

## CURRICULUM VITAE

**Dr. Dawn M. E. Bowdish**

*h-index = 63 (Google Scholar)*

### **Business Address:**

Department of Medicine  
McMaster Immunology Research Centre  
MG DeGroote Institute for Infectious Disease Research  
McMaster University, MDCL 4020  
1200 Main Street West  
Hamilton ON L8N 3Z5  
Tel: (+1) 905-525-9140, ext 22313  
E-mail: [bowdish@mcmaster.ca](mailto:bowdish@mcmaster.ca)

### **Educational Background:**

**2005 – 2008**



#### **Canadian Institute of Health Research Post-doctoral Fellow**

University of Oxford, Department of Pathology, Oxford U.K

Laboratory of Prof. Siamon Gordon

“Genetic and Functional Analysis of the scavenger receptor, MARCO”

**2000 – 2005**



#### **PhD. (Microbiology & Immunology)**

University of British Columbia, Dept. of Microbiology & Immunology Vancouver, Canada

Laboratory of Prof. R.E.W. Hancock

“Interactions of the human host defence peptide, LL-37 and the innate immune response”

**1995 – 1999**



#### **BSc. Honours (Microbiology)**

University of Guelph, Dept. of Microbiology, Guelph, Canada

Undergraduate project and summer studentship in the lab of Prof. J.S. Lam and supervised by Dr. Lori Burrows

“Genetics of the O-antigen of the O5 serogroup of *Pseudomonas aeruginosa*”

## Honours:

|               |  |
|---------------|--|
| 2022          | YWCA Hamilton & Halton – Woman of Distinction, Health & Recreation   |
| 2022          | Meritorious Service Award – Lung Health Foundation   |
| 2020          | Royal Society of Canada -College of New Scholars   |
| 2019-2024     | Canada Research Chair in Aging & Immunity (Tier 2, renewed)  |
| 2019          | McMaster Student's Union (MSU) Community Engagement Award  |
| 2018-2022     | University Scholar   |
| 2016-2017     | Breathe New Life Award – Top rated grant in the Ontario Thoracic Society/Ontario Lung Association's Grant in Aid program                                     |
| 2014-2019     | Canada Research Chair in Aging & Immunity, Tier 2  |
| 2014          | Best Teacher Award from the Department of Pathology & Molecular Medicine   |
| 2013          | Nomination for the President's Award for Excellence in Graduate Student Supervision  |
| 2012          | Ontario Lung Association-Pfizer Canada Research Award  |
| 2011          | G. Jeanette Thorbecke New Investigator Award, Society of Leukocyte Biology   |
| 2010          | ASPIRE, Pfizer Young Investigator Award for study of post-influenza pneumonia in the elderly   |
| 2006 – 2008   | JMH Junior Research Fellowship awarded by Linacre College at the University of Oxford  |
| 2006          | Cangene Gold Award, Awarded by the Canadian Society of Microbiology for the highest ranked PhD thesis in Microbiology  |
| 2005 – 2008   | Post-doctoral Fellowship awarded by the Canadian Institutes of Health Research   |
| 2003 – 2005   | Canada Graduate Scholarship awarded by the Canadian Institute of Health Research   |
| February 2005 | Honorarium for having abstract chosen to present at the Innate Immunity in Human Disease Research Day: BC Research Institute for Children's & Women's Health |
| November 2004 | Travel Allowance awarded by the International Endotoxin Society<br>8th Biennial Conference of the International Endotoxin Society,<br>Kyoto, Japan           |

## Current Status at McMaster University:

|   |   |
|---|---|
| <b>August 2021-</b>                     | <b>Executive Director, Firestone Institute for Respiratory Health</b><br>St. Joseph's Healthcare<br>McMaster University   |
| <b>January 2021-</b>                    | <b>Professor, Tenured</b><br>Department of Medicine<br>MG DeGroote Institute for Infectious Disease Research<br>McMaster Research Immunology Centre<br>"Innate immunity and host-microbe interactions across the life course" |
| <b>July 1, 2025 –<br/>June 30, 2030</b> | <b>Associate Member</b><br>Department of Biochemistry and Biomedical Sciences   |

Updated 2024-12-11

Page 2

**July 1, 2019-2020**

**Professor, Tenured**

Department of Pathology & Molecular Medicine  
MG DeGroote Institute for Infectious Disease Research  
McMaster Research Immunology Centre  
“Innate immunity and host-microbe interactions across the life course”

**July 1, 2014 –  
June 30, 2019**

**Associate Professor, Tenured**

Department of Pathology & Molecular Medicine  
MG DeGroote Institute for Infectious Disease Research  
McMaster Research Immunology Centre  
“The role of macrophage receptors in innate immunity and host defence”

**February 1, 2009 –  
June 30, 2014**

**Assistant Professor, Tenure-Track**

Department of Pathology & Molecular Medicine  
MG DeGroote Institute for Infectious Disease Research  
McMaster Research Immunology Centre  
“The role of macrophage receptors in innate immunity and host defence”

**Professional Organizations:**

Canadian Thoracic Society  
Canadian Society for Immunology  
American Society for Immunology

## **Employment History:**

### *Academic*

August 2021 – ongoing: Executive Director, Firestone Institute for Respiratory Health  
January 2021- ongoing: Professor, Department of Medicine, McMaster University, Hamilton, ON.  
July 2019- Dec 2020: Professor, Department of Pathology & Molecular Medicine, McMaster University, Hamilton, ON.  
July 2014- July 2019: Associate Professor, Department of Pathology & Molecular Medicine, McMaster University, Hamilton, ON.  
February 1, 2009- June 30, 2014: Assistant Professor, Department of Pathology & Molecular Medicine, McMaster University, Hamilton, ON.

## **Scholarly & Professional Activities:**

### *Professional development*

#### Attended:

- Accessibility for Ontarians with Disabilities Act (AODA) – August 2025
- San'yas Indigenous Cultural Safety training, September – December 2024
- Equitable Recruitment & Search/Selection Committee. January 22, 2021
- EnGender Workshop by The Executive Minds Inc. January – June 2018. This cross-faculty leadership training course addresses how change management, leadership styles and strategies for achieving professional goals.
- The Faculty of Health Sciences Leadership Management course 2016-2017
- The Emotionally Intelligent Manager: Ontario Hospital Association. November 25-27, 2015.

#### Completed:

- “R Basics – R programming Language Introduction” online course. Udemy July, 2016

### *Journal Referee (ad hoc)*

Thorax, Cell Host & Microbe, Journal of Infectious Disease, PLoS Pathogens, Journal of Leukocyte Biology, Molecular Therapeutics, Mucosal Immunology, Frontiers in Immunology, American Journal of Respiratory Cell and Molecular Biology, American Journal of Respiratory and Critical Care Medicine, Journal of Immunology, PLoS ONE, Journal of Innate Immunity, Journal of Royal Society Interface, Journal of Inflammation, Infection & Immunity, American Journal of Physiology, Molecular Autism and others

### *Journal Editor*

- Immunity & Ageing Journal (2019-ongoing)

### *Guest Editor*

- Guest editor for special issue entitled “Bioinformatics for Immunologists” of Frontiers in Immunology (2014-2015)

### *Internal Grant Reviews (Local)*

- Research Institute of St. Joseph's Hamilton Research Awards (2021, 2022, 2023, 2024)

### *External Grant Reviews (Canadian)*

- CIHR Microbiology & Infectious Disease Panel
  - Chair November 2022, May 2025
  - Scientific Officer December 2017, March 2018, December 2019, August 2020,
  - Reviewer for Project/Operating Grant program May 2013, 2023

