

Dawn Bowdish

Associate Professor, Pathology and Molecular Medicine at McMaster University

Hamilton, ON, CA

Understanding why changes in immunity that occur with age and how this predisposes us to infection and chronic inflammatory diseases.

Biography

Dr. Dawn Bowdish is an Associate Professor at McMaster University and a Canada Research Chair in Aging & Immunity. Dr Bowdish did her PhD at the University of British Columbia with Prof. Bob Hancock where she studied the anti-infective properties of antimicrobial peptides. This work led to a patent and the formation of a small biotech company. She did her post-doctoral work with Prof. Siamon Gordon at the University of Oxford and studied how macrophages recognize the Mycobacterium tuberculosis. She started her lab at McMaster University (Hamilton, ON) in 2009 where her team of post-doctoral fellows, undergraduate and graduate students study how macrophages recognize and destroy Streptococcus pneumoniae, the major cause of pneumonia in the elderly. Using a combination of animal models and human samples her lab has is uncovering how ageing, and age-associated inflammation affects the development of myeloid cells, which ultimately impairs monocyte and macrophage function and how the microbiota of the upper respiratory tract becomes permissive to Streptococcus pneumoniae colonization with age. She has published over 80 manuscripts, review articles and book chapters. She has won a number of early career awards including the Pfizer-ASPIRE award and the G. Jeannette Thorbecke Award from the Society of Leukocyte Biology. She has received funding from the CIHR, NSERC, ORF, NIH, the Labarge Optimal Aging Initiative and the Lung Association to understand why the elderly are susceptible to pneumonia and to develop novel preventative therapies. She sits on the Board of Directors of the Ontario Lung Association and advocates to increase research funding for lung health and advocates for a comprehensive Lung Health Action Plan for Ontario.

Areas of Expertise

Immunology, Microbiome , Immunosenescence, Aging Immune System, Pneumonia, White Blood Cells, Macrophages, Inflammation and Disease, Host-Microbe Systems , Lung , Lung infection, Aging and Elderly, Vaccination, Vaccine Research, Probiotics

Education

University of Guelph

BSc Microbiology

University of British Columbia

PhD Microbiology & Immunology

University of Oxford

Post-doctoral fellowship Immunology

Accomplishments

Canada Research Chair in Aging & Immunity

As the CRC in Aging and Immunity, Dr. Bowdish investigates what makes the elderly vulnerable to pneumonia, how age-associated inflammation, chronic inflammatory diseases and how the anti-bacterial immunity changes as we get older. By understanding the aging immune system she hopes to discover novel treatments to protect older adults from infection and that improve their immune function..

[Please click here to view the full profile.](#)

This profile was created by [Expertfile.](#)