Focus on Faculty # 71
Caroline Reinhold

Dr. Caroline Reinhold is Professor and Interim Chair of the Department of Medical Imaging, and an Associate Member of the Gerald Bronfman Department of Oncology and the Departments of Experimental Surgery and Obstetrics & Gynecology. Dr. Reinhold has served as Associate Chair of Research since 2015. She is also Co-Director of the Augmented Intelligence Precision Health Laboratory (AIPHL) of the MUHC RI.

Dr. Reinhold was born in Zurich, Switzerland, the second of four children. As CFO for Big Pharma, her father had a strong interest in the health sciences, a passion which he transmitted to his children. The wish to experience other cultures and to broaden the children's education motivated the family to immigrate to Montreal, Canada. Due to a number of unfortunate circumstances, the first 10-years in Canada brought financial hardship for the family and the older children were asked to provide help when they were not attending school. These formative years were instrumental in shaping her later life resulting in a strong work ethic, pursuit of excellence, dedication to family and empathy for the hardship of others. Although her academic career has been extremely rewarding and she is grateful to the many mentors who have positively impacted her career, her most fulfilling life experience was the birth of her two children. They have kept her grounded and are a constant ray of sunshine in her life.

Dr. Reinhold obtained her medical degree and post graduate training in Diagnostic Radiology from McGill University. She subsequently undertook fellowship training in advanced Ultrasound techniques and Body MRI at Yale University, one of only three programs in North America at the time. On completion of her fellowship, she was offered a staff position at Yale University which she turned down to accept a position at the McGill University Health Centre. A successful recipient of the GE-AUR scholarship award early on in her career, she returned to McGill as a full-time student, while continuing to work, to obtain a Master's Degree in Epidemiology and Biostatistics in 2000.

Her research interests and expertise lie in interpretation of body cross- sectional imaging, with a particular emphasis in multi-parametric MRI for disease stratification and outcome prediction.

Her deep understanding of magnetic resonance imaging (MRI)'s complex technology, her innate curiosity and dedication to the well-being of her patients allowed her to see the potential of this technology for various clinical indications. Dr. Reinhold and her team were one of the first worldwide to recognize the potential of high resolution heavily T2-weighted sequences to generate MRI cholangiopancreatography (MRCP), a technique which has revolutionized the way radiologists and gastroenterologists image the biliary tree and as a result has been incorporated into standard clinical care. She is also a world leader in the applications of MRI for the study of uterine and ovarian diseases and currently is the Chair of the O-RADS MRI (Ovarian -Adnexal Reporting & Data System) committee of the American College of Radiology. Her interest in translational clinical research has more recently been focused on the development of Artificial Intelligence algorithms in combination with a priori expert knowledge, to predict tumour gene expression, response and outcomes. As an active member of the Canadian Association of Radiologists (CAR) Artificial Intelligence Working Group, she has been a strong advocate for research to improve cancer care while protecting the privacy and rights of patients. During her career, she has received research funding from multiple agencies and has published over 280 peer-reviewed publications including book chapters.

Dr. Reinhold is a strong advocate for the peer-review process and is a reviewer for numerous scientific journals. In addition, she served as Deputy Editor for *JMRI* and *Radiology*. She currently Chairs the Standing Committee of the *CARJ*, whose role it is to support the strategic development of the *CARJ*.

An enthusiastic educator, she has given over 100 invited lectures nationally and internationally and currently serves on the Annual Program Committee Executive of the Radiological Society of North America, a society that hosts over 60,000 attendees at its Annual Meeting in Chicago, IL. In addition, she served as the Annual Program Chair for the International Society of Magnetic Resonance in Medicine and has had the opportunity to sit on its Board of Trustees from 2006-2011. Dr. Reinhold is a recipient of numerous awards, including the RSNA Honoured Educator award and ISMRM's Outstanding Teacher Award. She received the Prix d'innovation et d'excellence Dr. Jean A. Vezina Award from the Société Canadienne Français de Radiologie in 2009 and the Young Radiologist Award for Outstanding Achievement in the Radiological Sciences from the Canadian Association of Radiologists in 2001.

A strong advocate for mentoring the next generation of radiologists, Dr. Reinhold has mentored over 60 trainees, graduate and undergraduate students. As Associate Chair of Research she has helped develop a course in Biostatistics and Epidemiology specifically tailored to radiology resident trainees. Similarly, she led the development the MRI physics course for radiology trainees in conjunction with Dr. Ives Levesque. As co-director of AIPHL with Dr. Reza Forghani, she has participated in outreach programs for local high-school and CEGEP students. She has also participated in international outreach programs with the help of the many dedicated radiology faculty at the MUHC.

Dr. Reinhold's spare time is dedicated to her family and giving back to the community. She enjoys weekend walks with the family pets, watching the children's competitive sport matches, cooking gourmet meals and traveling with the family, in particular skiing the Swiss Alps. When time permits, she loves to curl up with a suspense novel.