships and to do science outreach. Now, looking back, I would be much more comfortable reaching out to industry leaders as a trainee, because I know they are very interested in helping.

KC: How can we normalize the topic of industry careers?

FC: There is a lot of discussion especially on social media around "leaving" academia. Many conversations tend to picture the two career options as opposing worlds. As much as there are many crucial differences, in reality I don't see pursuing a career in industry as any sort of "defeat" or "departure." Graduate school and postdoctoral training are meant to train us for a successful scientific career, regardless of where that takes place. Fortunately, there are plenty of academic PIs that understand success may come in different forms and are willing to support their trainees in whichever direction they want to move. I think this is a very important aspect to consider when choosing which lab to train in and who to select as your mentor.

It is also important to understand that choosing the right company to pursue a career at is just as important as choosing a lab for your PhD or postdoc, because leadership can make a huge difference in setting the tone for your experience. It pays off to find a workplace (whether in industry or academia) that is a good fit for you both professionally and personally.

KC: How are jobs advertised at your company or how can trainees start looking for industry positions?

FC: We have a career page on our website, but our HR department also advertises opportunities on other platforms such as LinkedIn. I recommend working very carefully on your LinkedIn profile and leveraging the networking opportunities that come from mutual connections. I also set up a weekly email digest to be notified of possible matching positions when I was on the job market.

KC: How do your academic skills translate into a position in industry?

FC: Grant writing is a really great academic skill that I was able to leverage on multiple occasions in my industry experience, from fundraising for start-ups to working on regulatory submissions to the FDA in my current role. Presenting at conferences or within your institution is another crucial skill that translates into industry, as there is a big focus on cross-functional communications and scientific presentations. Depending on the company where you work, there could also be a continuing effort to write papers, even though this does not impact career progression as strongly as it does in academia. Another skill that is often overlooked but can be nurtured during your academic training is the ability to be a collaborative scientist. Teamwork is much more prevalent in industry, where most projects are dependent upon many functions working together, and a collaborative spirit is a valuable skill.

To further explore opportunities in industry, we encourage Associate members to participate in the AACR [Oncology Industry Partnering Event: From Cancer Discoveries to Patients](#) that takes place prior to the AACR Annual Meeting. Additional opportunities to participate in discussions with industry leaders are available during the [Professional Development Sessions](#) throughout the meeting.