Congratulations / Félicitations

Claude Perreault, M.D., F.R.C.P.(C)
Principal Investigator, Immunobiology Research Unit, IRIC; Professor, Department of Medicine, Faculty of Medicine, Université de Montréal; Hematologist, Maisonneuve-Rosemont Hospital

The 2017 CSI – Hardy Cinader Award Recipient
Presentation: "Know Thyself"

After completing his training in hematology (Université de Montréal), then in immunogenetics (Université Paris VI), Claude Perreault came back to Université de Montréal and began his career at Hôpital Maisonneuve-Rosemont (HMR). At HMR, he founded the HLA typing lab and became a pioneer of bone marrow transplantation in Canada. After serving as scientific director of the HMR research center for ten years, he moved and became in 2003 one of the founding members of the Institute for Research in Immunology and Cancer (IRIC) where he currently holds the Canada Research Chair in Immunobiology. Claude has received awards from the Association Francophone pour le savoir (Léo-Pariseau Award), the Canadian Academy of Health Sciences, the Club de Recherche Clinique du Québec (Michel-Sarrazin Award) and the Leukemia & Lymphoma Society of Canada (Murray Margarit Memorial award).

Throughout his career, Claude has been primarily a T-cell biologist. He has studied T-cell development, the nature of T-cell ligands and the role of T cells in transplantation and cancer immunology. He is best known for his work on the immunopeptidome, the repertoire of MHC-associated peptides (MAPs) that define our immune self. With his colleagues Pierre Thibault (chemistry) and Sébastien Lemieux (bioinformatics), he has found that the immunopeptidome is more plastic than previously anticipated, and is molded by several cell-intrinsic and cell-extrinsic factors. They have also reported that MAPs presented by different HLA alleles originate from discrete genomic hotspots that display distinctive features amenable to predictive modeling. In addition, they discovered that a large proportion of MAPs originate from allegedly noncoding genomic sequences or exonic out-of-frame translation. Claude believes that these notions are important in the quest for cancer vaccines based on tumor-specific antigens. In the special context of allogeneic bone marrow transplantation, eradication of hematologic cancers can be achieved by targeting polymorphic MAPs (AKA minor histocompatibility antigens-MiHAs). With his HMR colleagues (Denis-Claude Roy and Jean-Sébastien Delisle), Claude has recently defined the global repertoire of MiHAs presented by common HLA alleles, and they have launched in January 2017 a Phase I multicenter trial of MiHA-targeted leukemia immunotherapy.

Because Claude is a big fan of large scale "systems biology" approaches, collaborations with colleagues in genomics, chemistry and bioinformatics occupy an important place in his research program. Most of all, Claude very much enjoys working with his graduate students and postdocs, and helping them to develop the most important assets in research: rigor and creativity.