- Canada Research Chair (ongoing, ad hoc)
- NSERC Discovery Grant Competition (Jan 2011, 2013, 2016, -2024)
- Respiratory Research Committee of Saskatchewan (2021)
- CIHR College of Reviewers (2017-ongoing)
- The Lung Association (Basic Science panel, March 2014, 2018, 2019)
- Banting Research Foundation (2016-2019)
- CIHR (Biomedical Sciences, Institute of Aging) (2014)
- Multiple Sclerosis Society of Canada (Operating Grant competition, Jan 2011 & 2013)

#### *External Grant Reviews (International)*

- British Society for Research on Aging (2025)
- UKRI (2024)
- Austrian Science Foundation (2024)
- Yale Pepper Geroscience New Investigator awards (ad hoc reviewer 2023)
- Hemolz Distinguished Professorship, Germany 2022
- NIH Program Grant – PO3, 2021
- Reta Lila Weston Trust (Microbiome & Brain Health grants, 2020)
- Irish Science Foundation (Ireland) (2016, 2017, 2019, 2020)
- Rosetrees Trust (2020)
- Dutch Research Council (2020)
- Biotechnology & Biological Sciences Research Council (UK) (2014, 2015, 2018)
- NIH – Project Program Grant (2017, 2018)
- Medical Research Councils UK (2016, 2017)
- Scottish MRC – MIDAS-RTI (2017)
- Fondazione Cariplo, Italy (2016)
- ANR (Agence Nationale du Recherche), France (2012, 2016)
- Israeli Science Foundation (2014)
- Asthma UK (2012)

#### *Contributions to Scientific Societies*

##### Board of Directors, Lung Health Foundation (formerly Ontario Lung Association) (June 2015-ongoing)

Major initiatives include;

- i) Development of the “National Lung Health Agenda”, which is a plan to create a federal action plan to improve lung health in Canada
- ii) Built new pillars of research and investment to align with changing demographics of lung disease and changes in philanthropic giving.
- iii) Oversaw the transition from a federated association to the Lung Health Foundation, including creating the Lung Health Foundation Advisory Board.
- iv) participating in the “Breathing as One” campaign, designed to increase research funding for lung health by 10-12 million in the next 5 years. (2014-present)
- v) Advocating for Bill 71: Lung Health Act, a private members bill to create a lung health action plan for Ontario (2014-present).
- vi) spokesperson for International Pneumonia Day 2017, 2018 and the vaccination campaign for pneumococcal pneumonia.

<https://www.facebook.com/OntarioLungAssociation/videos/596521740766963/>

- vii) Strategic Directions Committee (2016-ongoing): Oversees strategic investments, develops and approves new initiatives, assesses changing demographics of lung disease to best target initiatives

Scientific Advisory Board – British Society for Research on Ageing (2023-ongoing)

Organizing committee for the 2020 International Symposium on Pneumococci and Pneumococcal Diseases (ISPPD), Toronto, Ontario. (postponed to 2022 due to COVID-19)

Organizing committee for the International Infection, Immunity and Inflammation Conference (I4C) May 14-15, 2019, Vancouver, BC Canada

Discussion Leader at the 2019 Gordon conference on Antimicrobial peptides (Barga, Italy) and 2020 Gordon Conference on Acute Respiratory Infections (Galveston, Texas)

Vice-chair of the 2016 Gordon conference on Acute Respiratory Infections (Galveston, Texas)

co-Chair of the 2018 Gordon conference on Acute Respiratory Infections (Ventura, California)

Scientific Advisory Board, “Exploiting plant-made vaccines to protect the elderly against respiratory viruses”  
Génome Québec / le Ministère de l'Économie, de la Science et de l'Innovation (2017-2019)

Executive committee of the Ontario Thoracic Society (2018-2022)

#### *Consulting*

COVID-19 Strategic Consulting Group (SCG)- AstraZeneca Global (2022-ongoing)  
-received honorarium to provide insights into vaccination strategies for COVID-19 and other respiratory viruses

Pfizer Global “*Shaping the COVID-19 Vaccination Recommendation Landscape*” Advisory Board  
May 30-31<sup>st</sup>, 2024  
-received honorarium to provide insights into COVID-19 vaccination strategies

Pfizer “Pfizer Global Adult PEGASUS” April 16, 2024  
-received honorarium to provide insights into pneumococcal vaccination strategies for adults

Ontario Immunization Advisory Group, December 2021 (unpaid).  
-shared data on vaccine efficacy in long-term care and retirement home residents and made recommendations for 4<sup>th</sup> doses to assist with the omicron wave. These recommendations were shared with the Public Health Agency of Canada and implemented in January 2022. “COVID-19 Vaccine Recommendations in the Context of the Omicron Variant, 23 December 2021”  
<https://cm.publichealthontario.ca/>

[/media/documents/ncov/vaccines/2021/12/covid19-vaccine-recommendations-omicron-variant.pdf?sc\\_lang=en](/media/documents/ncov/vaccines/2021/12/covid19-vaccine-recommendations-omicron-variant.pdf?sc_lang=en)

Pfizer Advisors and Vaccine Experts (PAVE), 2019

-received honorarium to provide insights into pneumococcal vaccination strategies.

Qu-Biologics (Vancouver, Canada) 2013-2017

Miami Mice (Toronto, Canada) 2014-2015

## **Administrative Responsibilities: Committee Membership**

### *University*

- IIDR Executive Committee (2015- ongoing)
- Global Nexus Executive Committee (2023-ongoing)
- Canada's Global Nexus for Pandemic Preparedness and Biologic Threats – Task Force Chair (2021-2023)
- FHS Equity, Diversity & Inclusion (2019-2022)
- Braley Centre for Antimicrobial Resistance Executive Committee (2019-2022)
- Assistant Director IIDR - Training(2019-2021)
  - Major contributions include developing the Braley Fellows program in antimicrobial resistance
- CFI Infrastructure internal review committee (2016)
- Animal Research Ethics Board member (2014-2017)
- Focus Group on Identification and Support of Emerging Leaders at the Assistant and Associate Professor Levels (2014-2017)
- Graduate Council Scholarships Member: Rank scholarships for OGS, NSERC, CIHR (Oct 2010 – Aug 2013)

### *Department*

- Institute for Infectious Disease Research Symposium/Trainee Day Organizing Committee – 2010, 2018, 2019
- Tenure & Promotion Committee – Pathology & Molecular Medicine, 2017-ongoing.
- MIRC communications committee 2013-ongoing
  - responsible for website design, content and social media activities
- Institute for Infectious Disease Research Communications Committee Aug 2013-Aug 2014
- Organizer of Trainee Poster Presentations and Awards: Michael G. DeGroote Institute for Infectious Disease Research Opening Symposium (October 24<sup>th</sup>, 2009)

### *Faculty*

- Chemistry Faculty Search Committee Oct-Dec 2018
- Judge for the FHS Post-doctoral Fellow Association Annual Presentation day (2018)
- Infection & Immunity Area Co-ordinator for the Medical Sciences Graduate Program (2012-2013).
- FHS Research Plenary Award Selection Committee: Selected graduate winners of awards presented at the Inaugural Faculty of Health Sciences Research Plenary (May 4<sup>th</sup>, 2010)
- Judge – Poster session: 1<sup>st</sup> Annual FHS Postdoctoral Research Day (June, 3<sup>rd</sup>, 2010)

- Judge – Student Award Symposium: Canadian Society of Microbiology 2010 Annual Conference (June 2010)

### **Areas of Interest:**

**Research:** COVID-19 infections and vaccinations, immunosenescence, macrophage biology, macrophage receptor expression, scavenger receptor and phagocytic receptor function and signalling, aging and immunity, innate immunity & host defence, bacterial colonization and infections (e.g. *Streptococcus pneumoniae*), animal models of pneumonia and post-influenza pneumonia, microbiome of the upper respiratory tract, pathogens & commensals of the upper respiratory tract

