**Multiple versions below….**

**Kids**

Dr. Dawn Bowdish wants to know why we get sick and how we get better. She and her team of scientists study how immune cells called macrophages decide which germs are good for us and which ones are bad for us and need to be destroyed.

**En français:**

La recherche de Dawn Bowdish porte sur les changements subits par le système immunitaire au cours du processus de vieillissement, et les impacts que ces changements ont sur la santé d’une personne vieillissante et leur risque d’infection. Avec l’aide de son équipe, Dawn vise à découvrir l’interaction entre le système immunitaire vieillissant et les microorganismes qui vivent à l’intérieur ainsi qu’à l’extérieur de nos corps afin de prévenir les infections et de permettre la population plus âgée de vivre plus longtemps de façon indépendante. Elle est la Chaire de recherche du Canada sur le vieillissement et l’immunité.

**<50 words**

Dr. Dawn Bowdish is a Professor (Master University) and the Canada Research Chair in Aging & Immunity. Her lab studies how the microbiota and the innate immune system change with age and how these changes impact healthy/unhealthy aging and increase susceptibility to pneumonia and COVID-19.

**<70 words**:

Dawn Bowdish studies how the immune system changes with age and how these changes impact healthy/unhealthy aging and susceptibility to infections. She and her team work to uncover how the aging immune system and the microbes that live in and on us (“the microbiota”) interact in order to prevent infections and give older adults more years of healthy, independent living. She is the Canada Research Chair in Aging and Immunity.

**Succinct (<125 words)**

**Dr Dawn Bowdish** is a Professor at McMaster University, the Canada Research Chair in Aging & Immunity and the Executive Director of the Firestone Institute of Respiratory Health. Her lab studies how age-associated inflammation alters monocyte and macrophage development and function and how this ultimately increases susceptibility to respiratory infections while decreasing the effectiveness to vaccines for pneumonia and COVID-19. Her team also studies how the aging immune system and the microbiome interact and how this can contribute to healthy or unhealthy aging. She runs the Preclinical Studies in Aging Laboratory ([www.psal.ca](http://www.psal.ca)), and is on the Board of Directors of the Lung Health Foundation where she advocates to increase research funding for lung health and to increase lung health in older adults.

**General:**

Dr Dawn Bowdish, PhD (Department of Medicine, McMaster University) is the Executive Director of the Firestone Institute for Respiratory Health, which is one of Canada’s largest respirology research institutes. In her role as Executive Director she supports the Firestone’s mission to improve the lives of those living with chronic lung disease through research, education and clinical service. Her research interests include understanding how the aging immune system contributes to risk of respiratory infections, interacts with the microbiome and alters vaccine responses. During the COVID-19 pandemic she has co-led Canada’s largest study of COVID-19 infections and vaccinations in older adults living in long-term care and retirement communities and her team’s research findings have helped shape Ontario’s vaccination policies. As a member of the Board of Directors of the Lung Health Foundation, she advocates for increased research into lung health and advocates for increased vaccination against respiratory infections especially in older adults and those living with chronic lung disease.

**Lay Public**

Dr. Dawn Bowdish is a Professor at McMaster University, the Executive Director of the Firestone Institute for Respiratory Health, and a Canada Research Chair in Aging & Immunity. Dr. Bowdish investigates the changes in the aging immune system that make older adults vulnerable to pneumonia and how the microbes that naturally live on us keep dangerous pathogens at bay. Her research team aims to discover novel treatments to protect older adults from infection by improving their immune systems and harnessing the power of the microbes that live on and in us (“the microbiome”) and to understand why the aging immune system does not respond as well to vaccinations for pneumonia and COVID-19. She also sits on the Board of Directors of the Lung Health Foundation and advocates to increase research funding for lung health.

**Long & numbery**

**Dr. Dawn Bowdish** is the Canada Research Chair (Tier 2) in Aging & Immunity and the Executive Director of the Firestone Institute of Respiratory Health. She started her laboratory at McMaster in 2009. 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 120 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 recognition for her teaching and mentorship in the form of the Department of Pathology’s “Best Teacher Award” and by a nomination from her trainees for the President’s Award for Excellence in Graduate Student Supervision. 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 Lung Health Foundation and advocates to increase research funding for lung health.

**Long & Scientific:**

Dr. Dawn Bowdish is a 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 100 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. During the COVID-19 pandemic she co-led Canada’s largest study of COVID-19 vaccinations and infections in long-term care and retirement communities. As the Director of the Firestone Institute for Respiratory Health she leads one of Canada’s strongest respirology research groups. She sits on the Board of Directors of the Ontario Lung Association and advocates to increase research funding for lung health. When she’s not pushing back the boundaries of science she’s pushing back the boundaries of patience raising two strong-willed children.

**Short:**

Dr. Dawn Bowdish is a Professor at McMaster University and the 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 white blood cells called macrophages recognize the bacteria that causes tuberculosis. She started her lab at McMaster 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. 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, NIH, NSERC, the Labarge Optimal Aging Initiative and two awards from 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 Lung Health Foundation and advocates to increase research funding for lung health. When she’s not pushing back the boundaries of science, she’s pushing back the boundaries of patience raising two strong-willed children.

**Shorter:**

Dr. Dawn Bowdish is a 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. She did her post-doctoral work with Prof. Siamon Gordon at the University of Oxford and studied how white blood cells called macrophages recognize the bacteria that cause tuberculosis. She started her lab at McMaster in 2009 where her team of post-doctoral fellows, undergraduate and graduate students study the process of macrophage phagocytosis, how macrophages influence the composition of the microbiome of the upper respiratory tract and how they recognize and destroy *Streptococcus pneumoniae,* the major cause of pneumonia in the elderly. 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. Her lab is funded by the CIHR, NSERC, the Labarge Optimal Aging Initiative and the Lung Association. When she’s not pushing back the boundaries of science she’s pushing back the boundaries of patience raising two strong-willed children.

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Dr. Dawn Bowdish wants to know why we get sick and how we get better. She and her team of scientists study how immune cells called macrophages decide which germs are good for us and which ones are bad for us and need to be destroyed.