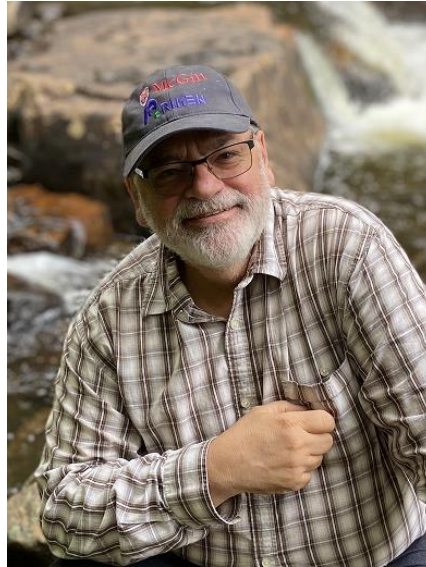


Focus on Faculty #66

Michel Tremblay



I was born in Quebec City at the same time as Sputnik 1 was launched. Perhaps this was a sign that I was going to enjoy this new space era and immerse myself in the life-long pleasure of reading and doing science. A young fan of science fiction, I was reading almost anything I could on space, biology and sci-fi adventures. Having three sisters and a brother, I never lacked companionship. Our family provided us with a simple but wonderful childhood within a loving family.

My first real adventure came in 1966 when we moved to Montreal. A bit lost at first, I reconciled myself with the world, when “It” came to see us ... through the occurrence of EXPO 67. What an extraordinary event for a 10 year old sci-fi fan! Us kids passed every day that I remember on *les Iles Notre-Dame et Ste-Helene*. The end result was a life decision to become a scientist. Many years later I pursued my BSc in microbiology at the Université de Sherbrooke where my best subject was virology, the ultimate subject for sci-fi biology ... are they alive or not? I thus joined the laboratory of Joseph Weber at the CHUS to study adenovirus lytic infection. These studies provided me with my first authorships and launched my scientific career. The direction that I had taken changed dramatically in 1980 when my mother was diagnosed with advanced breast cancer. I realized that my brief work with adenovirus could be helpful by examining adenovirus tumour proteins for my PhD research. Cancer became a central topic of my professional interest thus I joined the laboratory of Philip E. Branton in the NCI cancer group located at McMaster University. These were wonderful years. Not only my first two daughters were born in Hamilton, but also I had the privilege of working with a truly special mentor. Phil was, and still is, a music lover and a remarkable all-around scientist. Importantly, I understood that one can succeed in science and enjoy plenty of laughter with family, friends and colleagues, while still carrying on passionate and competitive scientific research.

By the end of my PhD in the late 1980s, already the world of cancer had changed dramatically in that oncogenes were being discovered at a fast rate and novel models of cancer using transgenic animals were coming of age. I chose to join the lab of Heiner Westphal at the NIH -NICHD and was given the task of developing Embryonic Stem (ES) cells KO. Indeed, I generated the first animal model of a human genetic disease. Gaucher’s disease was already difficult to treat and many children suffering

from various glucocerebrosidase mutations were in clinical trials at the NIH, each one being tested with various forms of the wild-type proteins. It was an excruciating testing process that became more efficient by validating these therapeutics with the engineered Gaucher's knock-out models. In addition to ES cells work, it is also at this time that the first protein tyrosine phosphatase (PTP) was cloned by N. Tonks (CSHL). I knew their catalytic activity well, as Phil Branton had a research program identifying these enzymes during my PhD in Hamilton. Potentially tumour suppressor, they were an exciting research field that was completely unknown at the time.

I was recruited in the Department of Biochemistry at McGill by bringing the technology of ES KO for the study of PTPs in 1992. With Philippe Gros' group and his research program on NRAMP, we made the first KO mouse model in Quebec, followed by many more genetically modified animal models through the transgenic core at the McGill Cancer Centre. PTPs are still the main focus of my laboratory, but we have since developed novel inhibitors that are specifically useful in improving the immune system, which led to novel applications in immunotherapy. I was also fortunate to have started three biotech companies at McGill. The positive and negative experiences of these start-ups were also very informative as to the benefits and detriments of research between the public and private sectors.

Throughout these 28 years of being a PI, oncology has remained my major interest and because of this I became Director of the McGill Cancer Centre, which we reinvented successfully into the Rosalyn and Morris Goodman Cancer Research Centre. I will remain always grateful to Rosalyn and Morris Goodman for having encouraged and financially championed this endeavor. I consider this as one of the most rewarding periods in my career.

More recently I have realized that the field of regenerative medicine interacts in many ways with oncology and I joined several outstanding colleagues at McGill and the Research Institutes to initiate the McGill Regenerative Medicine (MRM) Network. One cannot claim to be a first rate medical school today without advanced research and application in this far-reaching biomedical activity. Since I am the current director of the MRM network, this is my way to pursue my commitment to our remarkable university.

As I approach my 30th anniversary at McGill, this is likely the onset of the last decade of my research career. The lessons from Phil Branton of enjoying science and personal life have proven to be useful. The pleasure of mentoring students and new PIs alike is quite gratifying and will certainly continue to be central to the fun of doing science. Let's see how I will complete this career. I have many plans for finalizing some exciting papers, putting the final touches to major PTP projects and to implement ideas that I had for medical applications through start-up companies and existing collaborations.

I cannot complain that my career has not been fulfilling and this is also the case with my own family. With my three daughters including one completing a PhD in Biochemistry, a young son, and my dear partner, Noriko, there are never days without pleasant experiences and sometimes small mishaps that keep us busy. I do hope to finally learn Japanese and pursue hobbies that I never had the time to improve. Most fun would also be to enjoy time with Noriko and the children and the recently arrived grandchildren. With all those, I can see the years ahead being filled with activity and joy!