**Teaching:** immunology, innate immunity, host defence, immunosenescence, host-pathogen interactions

### **Courses Taught:**

### **Course Title**

#### *Undergraduate*

|              |  |
|--------------|--|
| NEXUS2A03    | Impact of Infectious Disease on Individuals and Society -Lecturer (2 lectures, 2024, 2025).                              |
| HTH SCI 4II3 | Advanced Immunology (Jan 2011-2019-ongoing) – Course co-ordinator (until 2020) & lecturer (ongoing, 3-4 lecturers/year ) |
| HTH SCI 3I03 | Immunology (Sept 2015-ongoing, 1 lecture/semester)   |
| HTH SCI 1DT3 | Introduction to Immunology (Jan 2014-ongoing, 2 lectures/semester)   |
| BDC4B03      | Commercialization planning (2017W)   |
| BDC3A03      | Road to Biomedical Discovery (November 2016, 2017)   |
| HTH SCI 4DM3 | Demystifying Medicine (Sept 2013-Dec 2013)   |

#### *Graduate Lectures:*

|         |  |
|---------|--|
| MS 722  | Health Science Communication (1 lecture per term 2022-ongoing) |
| MS 715  | Advanced Immunobiology (1 lecture per term 2010-2019)          |
| BBS 771 | Immunometabolism (1 lecture per term 2016-2019)                |

#### *Graduate Courses:*

|        |   |
|--------|---|
| MS 730 | Antimicrobial Resistance from principles to practice (2019 -2021) |
| MS 799 | Independent Study in Medical Sciences (2010 & 2012)               |

### ***External teaching***

|           |                        |  |
|-----------|------------------------|--|
| HLTH 400  | University of Waterloo | Interdisciplinary Perspectives on Aging (1 lecture, 2024,2025)                     |
| MICR 4010 | University of Guelph   | Bacterial Pathogenesis (1 lecture, January 2014, February 2015, and February 2016) |

### **Supervisorship:**

(For a complete list of awards and distinctions received by trainees see [www.bowdish.ca/people](http://www.bowdish.ca/people))

### **MSc (in progress)**

Eman Ranne (Medical Sciences)                      2024-ongoing    “Investigating hypomethylating agents to improve

Updated 2024-12-11



|  |              |  |
|--|--------------|--|
| Lachlan MacLean (Medical Sciences)   | 2023-ongoing | post-pneumonia cognitive decline.”<br>“Targeting macrophages to ameliorate pulmonary fibrosis”   |
| <b>MSc (completed)</b>   |              |  |
| Alice Caldwell (Medical Sciences)  | 2023-2025    | “Understanding how aging gut physiology impacts age-associated inflammation.”  |
| Dominika Boron (Medical Sciences)  | 2020-2022    | “Features of the upper respiratory tract microbiome associated with infection”<br><br>(Ontario Graduate Scholarship 2020/21, Award for best short talk at the Medical Sciences Graduate Program Virtual Research Day March 2021, CIHR Canada Graduate Scholarship 2021-2022, Selected talk for the Mildred Gulliver award competition – IIDR trainee day 2021) |
| Anastasia Chouvalov (Medical Sciences)   | 2019-2021    | “Early life adversity alters the aging trajectory”   |
| Diana Mirceta (U. Copenhagen)  | 2020-2021    | “Identifying members of the upper respiratory microbiota with anti-pneumococcal properties”  |
| Erica DeJong<br>(Ontario Graduate Scholarship 2019/20 Certificate of Excellence from the Summer Program in Aging, CIHR 2019) | 2018-2020    | “The microbiota and unhealthy aging”   |
| Grace Teskey   | 2016-2018    | “Peripheral immunophenotype is changed during autism spectrum disorder”  |
| Aveshni Naidoo   | 2013-2016    | “Age-associated inflammation impairs the anti-bacterial activity of macrophages”   |
| Netusha Thevaranjan  | 2014-2016    | “Age related changes in the microbiome of the URT predispose the elderly to <i>S. pneumoniae</i> infection”  |
| Nick Yap<br>(co-supervised with Brian Golding)   | 2014 – 2016  | “Phylogenetic approaches to characterize the evolution of pattern recognition receptors”   |
| Fiona Whelan   | 2010 - 2012  | “Evolution of the class A scavenger receptors”   |
| Zhongyuan Tu   | 2010 - 2012  | “Discovery of novel signalling motifs in the cytoplasmic domain of MARCO”  |
| Mariliis Kroos<br>(co-supervised with Prof. Siamon Gordon, University of Oxford)   | 2007- 2008   | “The role of the cytoplasmic domain of MARCO in adhesion and motility”   |

### **PhD (in progress)**

Hesam Hafezalseh (Medical Sciences)2024-ongoing “Uncovering the role of chronic inflammation in post-

|  |              |   |
|--|--------------|---|
| (co-supervised with Dr. C. Verschoor)  |              | pneumonia cognitive decline”  |
| Sofya Ermolina (Medical Sciences)<br>(Department of Medicine Graduate Student Incentive Program Award 2022/23, MIRA Graduate Student Professional Development 2022)  | 2021-ongoing | “The role of the microbiome in unhealthy aging”   |
| Nancy ElChaar (Medical Sciences)<br>(co-supervised with Dr. M. Surette)  | 2021-ongoing | “Identifying anti-pneumococcal features of the Upper Respiratory Tract”   |
| Kevin Zhao<br>(Medical Sciences, MD/PhD program)<br>(Winner of the McMaster Institute of Research on Aging Pitch Your Project “People’s Choice Awards” 2021, MIRA-IIDR PhD scholarship 2022, Ontario Graduate Scholarship 2022, First place PhD short presentation at the 8th Annual Perey Symposium 2022, CIHR-CGS-D-2023-2026) | 2021-ongoing | “TNF impairs macrophage killing of <i>Streptococcus pneumoniae</i> ”  |
| <b>PhD (completed)</b>   |              |   |
| Jenna Benoit (Medical Sciences)  | 2021-2025    | “COVID-19 vaccination efficacy in patients on immunomodulatory drugs”<br>(Ontario Graduate Scholarship 2022, Firestone Institute for Respiratory Health Travel grant to present selected abstract (oral presentation) at the Canadian Society of Immunology conference 2022, Poster award at the Canadian Society of Immunology 2022, McMaster Global Experiences Travel Award present chosen abstract at FOCIS 2022, Second place for best PhD presentation at the 2022 Perey Symposium) |
| Christian Bellissimo<br>(Ontario Graduate Scholarship 2017, Canada Graduate Scholarship-MSc 2018, Canada Graduate Scholarship Doctoral 2019, Best Poster Presentation in Placental Biology at the Canadian National Perinatal Research Meeting 2019)   | 2022-2024    | “Characterizing placentation during metabolic stress”   |
| Elnur Shayhidin (Medical Sciences)<br>(withdrawn due to COVID, currently industry)   | 2019-2021    | “TNF impairs macrophage killing of <i>Streptococcus pneumoniae</i> ”  |
| Jessica Breznik (Medical Sciences)<br>Current position: PDF (McMaster, Bowdish lab)  | 2016-2020    | “Peripheral Monocytes and Intestinal Macrophages during Chronic Inflammation”   |
| Sara Makaremi (Biomedical Engineering)<br>(co-supervised with Jose Moran-Mirabal)<br>Current position: PDF (US)  | 2014-2020    | “Structural requirements for macrophage adhesion”   |
| Pat Schenck (Biochemistry)<br>(co-supervised with Mike Surette)<br>Current position: Scientific Advisor, Research Foundation   | 2014-2019    | “The composition of the airway microbiota influences infection risk”  |
| Dessi Loukov (Medical Sciences)<br>Current position: Medical Science Liaison   | 2014-2018    | “Age-associated inflammation drives macrophage dysfunction and susceptibility to pneumococcal infection”  |

