

# **Obituary**

# Marc G. Caron (1946-2022)

### Kathleen M. Caron

My father was raised on a dairy and maple syrup farm in Northern Québec, Canada, in a small village, St. Cyrille de L'Islet. He was the eldest of seven children, now survived by his brother and five sisters. The day after my father died, I spoke with my father's brother Luc. I asked, "Mon Oncle, qu'est que tu as fait aujourd'hui?" (Uncle, what did you do today?) He replied, "Biens, j'etais dans le bois." (Well, I was in the forest.) This was answered with a tone of such obviousness that I knew immediately it had been foolish for me to ask the question. You see, when your livelihood depends on the health of the forest, you become its steward, and it's a lot of hard work. Chopping, clearing, sawing, mulching, mowing, burning, blowing, planting, pruning. Every day it requires care, nurturing, and urgency, because in Québec the snow is always coming. My uncle Luc, like my father and many rural French Canadians, find peace and purpose deep in the forest. It is expansive. You cannot see its boundaries.

Dad and my mother Pauline found their forest in Hillsborough, North Carolina. Canadian maples are replaced by oak, poplar, and pine and, more recently, by Dad's semi-obsession with dawn redwood trees. These gigantic trees are native to the Pacific Northwest but can grow in North Carolina, specifically in Duke's Sarah P. Duke Gardens and in our family friend Bob Bell's back yard. Each year, Dad would go to Bob's yard and meticulously and gently hand-select the healthiest saplings from the ground. To successfully grow a dawn redwood, you must first bring it into your home, sheltering it and protecting its frail and displaced roots until they become firm again. Then, after a couple of weeks, the saplings move outside, not too far from the house, planted in containers so that they can be checked on and watered every single day. It is interesting to observe that the trees grow in different ways. Some trees do better in the rose bed next to the pool, while other trees seemingly reach for the sky from their brick

planters by the back door. In a few years, the dawn redwoods are ready for their forever home in the forest. Dad would spend hours, days, and sometimes entire weekends preparing the forest for the new planting. Wearing his "bando" (French Canadian word for sweatband), which my sister Melissa dubbed his "battery pack," and-as my brother Nelson reveled in saying - "wielding his axe with such power and precision that it was a thing of beauty to behold," my father would ensure that the transplanted dawn redwood had the very best chance of success in the forest. Dad would call each of us on the phone, exhausted but also so proud and excited that he had successfully transplanted yet another tree-past the pond, by the barn, along the fence, beside the bees' nest, around the orchard, between the rocks. Do you see the vision? In about 30 years, there will be an expansive forest of dawn redwoods in Hillsborough, North Carolina. And in this forest surrounding our family home, my father found his peace.

This daily nurturing is something that Dad also brought to the lab, because af-



Marc Caron passed away peacefully at his family's home on April 25<sup>th</sup>, 2022. These are part of the reflections shared by his children during his funeral service on April 30<sup>th</sup>, 2022.

finity chromatography resins, β-arrestin recruitment assays, or self-administration protocols in genetically engineered mouse models are really complex things that need great care and attention. The work was mostly done by postdoctoral fellows and graduate students who Dad had also hand-selected, not from Bob Bell's back yard but from prestigious institutions all over the world. Dad would always personally pick up the postdocs from the Raleigh-Durham airport, even once on Christmas Eve, which caused my mother to cancel our Noël Réveillon! The postdocs would come into our home to live with us for a short while. Nelson would get kicked out of his room and sleep on a mattress on the floor, and Melissa and I would take over the responsibilities of our daily family routine. Meanwhile, Mom would dedicate herself to sheltering and nurturing these young international scientists. She would cook them splendid meals to comfort their homesickness, and during the days she would help them find an apartment, buy second-hand furniture, set up a bank account, and learn how to drive. In about a week, the postdocs were ready to start work in the lab under Dad's thoughtful nurturing and mentoring. He would teach them the technical aspects of their experiments but also instill them with a purpose for their science and a passion for novel discovery. Each day, my father would provide his mentees with relentless encouragement, making them believe that they can always achieve more. He is well known for his endearing Friday evening farewell: "Okay, have a good weekend, and I'll see you tomorrow morning!" In about 3-5 years, the postdocs would leave the lab, establishing their own roots in their own laboratories in every corner of the world. They are an expansive family, impossible to define their boundaries, and like the dawn redwoods, they too are giants! To those who trained and worked with my father, please knowand please spread the word-that Marc was so proud of every single trainee and colleague. You see, it is in the success





and happiness of the trainees within his cultivated scientific forest that my father found some of his greatest joys and peace. To Dad, thank you for enriching our family life with this extended scientific family. We love you and we will miss you.

