

Win4Science Spotlight Series: **Prof. Karine Auclair**

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From a young age, Prof. Karine Auclair was inspired by nature. This passion led her to pursue her current research, tackling biological questions from a chemistry perspective. Prof. Auclair sat down with Win4Science to discuss the trajectory of her career.

Born in Jonquière, a small town north of Quebec City, Prof. Auclair was the first from her family to attend university, choosing to study chemistry at the Université du Québec à Chicoutimi. Here, she worked in the lab of the late Prof.

François-Xavier Garneau, an inspiring researcher in organic chemistry. Karine explained that Prof. Garneau “was not just a teacher for me. He was actually a mentor and a friend.” She emphasized this point as “a lot of students tend to be afraid of professors [...] people need to realize that we are human [...] and we’ve been there so we know what it’s like. He [Prof. Garneau] was amazing to me. All through this he supported me [and] I can’t thank him more.” Prof. Garneau’s mentorship and Prof. Auclair’s hard work showed at the end of her undergraduate studies as Prof. Auclair recollected fondly a proud moment when at the year-end award ceremony with mother present, she earned multiple awards recognizing academic excellence, reflective of her passion for science and great potential.

Prof. Auclair pursued her PhD at the University of Alberta investigating the biosynthesis of natural products, specifically how fungi synthesize a statin drug that her mother was taking. While this was an enriching experience, Prof. Auclair struggled at first as, “for almost three years, I had absolutely no results to publish [...] and, at the time, my self esteem plummeted like crazy”. However, she persisted and overcame this challenge, eventually graduating with 9 papers. From there, she pursued her post-doctoral work at the University of San Francisco and, after just one year, she applied for a professorship position at McGill, believing at the time it would be good practice for future applications. However, the results exceeded her expectations as she received an offer from McGill. Since then, Prof. Auclair has been running a successful research program in the Department of Chemistry.

Despite her success, Prof. Auclair’s career has not been without its challenges, both personal and professional. With each exciting chapter of her academic career this also meant uprooting herself and being distanced from loved ones while navigating new and unfamiliar places. Just three years after she began her Assistant Professorship at McGill, she underwent three serious surgeries that required at least 8 months of recovery. This time was both physically and psychologically taxing, but Prof. Auclair was resilient and determined, and with the support of the department, she began her teaching responsibilities after her recovery period. Since then, one recurring professional challenge she has faced is rejection – an experience that many can relate to. During the early stages of her Assistant Professorship, Prof. Auclair struggled to secure funding and recalls being “so worried I [Prof. Auclair] had a hard time sleeping at night.” However,

with persistence she secured her first CIHR grant and over time, she understood that applications are like research where “most of the time things don’t work and once in a while [they do].” She emphasizes that while it is often a long, hard road lined with unpleasant rejections, the successes feel like “I [you] have won the battle.”

For the women in STEM, Prof. Auclair advises them to “aim high, you are good enough. [...] If it’s your dream, keep trying. [...] You’ll be surprised because I didn’t think I could do it, [...] but I did it [and] if I can do it, you can do it.” She emphasized that it is important to find people who will support you, are proud of your accomplishments, and give you space to share your accomplishments with pride. Prof. Auclair was candid about the fact that, while she is a woman in STEM, she is still learning about the biases. For example, she recently read a paper showing that due to bias, women received fewer citations than men, revealing the fairness she once believed in was a façade. . As she continues to be a trailblazer in STEM, Prof. Auclair hopes these biases disappear so fewer women experience the self-doubt that she endured.

While being a researcher and professor has been incredibly rewarding, Prof. Auclair values a work-life balance. “Having a life helps a lot. [...] It gives you a way to forget for a minute and rest your brain,” she explains. Over the course of the pandemic, despite the more frequent interruptions by her children when working from home, this helped her take screentime breaks that in-turn aided her work. Impressively, Prof. Auclair keeps a strict schedule allowing her to have time for family, and together, they run a small farm which recently completed its 27th harvest.

By pursuing her passion for science, Prof. Auclair has created a fulfilling life and career surrounded by a supportive community and reminds us that “the more you do research, the more you realize [...] that we’re building on each others work [...] everything is linked, nobody realizes anything on their own.”

To read more about Prof. Auclair’s research visit her lab’s [website](#) or follow her lab on Twitter (@AuclairLab).