|   |             |  |
|---|-------------|--|
| Kyle Novakowski (Medical Sciences)<br>Current position: Industry (Canada)                                 | 2012- 2017  | “The importance of the scavenger receptor cysteine rich domain of MARCO in bacterial recognition & signalling” |
| Fan Fei (Chemistry)<br>Current position: Industry (US)  | 2013-2015   | “Metabolomic analysis of the inflammatory response macrophages from young and old mice”                        |
| Mike Dorrington (Medical Sciences)<br>Current position: Scientific Advisor,<br>Ontario Genomics Institute | 2010 – 2015 | “The role of MARCO in control of pneumococcal colonization of the nasopharynx”                                 |
| Alicja Puchta (Medical Sciences)<br>Current position: Lawyer  | 2010- 2014  | “Age associated macrophage dysfunction contributes to susceptibility to pneumonia”                             |

### **Post-doctoral (in progress)**

|              |              |   |
|--------------|--------------|---|
| Dr. Kémy Adé | 2023-ongoing | “Understanding the role of macrophage ontogeny in age-related lung disease” |
|--------------|--------------|---|

### **Post-doctoral (completed)**

|                     |           |   |
|---------------------|-----------|---|
| Dr. Jessica Breznik | 2020-2025 | “Immunologic predictors of COVID-19 risk in long term care” |
|---------------------|-----------|---|

(MIRA fellowship 2021-2022, Best PDF poster- IIDR Trainee Day 2021, Poster award in Maternal & Fetal Medicine at the 2022 Canadian National Perinatal Research Meeting)  
Current position: Faculty at the University of Guelph

|                  |           |   |
|------------------|-----------|---|
| Dr. Kate Kennedy | 2021-2023 | “Maternal-microbiome relationships in pregnancy and impact on offspring intestinal development” |
|------------------|-----------|---|

(Award for talk at the 2022 Canadian National Perinatal Research Meeting, Molly Towell Perinatal Research Foundation 2022)

|                  |           |   |
|------------------|-----------|---|
| Dr. Candice Quin | 2020-2023 | “Age-associated inflammation alters myelopoiesis” |
|------------------|-----------|---|

(CIHR Fellowship 2020-2023, Mildred Gulliver Post-doctoral fellow award 2021, Best poster at the IIDR trainee day 2020, Winner of the Perey Symposium postdoctoral fellowship award for best oral presentation 2022)  
Current position: Faculty at the University of Aberdeen

|  |           |   |
|--|-----------|---|
| Dr. Tatianne Ribeiro<br>(co-supervised with Dr. Deborah Sloboda,<br>MIRA & M. G. DeGroot Fellowship recipient) | 2019-2021 | “Early life adversity alters immune function” |
|--|-----------|---|

|   |           |   |
|---|-----------|---|
| Dr. Allison Kennedy<br>(co-supervised with Dr. Doug Boreham)<br>Current position: Research Associate (McMaster) | 2017-2020 | “Peripheral immune changes in prostate cancer patients undergoing low dose radiation” |
|---|-----------|---|

|  |             |   |
|--|-------------|---|
| Dr. Janine Strehmel<br>Current position: Industry (Toronto)  | 2016-2019   | “Mining the URT microbiota for novel antimicrobials”  |
| Dr. Cedoljub Bundalovic-Torma<br>(co-supervised with Dr. Mike Surette)<br>Current position: PDF – U of Toronto | 2018-2019   | “Age-related changes to the upper respiratory tract microbiota”   |
| Dr. Christian Schulz<br>(DFG fellowship recipient)<br>Current position: Industry (Germany)                     | 2016-2018   | “Host-microbiome interactions influence colonization and infection with <i>S. pneumoniae</i> ”                                  |
| Dr. Chris Verschoor<br>Current position: Faculty, HSNRI  | 2010- 2016  | “Age-associated myeloid cell immunosenescence contributes to susceptibility of the elderly to <i>Streptococcus pneumoniae</i> ” |
| Dr. Preethi Jayanth<br>Current position: Technician, U of Guelph   | 2011 – 2013 | Co-supervised with Dr. Mike Surette<br>“Mechanisms of host immune evasion by the <i>Streptococcus milleri</i> group”            |
| Dr. Peter Pelka<br>Current position: Faculty, U of Manitoba  | 2011 – 2012 | “Host immune responses to the microbiota of the upper respiratory tract”  |

### Undergraduate students

|                           |                 |   |
|---------------------------|-----------------|---|
| Isabela Gauch Gomes Viana | 06/2025-08/2025 | Honours Biochemistry (IIDR scholarship)                             |
| Michelle Wang             | 06/2025/08/2025 | BBS Summer Scholar  |
| Lauren Hui                | 05/2025-08/2025 | Life Sciences student   |
| Catharine Andary          | 09/2022 -2025   | Medical student   |
| Alizee Fieffe-Bedard      | 09/2024-04/2025 | Biology 4 <sup>th</sup> year thesis student                         |
| Humphrey Erizo            | 09/2024-04/2025 | Biology 4 <sup>th</sup> year thesis student                         |
| Sharon Okoromra           | 05/2024-07/2024 | BBS Summer student  |
| Amanda Densil             | 09/2023-04/2024 | 4 <sup>th</sup> year Project Student                                |
| Molly Health              | 09/2023-04/2024 | 4 <sup>th</sup> year Project Student                                |
|                           | 05/2023-09/2023 | NSERC USRA summer student   |
| Nikina Bear-Lowen         | 05/2024-07/2024 | BBS Summer student  |
| Aunika Venables           | 09/2023-04/2024 | iSci 4 <sup>th</sup> Project Student                                |
|                           | 01/2023-04/2023 | iSci 3 <sup>rd</sup> year project student                           |
| Minuki Wickramasuriya     | 05/2022-08/2022 | Co-op student   |
| Alexander Georgiou        | 01/2022-04/2022 | Co-op student   |
| Clare Edwards             | 09/2021-04/2022 | 4th year thesis student   |
|                           | 01/2021-08/2021 | Co-op student   |
| Ansha Suleman             | 09/2020-04/2021 | 4th year thesis student   |
| Kevin Dai                 | 09/2020-04/2021 | 4th year thesis student   |
| Christina Cerson          | 09/2020-04/2021 | 4th year thesis student (co-supervised with Dr. Jose Moran-Mirabal) |
|                           | 05/2019-08/2019 | NSERC Summer student (co-supervised with Dr. Jose Moran-Mirabal)    |