#### Kafui Dzirasa

Early in graduate school at Duke, I became interested in studying the role of dopamine in sleep regulation. My PubMed searches kept leading me to a "Marc Caron." When I realized that this world-renowned scientist was at my own institution, one of the postdocs in my graduate lab offered to make the introduction. I couldn't imagine that someone as famous as this Marc would take the time to talk to a first-year graduate student, especially one that didn't know anything about biochemistry, cellular biology, or neuroscience. But by the end of our first meeting, Marc had offered to join my thesis committee.

Everv Tuesday mornina. Marc welcomed me into his lab meeting as his adopted trainee. I was a precocious student, and rarely would five minutes pass without me interrupting the weekly presenter to ask a question. Then, right after lab meeting ended, I would follow Marc back to his office and ask him more questions. I interrupted so much during one lab meeting that my only goal in following Marc back to his office that week was to apologize. Marc wouldn't hear of it. He assured me that he enjoyed all my questions, and he encouraged me to ask as many as I wanted. Most importantly, he did it with a smile. That was Marc.

As I continued to navigate the full weight of the isolation that accompanied my training experiences (Dzirasa, 2020), Marc's office became one of the few rooms on campus where I found refuge. I would just hide away there and talk science. I rarely had an appointment, and Marc would almost never end one of our conversations. If Marc had another scientific meeting, he just invited me to join. If he had a phone meeting, he would just let me listen in. When he had a lab event at his home on the farm, he invited me to attend. One time, I informed Marc that I

had already made a commitment to spend time with one of my own mentees. He invited the mentee to attend the summer barbeque at his home, too. Over time, I took the liberty of crashing the holiday parties at his home. Marc was always ecstatic to see me, and he made sure it felt like my home.

As our scientific relationship progressed, Marc invited me to join meetings with the other senior investigators leading Duke's Silvio O. Conte Center (Kuhn and Krishnan, 2022). Marc would introduce me as "the future of psychiatric research," an intro that I found odd. To me, Marc was the past, present, and future of psychiatric research, and I was simply a precocious graduate student who could never find a way to get all his questions answered. The reviewers seemed to agree with my perspective. My grants and papers often got rejected, to which Marc always quipped "they will catch up eventually."

After I graduated from Duke's MD/PhD program, I was appointed as an assistant professor in the psychiatry department. Marc agreed to lead my faculty mentoring team. When I wrote a four-year administrative supplement grant to support my transition to independence. Marc was the PI of the parent grant. When it came time to hire my first technician, Marc screened the resumes and interviewed the applicants. He also called their references. I had no idea what I was doing. and Marc wanted to make sure that I had the best team to support my scientific vision. He didn't want anyone to ruin the little sapling that he had spent so much time nurturing.

Marc invited my first employee to his weekly lab meetings. The second and third one, too. We all joined the holiday parties. His beloved wife, Pauline, made all of us feel at home. When I was awarded an R01 in the first year of my training supplement award, Marc and I celebrated together. Though the NIH canceled the last three years of the training award, Marc said it was the first time he was happy to see his grant budget reduced. When I was awarded my first private foundation grant, I ran over to Marc's lab holding the bottle of wine the donors sent to my lab. Marc and I drank the bottle together with his postdocs. It was only natural; Marc had given me feedback on all my grant proposals for the last 10 years. It was our accomplishment. When Marc was awarded the 2013 Lieber Prize for Outstanding Achievement in Schizophrenia Research, he was given the opportunity to nominate a young researcher to receive the Sydney Bear Prize. He asked if he could nominate two. I shared the prize with one of his postdocs.

After one of his subsequent holiday parties, Marc pulled me aside. "Your lab has gotten pretty big," he said. "Yup, nine and growing," I replied. With his gentle smile and a pat on the shoulder, he let me know that it was time for me to be planted outside of the house. It was time to get my own holiday party. But Marc kept me close. He joined the thesis committees for several of my trainees. In 2017, we decided to co-mentor a graduate student. I had mentored her since she was an undergrad, and I trusted Marc to care for her as he had cared for me. Our final meeting prior to her defense was scheduled for April 26th, 2022, at 1 p.m. She was his last seedling. Our seedling.

Marc Caron loved the woods. I am one of his trees. One of many. May this master gardener live on in the vast forest he planted.

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## **REFERENCES**

Dzirasa, K. (2020). For Black Scientists, the Sorrow Is Also Personal. Cell 182, 263-264. https://doi. org/10.1016/j.cell.2020.06.028.

Kuhn, C., and Krishnan, R. (2022). IN MEMORIAM Marc Caron 1946-2022. Neuropsychopharmacology. https://doi.org/10.1038/s41386-022-01346-w.