

## Dr. Natalie Keirstead

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Dr. Natalie Keirstead knew fairly early that she wanted to get involved in medical research. She completed her undergraduate education at Dalhousie University, graduating with Honours with a Bachelor of Science in Microbiology and Immunology. She then went on to complete a Master of Science degree in Medical Microbiology at the University of Manitoba. While she considered going to medical school, Dr. Keirstead was very interested in learning more about the similarities and differences in biology among animal species in the hopes to better understand the underlying mechanisms of human and animal disease and thought veterinary school would be a better fit for her. She returned to the East Coast, this time to the University of Prince Edward Island, to complete a Doctor of Veterinary Medicine program. After that, she pursued a PhD and residency training in pathology at the University of Guelph, with a focus on innate immunity. She is also board-certified in both Pathology (a Diplomate of the American College of Veterinary Pathology; DACVP) and Toxicology (Diplomate of the American Board of Toxicology; DABT).

Dr. Keirstead started her professional career in academia, and loved teaching veterinary students, not only in classroom courses but on the diagnostic floor (necropsies, biopsy rounds), in addition to supervising students on research projects. However, she was still curious about careers in the pharmaceutical industry because the research conducted there was more applied, resulting in health authority-approved medicines to treat or ideally cure diseases. Dr. Keirstead landed her first industry job at Hoffmann-La Roche, more simply known as Roche, and has been working in industry ever since! When asked what it was like to move around so much throughout her career, Dr. Keirstead spoke to the value of gaining a wealth of experiences in multiple environments, and being exposed to a variety of perspectives, even just within Canada.



Dr. Keirstead is now Head of Pathology at Merck and no two days in the life of Dr. Keirstead are ever quite the same, but that is one of the things she loves most about her job! She enjoys the mix of tasks and likes that it keeps things interesting. Leading a diverse global team of over 60 people can be challenging, but Dr. Keirstead recognizes the value of fostering open communication, encouraging diversity of thought, and highlighting everybody's different strengths. Working with a large group of smart, driven individuals with a shared objective and deep commitment has been exciting for Dr. Keirstead. Whenever members of her team move on to different labs, different departments or even different companies, she feels proud of their professional development. This, in her view, is one of the most rewarding parts of her job.

The other most rewarding part of Dr. Keirstead's job is hearing that the medicines that she and her team helped develop have been approved. Both of Dr. Keirstead's parents suffered from cancer and passed away at a relatively young age. At that time, there were no effective treatments for her father's carcinoma. Now, she is part of a team that has brought forward a drug that has shown benefit in treating that very disease, and perhaps could have helped her father had it been available. She is so happy for those families who, because of her work, won't have to lose their fathers to the same illness that she lost hers to. Each day that she goes to work, she knows that her research has the potential to improve the lives of people around the world.

Dr. Keirstead's advice for students and trainees of all levels would be to reach out to your network, even to people that you might not even think are part of your network! While she was still working in academia, she recalls flying on her own to a meeting about experimental biology in the United States. She did not know anyone there, but was aware that one researcher who was attending was an Alma Mater of the University of Guelph as well. She reached out to him on a whim and he was extremely welcoming. He gave her a tour of his laboratory (he worked for a large pharmaceutical company in the area) and provided her first exposure to what a career in industry might really look like. Dr. Keirstead encourages trainees to take advantage of opportunities when they arise, even if they fall outside of your comfort zone. Don't be afraid, learn as you go, and trust that you will grow exponentially as long as you are motivated and interested in the work you're doing.



So what's next for Dr. Keirstead? The sky is the limit! Even outside her area of expertise, if she recognizes an area where she thinks she can have an impact, do something in a new way, or improve something, she enjoys taking on the challenge. Although she has a demanding day job, she still finds time to work on other projects about which she is passionate.