|                            |                 |   |
|----------------------------|-----------------|---|
| Alisa Nykolayeva           | 06/2020-12/2020 | Co-op student   |
| Maiura Maralitharan        | 09/2019-04/2020 | 4th year thesis student   |
| Kate Miyasaki              | 09/2019-04/2020 | 3rd year thesis student   |
| Sonia Igboanugo            | 08/2018-04/2019 | BDC 4th year student  |
| Danny Ma                   | 05/2018-04/2019 | NSERC USRA (Summer), BHSc thesis (Fall/Winter)  |
| Mina Sadeghi (Fall/Winter) | 05/2018-04/2019 | Biopharm thesis (Summer), Co-op   |
| Judjina Thevaranjan        | 01/2018-12/2018 | Co-op student (Winter/Summer semester), Thesis (Fall)                                     |
| Melodie Na-Yoon Kim        | 05/2017-09/2018 | 4th year BHSc student HTH SCI   |
|                            | 08/2018-04/2019 | 4th year BHSc student HTH SCI   |
| Dhanyasri Maddiboina       | 09/2017-04/2018 | iSci- 4th year thesis student   |
| Joseph Chong               | 09/2017-04/2018 | 4th year Biochemistry student   |
|                            | 09/2016-04/2017 | 3rd year Biochemistry student   |
| Sureka Pavalagantharajah   | 09/2016-04/2017 | 4th year BHSc   |
| Dhanyasri Maddiboina       | 09/2016-04/2017 | iSci-3rd year thesis student  |
| Jason Fan                  | 09/2016-04/2017 | 4th year BHSc   |
|                            | 09/2015-04/2016 | 3rd year BHSc HTHSCI3H03  |
| Mohammad Malik             | 05/2016-09/2016 | Biotechnology co-op student   |
| Melodie Na-Yoon Kim        | 05/2016-09/2016 | 3rd year BHSc student HTH SCI 3H03  |
| Jenny Sun                  | 01/2016-08/2016 | Biology & Pharmacology co-op student  |
| Justin Boyle               | 09/2015-04/2016 | Chemistry Senior Thesis student (co-supervised with Dr. José Moran-Mirabal)               |
| Thilini Delungahawatta     | 09/2015-04/2016 | Biology Senior Thesis student (Biol 4C09, co-supervised with David Rollo)                 |
| Vikash Chawla              | 09/2015-04/2016 | Biology Senior Thesis student (Biol 4C09)   |
| Alejandra Lagos            | 09/2015-04/2016 | Biology Senior Thesis student (Biol 4C09)   |
| Mohamad Malik              | 01/2015-08/2015 | Biotechnology co-op student   |
| Alan Zhou                  | 01/2015-04/2015 | iSci-3rd year thesis student  |
| Ben Su                     | 09/2014-04/2015 | Academic advisor for SCIENCE 3EX6 Applied Placement                                       |
| Melissa Ling               | 01/2014-04/2014 | iSci-3rd year thesis student  |
|                            | 09/2014-04/2015 | iSci- 4th year thesis student   |
| Dessi Loukov               | 01/2014-04/2014 | 4th year thesis student   |
| Philip Lauman              | 01/2014-04/2014 | iSci-3rd year thesis student  |
| Jessica Wallace            | 09/2013-04/2014 | Biology 4th year thesis student   |
| Robert Valencia            | 09/2013-04/2014 | Lab Co-ordinator  |
| James Han                  | 05/2013-04/2014 | iSci- 4th year thesis student (ISCI 4A12)   |
| Netusha Thevaranjan        | 05/2013-04/2014 | Undergraduate Technician, Summer student, Biology-4th year thesis student (Life Sci 4C09) |
| Charles Yin                | 09/2013-04/2014 | 4th year thesis student (ISCI 4A12)   |
|                            | 05/2012-08/2012 | iSci- 3rd year thesis student   |
| Prashant Kalvapalle        | 05/2013-08/2013 | MITACS summer studentship recipient   |
| Samathy Balachandran       | 01/2013-04/2013 | Pharmacology – 4th year thesis student  |
| Peter Mu                   | 08/2011-04/2013 | Undergraduate Lab Manager   |
| Keith Lee                  | 05/2012-04/2013 | BHSc- 4th year thesis student   |

|                |                 |  |
|----------------|-----------------|--|
| Jaskiran Nanda | 05/2011-08/2011 | Biology -Summer research student                 |
| Michael Danesi | 05/2011-08/2011 | Biology & Psychology –Summer Research            |
| Sarah Chauvin  | 06/2010-04/2011 | Biochemistry- 3rd year project & 4th year thesis |
| Harikesh Wong  | 07/2009-04/2010 | Biochemistry- 4th year thesis                    |
| Alex Jiang     | 06/2009-04/2012 | BHSc- 3rd & 4th year thesis                      |
| Zhongyuan Tu   | 05/2009-08/2010 | Biochemistry -4 <sup>th</sup> year thesis        |

### **Supervisory Committees (in progress)**

|                        |              |  |
|------------------------|--------------|--|
| Chuan Yu               | 2024-ongoing | MASc, Engineering (supervisor, Dr. R.Wylie)                              |
| Pareesa Ali            | 2024-ongoing | PhD, Medical Sciences (supervisor, Dr. R. Sehmi)                         |
| Kayla Zhang            | 2024-ongoing | MSc, Medical Sciences (supervisor, Dr. M. Mukherjee)                     |
| Elizabeth Ball         | 2023-ongoing | PhD, Medical Sciences (supervisor, Dr. J. Hirota)                        |
| Angela Schmidt         | 2023-ongoing | MSc, Medical Sciences (supervisor, Dr. J. Schertzer)                     |
| Sara Deir              | 2023-ongoing | MSc, Biomedical Engineering (supervisor, Dr. B. Zhang)                   |
| Quan Zhou              | 2023-ongoing | PhD, Medical Sciences (supervisor, Dr. M. Kolb)                          |
| Yona Tugg              | 2022-ongoing | PhD, Medical Sciences (supervisor, Dr. Matt Miller)                      |
| Nuzhat Rahman          | 2021-ongoing | PhD, Medical Sciences (supervisor, Dr. Charu Kausic)                     |
| Seyed Saeid Tabatabaei | 2021-ongoing | PhD, University of Guelph, Animal Sciences<br>(supervisor – Dr. Caswell) |
| Amber Hann             | 2020-ongoing | PhD, Biochemistry (supervisor – Dr. Verdú)                               |
| Marie-Ange Massicotte  | 2020-ongoing | PhD, Biochemistry (supervisor – Dr. Coombes)                             |
| Shawna Thompson        | 2016-ongoing | PhD, Psychiatry (supervisor – Dr. Foster)                                |

### **Supervisory Committees (completed)**

|                      |                    |  |
|----------------------|--------------------|--|
| Kyle Jackson         | 2021-2025          | PhD, Chemical Engineering<br>(supervisor – Dr. Housseini-Doust)            |
| Summer Cho           | 2020-2025          | PhD, Biochemistry (supervisor – Dr. Wright-MacNeil)                        |
| Anita Singh          | 2020-2022          | MSc, Biochemistry (supervisor – Dr. Schertzer)                             |
| Alex Qian            | 2016-2024          | PhD, Biochemistry (supervisor – Dr. Trigatti)                              |
| Zeina Saayfane       | 2022-withdrew 2023 | MSc, Medical Sciences (supervisor Dr. Hawke)                               |
| Anurag Bhalla        | 2020-2022          | MSc, Medical Sciences (supervisor – Dr. Nair)                              |
| Michael Huang        | 2020-withdrew 2022 | MSc, Biochemistry (supervisor – Dr. Schertzer)                             |
| Sabah Haq            | 2018-2022          | PhD, Medical Sciences (supervisor – Dr. Khan)                              |
| Christian Bellissimo | 2018-2022          | PhD, Biochemistry (supervisor – Dr. Sloboda)                               |
| Sarvatit Patel       | 2018-2022          | MSc, Chemical Biology (supervisor – Dr. Werstuck)                          |
| Josh McGrath         | 2016-2021          | PhD, Pathology (supervisor – Dr. Stampfli)                                 |
| Katherine Kennedy    | 2015-2021          | PhD, Biochemistry (supervisor – Dr. Sloboda)                               |
| Alexandra Parco      | 2020-2021          | MSc, Biochemistry (supervisor – Dr. Coombes)                               |
| Kaylyn Bacchiocchi   | 2020-2021          | MSc, Biochemistry (supervisor – Dr. Bramson)                               |
| Caressa Tsai         | 2017-2021          | PhD, Biochemistry (supervisor – Dr. Coombes)                               |
| Elizabeth Chau       | 2016-2021          | PhD, Biochemistry (supervisor – Dr. Coombes)                               |
| Mila Bjelica         | 2019-2021          | MSc, Kinesiology (supervisor – Dr. Obeid)                                  |
| Marcus Rose          | 2019-2020          | PhD, Physics & Astronomy<br>(supervisors – Dr. Fradin & Dr. Moran-Mirabal) |
| Inna Ushcatz         | 2019-2020          | MSc, Medicine (supervisor – Dr. Obeid)                                     |
| Blerina Kadiu        | 2019-2020          | PhD, Biochemistry (supervisor – Dr. Surette)                               |

