



Congratulations / Félicitations

***Michael Grant, PhD
Professor of Immunology, Division of BioMedical
Sciences, Faculty of Medicine, Memorial University***

The 2018 CSI – Hardy Cinader Award Recipient

Presentation: “Edge to edge, look straight ahead”

Michael Grant was born and raised in the once small British Columbia lower mainland city of Langley. He attended the University of BC (UBC), earning a BSc in biochemistry and MSc in Microbiology and Immunology. Before beginning MSc studies, Michael worked for 6 years as a rheumatology research assistant at UBC extracting and analyzing proteoglycans from the cartilage of healthy and arthritic knees. This work, among other things, inspired his interests in immunology and in joint preservation. These interests continue to provide rewarding intellectual and physical challenges to this day. His MSc was under the supervision of Dr. Geoffrey Hoffmann, an immunologist with a background in theoretical physics. Dr. Hoffmann trained with Niels Jerne and developed the “symmetrical” immune network theory to explain the critical immunological concepts of the time, which then were largely lumped under the heading of suppression. As an MSc student, Michael worked on a project linking development of acquired immune deficiency syndrome (AIDS) to production of a particular class of putatively disruptive idiotypes within the immune response against human immunodeficiency virus (HIV). After completing his MSc, Michael went to McMaster University to do a PhD with Dr. Kenneth Rosenthal, a viral immunologist who had trained with Rolf Zinkernagel. While his PhD project began with a relatively conventional analysis of cytotoxic T cell (CTL) responses against HIV, an unexpected finding that HIV-infected individuals had CTL that selectively killed uninfected CD4⁺ T cells proved more exciting and directed his interest back towards a more controversial perspective on the pathogenesis of AIDS. This interest was reinforced when a monoclonal anti-idiotypic antibody developed against HIV-specific immunoglobulin by Heinz Kohler and Sybille Muller selectively inhibited the CTL-mediated killing of uninfected CD4⁺ T cells.

Thus, Michael’s postdoctoral project involved working with Drs. Hoffmann, Muller, Kohler, a biotech start-up and investigators at the Yerkes primate centre to develop an animal model of HIV infection in which the anti-idiotypic antibody could be tested as a therapeutic. After completing his postdoc, Dr. Grant accepted a position in the Faculty of Medicine at Memorial University of Newfoundland. Level 3 biohazard facilities built for his lab allowed him to establish an independent research program studying the immunology of HIV infection with an interdisciplinary group of collaborators. With advances such as highly active antiretroviral therapy to effectively control HIV infection, his research evolved to address emerging issues around the interface between drug resistance and immunology and novel means to combat immune exhaustion. His now long-term study cohort is optimally characterized to investigate the role of cytomegalovirus infection in immune senescence, accelerated aging and in adaptation of the natural killer cell repertoire in the context of chronic HIV infection.

Dr. Grant has been active as a council member with both the Canadian Society for Immunology and Canadian Association for HIV Research (CAHR), recently serving as CAHR president. He has worked extensively as a committee member and now scientific officer on the CIHR Virology and Viral Pathogenesis and Immunology and Transplantation panels, chaired the CIHR HIV/AIDS Research Advisory Council and served on the Ministerial Advisory Council on HIV. Married with two adult children, Michael enjoys hockey, swimming and snowboarding.