



Tracing The Career Path of Richie Kohman

By Guillaume Belissent

Career paths are not always linear. Just ask Richie Kohman, an organic chemist turned neuroscientist who recently moved to Geneva as the Chief Scientific Officer at the Wyss Center. The Wyss Center is one of three non-profit organizations (The others being in Boston and Zurich) that have a mission to translate scientific discoveries into practical applications for the betterment of society. As the CSO of the Wyss Center for Bio and Neuroengineering in Geneva, Richie manages the Center's scientific activities to better understand the brain as well as to develop improved treatments for brain disorders.

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We had the opportunity to talk to him about his journey to becoming a leader in his field. As he describes it, "My research path seems a bit meandering from afar, but it's had a lot more structure than maybe it appears."

The Early Days

Richie started his career path studying organic chemistry, a field he later learned was one of the most dreaded in all of the physical and life sciences - particularly by students. Some people actually "made faces" when he mentioned that he did organic chemistry. Ironically, there he found his passion. By using organic chemistry tools, he was able to manipulate matter to create new things. During his studies, for example, he created novel hydrogels with tunable degradation and release properties to improve drug delivery. Another example in regenerative medicine, he developed cell-coating biomaterials with the capacity to deliver stem cells to damaged tissue sites.

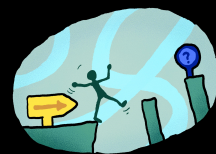
As Richie puts it, "I always was a very applied person. I think fundamental science is really great. Some people just have questions about the universe, they want to study them, and that's very, very important. But for me, I always wanted to build things."

Next Steps, Or Actually Jumps

After grad school, Richie decided to pivot from biomaterials chemistry to neuroscience and do a postdoc in neuroengineering and optogenetics at Boston University. He knew it was a big change into something less familiar. But that's what he was really interested in, and didn't want to settle for second best. "So I did kind of a huge jump to my postdoc. And somehow someone hired me, even though I had no experience in the field."

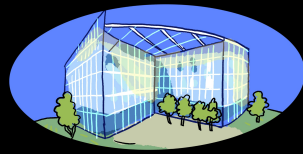
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In his words, "I went from organic solvents to mouse brain surgery basically in one step." Clearly the risk was worth it for both sides. Richie worked on the design and creation of nanotechnology for neuroscience research, development of surgical techniques for drug delivery to the brain, and establishment of an academic lab for chemical, surgical, and optogenetic research.



The postdoc way of life had its attractions. In contrast to grad school, there are no more classes and all your time is spent on your research. As Richie puts it “I like the concept of being independent, controlling your own fate and just doing research”. But there are also downsides like “you're not getting paid very well”, as he pointed out. So, although Richie enjoyed postdoc life, he left it for a brief stint in a startup developing expansion microscopy, a technique used in biology to enlarge biological specimens for high-resolution imaging.

The start-up experience can be stimulating yet there are positives and negatives. One of the downsides for Richie was the inflexibility in the scope. Investors back a specific idea, and business plan. They have expectations and deadlines must be met. Deviating from that path can be challenging. “You can't just wake up in the morning and decide to study stem the company is focused on microfluidics.” And that can feel a little limiting.



Before The Latest Move

Richie first joined the Wyss Institute in Boston in 2016. There he led a project that set out to map the rat brain using Fluorescent In Situ Sequencing (FISSEQ). With the success of this project, Richie was promoted to run the division, which meant that his job responsibilities shifted from bench work to management. That was another shift to something less familiar, and not always what he wanted to be doing. But Richie found a way to keep a hand in the research.



“I would occasionally get sort of burnt out from meetings, emails, paperwork stuff. And I would sneak into the lab and do some experiments as a means of venting or procrastinating.”

What Richie is excited about now

In 2021, Richie Kohman took on the role of Chief Scientific Officer (CSO) at the Wyss Center in Geneva, a specialized hub for neuroengineering. The center is working on many “cool projects”. One that he finds particularly interesting is on spinal cord repair. The Wyss Center is collaborating with Professor Gregoire Courtine's lab at EPFL to develop a gene therapy approach aimed at stimulating the growth of spinal cord neurons, ultimately enhancing the recovery process for individuals with spinal cord injuries.

Lessons learned

After two decades of experience in sciences, Richie has learned some lessons that he wants to pass on.

Always give it your best attention. Richie remembers viewing courses only as requirements, sometimes even questioning their practicality and future relevance. Reflecting on this, he regrets not fully investing himself in those courses, and advises against falling into that mindset. This resonated with me, particularly in classes like electrical engineering or organic chemistry that didn't interest me at the time. However, now these courses unexpectedly help me understand some of my favorite subjects.

Richie pointed out that the tendency to judge a course or conversation persists to this day. “I still fall into that sometimes when I'm listening to a talk, if it's a little outside of my current

interests.” In those cases, he remembers to give it his best, telling his inner mind to “shut up.”

Enjoy what you do, on average. Although Richie says his perspective on this varies depending on his time of day, mood, and circumstances, his core belief remains consistent, emphasizing the importance of doing something that brings enjoyment. While it may sound “very corny” and “very generic,” he believes that you must enjoy what you do. Recognizing that nothing is perfect and that unpleasant tasks are inevitable in any position, he acknowledges, “there are always stints at any position where you have to grind through something that's unpleasant.” If you like what you're doing (on average) it's easier to persevere and grind through those challenging moments. Drive comes from enjoying what you do.

Don't be afraid of change.

The most resounding lesson that can be taken from Richie's path is to not be afraid of change. He certainly wasn't. He switched fields from organic chemistry to neuroscience and from academia to startup to non-profit.

Richie's lessons are valuable to us all, but what I learned most is to just reach out. Don't be afraid to reach out to someone with experience in the fields you are interested in. You'll learn a lot and enjoy doing it.