|                         |             |  |
|-------------------------|-------------|--|
| David Hare              | 2013-2020   | PhD, Pathology (supervisor – Dr. Mossman)                |
| Ken Mwawasi             | 2015-2020   | PhD, Pathology (supervisor – Dr. Bramson)                |
| Trevor Lau              | 2015-2020   | PhD, Biochemistry (supervisor – Dr. Schertzer)           |
| Gayatri Nair            | 2018-2019   | MSc, Medical Sciences (supervisor – Dr. Surette)         |
| Alexis Bullock          | 2018-2019   | MSc, Kinesiology (supervisor – Dr. Heisz)                |
| Maryam Vaseghi-Shanjani | 2017-2019   | MSc, Medical Sciences (supervisor – Dr. Xing)            |
| Bushra Ilyas            | 2014-2019   | PhD, Biochemistry (supervisor – Dr. Coombes)             |
| Jeff Lam                | 2017-2019   | MSc, Pathology (supervisor – Dr. Kaushic)                |
| Ophélie Quillier        | 2016-2018   | Biochemistry (supervisor – Dr. Surette)                  |
| Vi Dang                 | 2014-2018   | PhD, Biochemistry (supervisor – Dr. Werstuck)            |
| Jenna Dowhaniuk         | 2015-2017   | MSc, Medicine (supervisor – Dr. Ratcliffe)               |
| Aric Huang              | 2016-2017   | MSc, Biochemistry (supervisor – Dr. Werstuck)            |
| Sohail Mahmood          | 2014-2017   | MSc, Pathology (supervisor -Dr. Ask)                     |
| Emily Paolucci          | 2016-2017   | MSc, Kinesiology (supervisor – Dr. Heisz)                |
| Brian Tuinema           | 2014-2017   | PhD, Biochemistry (supervisor – Dr. Coombes)             |
| Sara Dizzel             | 2015-2017   | MSc, Pathology (supervisor – Dr. Kaushic)                |
| Phil Staibano           | 2015-2016   | MSc, Medicine (supervisor – Dr. Nazi)                    |
| Michelle Mendonça       | 2011 – 2016 | PhD, Biochemistry (supervisor – Dr. Surette)             |
| Stacey Muise            | 2015 – 2016 | MSc, Radiation Medicine (supervisor – Dr. Boreham)       |
| Jessica Wallace         | 2015 – 2016 | MSc, Biochemistry (supervisor – Dr. Sloboda)             |
| Jane McBride            | 2015 – 2016 | MSc, Biochemistry (supervisor – Dr. Schertzer)           |
| Ashley Beaulieu         | 2015 – 2016 | MSc, Pathology (supervisor – Dr. Stampfli)               |
| Sarah Karampatos        | 2015 – 2016 | MSc, Rehabilitation Science (supervisor – Dr. Maly)      |
| Pamela Shen             | 2011 – 2016 | PhD, Pathology (supervisor – Dr. Stampfli)               |
| Karissa Giraldi         | 2013 – 2015 | MSc, Biochemistry (supervisor - Dr. Surette)             |
| Tatianna Wong           | 2013 – 2015 | MSc, Biochemistry (supervisor – Dr. Gilberger)           |
| Ken Mwasi               | 2013 – 2014 | MSc, Pathology (supervisor – Dr. Mahoney)                |
| Vi Dang                 | 2013 – 2014 | MSc, Chemistry (supervisor – Dr. McCarry/Britz-McKibbin) |
| Alexandra Ruyter        | 2011 – 2013 | MSc, Pathology (supervisor – Dr. Mahoney)                |
| Julie Kaiser            | 2011 – 2013 | MSc, Biochemistry (supervisor – Dr. Surette)             |
| Tamara Krneta           | 2010 – 2012 | MSc, Pathology (supervisor – Dr. Ashkar)                 |
| Elena Pretus            | 2010 – 2012 | MSc, Pathology (supervisor – Dr. Stampfli)               |
| Lauren Waller           | 2010 – 2012 | MSc, Biochemistry (supervisor – Dr. Coombes)             |
| Elspeth Smith           | 2010 – 2012 | MSc, Pathology (supervisor – Dr. Lichty)                 |
| Josip Marcinko          | 2009 – 2011 | MSc, Pathology (supervisor – Dr. Jordana)                |
| Devanghi Mehta          | 2009 – 2011 | MSc, Pathology (supervisor – Dr. Mossman)                |

#### **External Examiner - Comprehensive Examiner**

|                          |                |                     |
|--------------------------|----------------|---------------------|
| Sarah Deir (Engineering) | November, 2024 | McMaster University |
| Mikela Eng               | September 2020 | McMaster University |
| Danya Thayaparan         | April 2019     | McMaster University |
| Kyle Flannigan           | March 2014     | McMaster University |
| Varun Anipindi           | May 2012       | McMaster University |
| Bethany Heinrich         | July 2010      | McMaster University |
| Dannie Bernard           | June 2009      | McMaster University |

**Comprehensive Exam advisor**

|                         |               |                     |
|-------------------------|---------------|---------------------|
| Elizabeth Ball (MedSci) | June 2024     | McMaster University |
| Quan Zhou               | February 2024 | McMaster University |
| Alex Qian               | May 2019      | McMaster University |
| Ken Mwawasi             | June 2016     | McMaster University |
| Pamela Shen             | May 2013      | McMaster University |

**External Examiner- PhD Transfer**

|                                      |           |                     |
|--------------------------------------|-----------|---------------------|
| Sophie Pozanski (Pathology)          | May 2018  | McMaster University |
| Daphne Lamarchée (Biochemistry)      | Jun 2015  | McMaster University |
| Uyen Nguyen (Biochemistry)           | Apr 2013  | McMaster University |
| Brian Tuinema (Biochemistry)         | Feb 2013  | McMaster University |
| Leticia Gonzalez Jara (Biochemistry) | June 2012 | McMaster University |
| Carly Horvath (Pathology)            | July 2010 | McMaster University |
| Afia Aziz Ur Rehman (Medicine)       | Dec 2010  | McMaster University |

**Chair- PhD Transfer**

|                    |           |                     |
|--------------------|-----------|---------------------|
| John-Paul Oliveria | June 2013 | McMaster University |
|--------------------|-----------|---------------------|

**Chair- PhD Defence**

|                     |               |                     |
|---------------------|---------------|---------------------|
| Vidhyalakshmi Mohan | April 2024    | McMaster University |
| Hannah Stacey       | April 2023    | McMaster University |
| Dharneya Thayaparan | June 2021     | McMaster University |
| Victor Ferreira     | November 2014 | McMaster University |

**External Examiner- MSc defense**

|               |                |                                |
|---------------|----------------|--------------------------------|
| Amy Moorhead  | September 2020 | McMaster University            |
| Andrea Monjo  | December 2016  | Sir Wilfred Laurier University |
| Sarah Poynter | August 2013    | Sir Wilfred Laurier University |
| Joshua Kong   | September 2013 | McMaster University            |
| Elena Pretus  | August 2012    | McMaster University            |
| Elishka Pek   | July 2009      | McMaster University            |
| Aman Thatte   | December 2009  | McMaster University            |

