

Congratulations / Félicitations



Megan K. Levings, PhD
Professor, Department of Surgery and School of Biomedical Engineering, University of British Columbia; Head, Childhood Diseases Theme, BC Children's Hospital Research Institute

The 2025 CSI – Bernhard (Hardi) Cinader Award Recipient

Presentation: “Regulating human immunity”

During her B.Sc. at Simon Fraser University, Dr. Megan Levings started her career through summer research projects with Dr. James Price, who was studying signalling pathways in drosophila. This experience sparked her interest in genetics and she subsequently pursued graduate training with Dr. John Schrader, in the genetics program at the University of British Columbia. Here she studied cytokine receptors and signalling pathways and attended many Canadian Society for Immunology meetings. After obtaining her PhD in 1998, she joined Dr. Maria Grazia Roncarolo's lab in Milan, undertaking postdoctoral training in the area of immune regulation. During this time, she worked with human cells to define what we now know as regulatory T cells (Tregs), and characterized their potential to be used as cellular therapy to stop harmful immune responses. Dr. Levings was recruited back to UBC in 2003, joining the Department of Surgery as a Tier II Canada Research Chair in Transplantation. In 2011 she moved her lab to the BC Children's Hospital Research Institute where she now heads the Childhood Diseases Research Theme, is a Tier I Canada Research Chair in Engineered Immune Tolerance, and leads a vibrant group of trainees and staff.

Dr. Levings studies the biology and application of Tregs as a cellular therapy to diminish the need for immunosuppression in transplantation and autoimmunity. Her lab made a major advance in the use of chimeric antigen receptor (CAR) technology to re-direct Treg specificity, leading to clinical trials of CAR Tregs in transplantation, and work to create 'designer' Tregs for application in a variety of diseases. She also pursued thymus-derived Tregs as a new therapeutic cell source, laying the foundation for the first clinical trial of Treg therapy in Canada. To bolster Canada's capacity to generate cell therapy products, she is leading a 64M\$ CFI-funded project to build a good manufacturing facility in at UBC. Work to study interactions between Tregs and Th17 cells led to multiple clinical trials of ustekinumab (anti-IL12/23 p40 antibody) to delay type 1 diabetes progression, with her lab leading pivotal biomarker studies. Her passion for human immunology inspired her to lead the CIHR-funded Canadian Autoimmunity Standardization Core, which has several ongoing, cross-Canada initiatives for harmonization of, and training in, human immune assays.

Dr. Levings has published >190 papers and won numerous awards, including the Canadian Society for Immunology New Investigator (2009) and Investigator (2018) Awards, the YWCA Woman of Distinction, Science, Research & Technology Award (2020), the Simon Fraser University Outstanding Alumni Award (2022) and the UBC Distinguished Researcher Award (Basic/Foundational) (2022). To date she has mentored 29 graduate students, 16 post docs, and >30 undergraduate students. She has served on multiple peer-review, society, government, and advisory committees, and is currently President Elect of the Federation of Clinical Immunology Societies (FOCIS).

While not thinking about Tregs, Dr. Levings enjoys cooking, gardening, cross-country skiing and travelling.