**External Examiner- PhD defense**

|                   |                |   |
|-------------------|----------------|---|
| Saoirse Benson    | June 2023      | Flinders University, Australia          |
| Jenny Nguyen      | May 2023       | University of Calgary                   |
| Melanie Girard    | December 2022  | University of Toronto                   |
| Nadia Milad       | September 2022 | Sherbrooke University                   |
| Sasha Doodnauth   | October 2020   | University of Toronto                   |
| Kayla Campbell    | August 2020    | Brown University                        |
| Ravi Holani       | March 2020     | University of Calgary                   |
| Elena Mitsi       | December 2019  | Liverpool School of Tropical Health, UK |
| Sara Roggensack   | November 2019  | Tufts University, US                    |
| Victora Hippolito | August 2019    | University of Toronto                   |
| Angela Li         | February 2019  | University of Toronto                   |
| Danielle Twum     | November 2018  | Roswell Park Cancer Institute, US       |



|                         |                |                                       |
|-------------------------|----------------|---------------------------------------|
| Breanna Hodgins         | October 2018   | McGill University                     |
| Jieun Kim               | February 2018  | University of Toronto                 |
| Alyssa Cull             | February 2017  | Queen's University                    |
| Otto Strauss            | May 2016       | University of Auckland, New Zealand   |
| Emma de Jong            | December 2015  | Murdoch University, Australia.        |
| Amra Saric              | December 2015  | Ryerson University                    |
| Cameron Stuart McAlpine | June 2015      | McMaster University                   |
| Paula Beaumont          | September 2014 | University of Edinburgh, Scotland, UK |
| Aswin Hari              | October 2013   | University of Calgary                 |
| Kenneth Chalcraft       | March 2013     | McMaster University                   |
| Katherine J. Kasper     | January 2013   | University of Western Ontario         |
| Amal Al-Gawari          | June 2012      | McMaster University                   |

### **Other contributions to teaching**

#### ***Supervision of foreign/exchange students***

|                     |                      |                                |
|---------------------|----------------------|--------------------------------|
| Lara Jaëske         | Sep 2019-Nov 2019    | University of Rostock, Germany |
| Andrea Kellner      | Sept 2015-March 2016 | University of Jena, Germany    |
| Prashant Kalvapalie | May 2013-Aug 2013    | MITACS summer exchange student |

#### ***Grade School***

|   |                      |
|---|----------------------|
| Dundas Central – Grad 5 class “Food microbiology” (3 science classes)   | March-April 2019     |
| Dundas Central – Grade 4 class “Dirt Microbiology” (2 science classes)  | March 2017, Oct 2018 |
| Dundas Central-Grade 1 class “Good germs/bad germs” (2 science classes) | January 2014         |

#### ***High School students***

1. Anika Gupta (Sept 2017-May2018 & Sept 2018-May2019), High School Student, Bay Area Science and Engineering Fair project
2. Kazi Akther (August 2014), High School Student, winner of the IIDR internship for the Bay Area Science & Engineering Fair
3. Priynka Dhillon (August 2014), High School Student, winner of the IIDR internship for the Bay Area Science & Engineering Fair
4. Catharine Bowman, High School Student, performed a science fair project for the Bay Area Science and Engineering Fair (Jan- Mar 2014).
5. Eisha Ahmed, High School Student, competing in the International Science Fair (Apr -Aug 2013), supervised preparation for the International Science fair & hosted with Dr. Mike Surette for her receipt of the IIDR Summer Student Internship
6. Leonard Rivet, High School Student, member of Youth Engaged in Science (YES) Mentorship program (Sept 2012-June 2013, with Dr. Alba Guarné)
7. Jason Fan, High School Student, IIDR internship winner (May- Aug 2012)
8. Julia Lee, High School Student, member of Youth Engaged in Science (YES) Mentorship program (Oct 2009-Mar 2010)

#### ***Other***

- Mohammed Malik (Jan 2015-Aug 2015), Co-op student, Biotechnology Program
- Judge for Trainee presentations at the 1<sup>st</sup> Annual Perey Symposium (June 2014) and member of awards committee
- Dessi Loukov, Co-op student, industrial student with Qu Biologics (May –Dec 2013)

## Research Funding:

### Currently Held:

|                        |  |                               |
|------------------------|--|-------------------------------|
| 2024-03-06-2029-03-05  | Humoral and cellular immune responses to COVID-19 infections and vaccinations in older and frail adults<br>Canadian Institutes of Health Research<br>Project Grant<br>PIs: D. Bowdish & C. Verschoor<br>Co-Investigators: M. Miller, I. Nazy, A. Costa, J. Breznik, et al.   | \$1,345,000<br>(\$269,000/yr) |
| 2024-07-01- 2027-07-01 | Assessing the Efficacy of a Hypomethylating Agent to Decrease Post-Pneumonia Cognitive Impairments<br>Alzheimer Society of Canada and Brain Canada Foundation<br>PI: D. Bowdish  | \$100,000                     |
| 2023-12-12- 2025-02-28 | Humoral and cellular immune responses to COVID-19 vaccination and infection in older adults<br>Canadian Institutes of Health Research<br>Bridge Funding<br>PI: D. Bowdish & C. Verschoor   | \$100,000                     |
| 2023-09-14-2028-09-14  | Unraveling the role of IgA during respiratory virus infections<br>Infection and Immunity<br>Canadian Institutes of Health Research<br>PI: M. Miller<br>Collaborator: D. Bowdish M. Loeb  | \$914,175<br>(\$0 to Bowdish) |
| 2024-03-01-2027-03-31  | Uncovering the role of chronic inflammation and serious respiratory infections in brain aging and cognitive impairment<br>CIHR Operating Grant: Mechanisms in Brain Aging and Dementia<br>PIs: D. Bowdish & C. Verschoor (HSRNI)<br>coPIs: A. Jones, M. Chong, A. Costa, K. Choe (McMaster), J. Kwong (UofT), M. Tremblay (Victoria), C. Quin (Aberdeen) | \$250,000/yr                  |

|                       |  |  |
|-----------------------|--|--|
| 2023-04-01-2028-03-31 | Uncovering the role of the gut microbiome in unhealthy aging and frailty<br>Canadian Institutes of Health Research<br>Project Grant<br>PI: D. Bowdish<br>Co-Investigator: M. Surette   | \$856,800<br>(\$171,360/yr)                            |
| 2023-04-01-2028-03-31 | Reprogramming lung macrophages using inhalable immunomodulatory microparticles for the treatment of lung fibrosis<br>Natural Sciences and Engineering Research Council of Canada (NSERC)<br>Discovery Horizons<br>PI: T. Hoare<br>Collaborators: D. Bowdish, M. Kolb, R. Wylie | \$500,000<br>(\$25,000/yr to Bowdish)                  |
| 2021-04-01-2026-03-30 | Macrophage senescence impairs phagocytosis and phagosome function<br>National Science & Engineering Research Council of Canada (NSERC)<br>Discovery Grant<br>PI: D Bowdish   | \$250,000<br>(\$50,000/yr)                             |
| 2020-01-01-2025-01-01 | Preclinical Studies in Aging Laboratory<br>Canadian Foundation for Innovation<br>John Evans Leadership Fund and Ontario Research Fund-Research Infrastructure (ORF-RI)<br>Ministry of Economic Development, Job Creation and Trade (MEDJCT)                                    | \$356,483<br>(from CFI)<br>\$356, 483<br>(from ORF-RI) |

### Previously held:

|                       |   |                               |
|-----------------------|---|-------------------------------|
| 2021-04-01-2023-03-31 | A living evidence approach to variants of concern (VOC) and COVID-19 vaccine effectiveness<br>Canadian Institutes for Health Research (CIHR)<br>PI: J Little<br>Co-PI: A Iorio. Co-Is: M Begin, J Beyene, I Boutron, D Bowdish, M Brouwers, C Colijn, C Cooper, A Costa, D Coyle, J Curran, D Earn, K El Emam, L Griffith, J Grimshaw, J Heffernan, T Horsley, A Hsu, S Hughes, B Kagina, M Langlois, J Lavis, X Li, S O'Brien, A Pham-Huy, T Piggott, P Raina, M Rubini, M Smith, L Thabane, H Wang, V Welch, K Wilson, L Xu | \$475,940<br>(\$0 to Bowdish) |
| 02-04-01-2023-03-31   | Safety immUnogenicity of Covid-19 vaCcines in systEmic immunE mediated inflammatory Diseases (SUCCEED)<br>COVID-19 Immunity Task Force<br>McGill: S Bernatsky, I Colmegna   |                               |

|                       |  |  |
|-----------------------|--|--|
|                       | UHN/Sinai/Toronto: V Chandran, T Watts, A-C Gingras, N Haroon, R Inman, A McGeer, M Silverberg, B Kuriya<br>McMaster: D Bowdish, M Larche, S. Collins, J Marshall, S Garner, I Nazy<br>Manitoba: C Hitchon<br>Waterloo: R Cook<br>Calgary: G Kaplan, C Barnabe, B Hazelwood<br>Memorial: P Rahman<br>Sherbrook: G Boire<br>Laval: P Fortin | \$3,131,216<br>(McMaster component<br>\$630,120.00<br>+18% OH) |
| 2021-2022             | Timing of second dose of SARS-CoV2- mRNA vaccine on the Immunologic and functional Antibody Responses Generated in Healthcare workers (TIMING Study). PHRI Internal Funding competition. Competitive.<br>Co-PI: D Leong<br>Co-Applicant: D Bowdish, I Nazy, M Miller, M Loeb, Z Chagla, D Mertz, P Kim, J Denburg                          |  |
| 2020-03-31-2023-02-27 | Understanding whether the microbiome and upper respiratory tract immune responses contribute to infection or protection from infection, with SARS-CoV2<br>W. Garfield Weston Foundation<br>PIs: D Bowdish, M Surette   |  |
| 2020-03-31-2023-02-27 | Harnessing the microbiota to promote healthy aging and prevent respiratory infections in older adults<br>W. Garfield Weston Foundation<br>PIs: D Bowdish, M Surette  |  |
| 2020-12-15-2023-12-01 | Immunologic and facility-wide predictors of COVID-19 risk in long term care<br>Canadian Immunity Task Force<br>Co-PIs: A Costa, D Bowdish  | \$79,000   |
|                       |  | \$298,940  |

\$1,000,000

\$5,000,000

|                       |   |                                  |
|-----------------------|---|----------------------------------|
| 2020-05-31-2021-04-31 | Airway and systemic cellular and immune responses and lung mechanics in Covid-related acute lung injury<br>Hamilton Academic Health Sciences Organization<br>Co-Principle Applicants: M Mukherjee, P Nair<br>Co-applicants: D Bowdish, M Smieja, T Ho | \$89,405                         |
| 2020-05-25-2021-04-31 | Immune phenotyping of symptomatic and asymptomatic SARS-CoV-2 infection in pregnant women admitted for delivery in Hamilton Ontario<br>Hamilton Academic Health Sciences Organization<br>PIs: J Denburg, D Bowdish                                    | \$33,000                         |
| 2017-08-01-2019-08-31 | Mining the microbiota for novel immunotherapies<br>Boris Family Foundation<br>Collaborators: M Surette, M Loeb  | \$100,000                        |
| 2017-06-01-2019-06-01 | Dysregulation of regulatory T cells during chronic infection in muscle<br>R21 NIH #RAI128284A<br>PI: E Wohlfert<br>Collaborator: D Bowdish  | \$330,000                        |
| 2017-09-01-2018-09-01 | Novel probiotics to promote healthy aging and reduce susceptibility to respiratory infections in the elderly<br>Weston Family Microbiome Initiative<br>Garfield Weston Family Foundation<br>Co-PI: M Surette  | \$0                              |
| 2016-04-01-2018-03-31 | Province of Ontario Neurodevelopmental Disorders Network (POND)<br>Ontario Brain Institute - Interdisciplinary Program<br>PI: S Georgiades<br>Co-PI: J Foster   | \$150,000<br>\$50,000 to Bowdish |

Collaborator: D Bowdish

|                       |   |   |
|-----------------------|---|---|
| 2017-06-01-2018-05-31 | Comparing the regulatory networks underlying inflammation in arthritis & aging<br>Arthritis National Research Foundation (ANRF)<br>PI: D Winter<br>Co-Investigators: D Bowdish, H Perlman   | \$27,500  |
| 2015-2023             | Solving the antibiotic resistance crisis<br>Ontario Research Fund<br>Principal Applicant: Gerry Wright<br>Co-applicants: D Bowdish, E Brown, L Burrows, B Coombes, A Capretta, N Magarvey, M Surette, D Mertz, A Savchenko, M Organ                           | \$10,655,996<br><br>\$75,000/yr to Bowdish in years 1-3 |
| 2015-07-01-2016-06-30 | Host-pathogen strain specificity as determinant in complicated pneumonia and pleural empyema<br>Ontario Lung Association – Grant in Aid<br>PI: M Surette<br>Collaborator: D Bowdish   | \$100,000<br>(\$5,000 to Bowdish)                       |
| 2016-08-01-2017-07-30 | The aging microbiome as a risk factor for developing pneumococcal pneumonia in mid- to late-life<br>Ontario Lung Association<br>Principal Applicant: D Bowdish  | \$49,500  |
| 2012-09-01-2018-03-01 | Microphage function changes with age and contributes to susceptibility to infectious disease<br>Canadian Institute for Health Research (CIHR)<br>Principal Applicant: D Bowdish   | \$48,023  |
| 2012-09-01-2017-08-01 | The viral toxin: understanding binding, internalization and signaling of dsRNA<br>Canadian Institute for Health Research (CIHR)<br>Co-applicants: D Bowdish, K Mossman  | \$1,047,395   |
| 2014-06-01-2017-05-31 | Enhanced scientific capacity for risk assessment of the pathogenicity potential of microbes associated with biotechnology<br>Health Canada - Health Canada Biotechnology Initiative<br>Principal applicants: PS Shwed, AF Tayabali<br>Collaborator: D Bowdish | \$ 709,615<br>\$1,500 to Bowdish                        |
| 2014-01-01-2015-01-01 | Establishing age-related chronic inflammation as a modifiable risk factor for poor immune function in the elderly<br>Labarge Optimal Aging Initiative<br>Co-applicants: D Bowdish, M Loeb, C Verschoor, G Pare  | \$316,000/yr x 3yrs<br>\$6,000 to Bowdish               |

|                       |   |                     |
|-----------------------|---|---------------------|
| 2013-01-01-2016-01-01 | Probiotics to Prevent Respiratory Infections in the Elderly<br>Labarge Optimal Aging Initiative<br>Co-applicants: D Bowdish, M Loeb, J Bramson, M Surette, J Johnstone, P Nair  | \$58,000            |
| 2010-09-01-2015-08-31 | Respiratory tract microbiome dynamics and the interplay of commensal bacteria with resident pathogens<br>Canadian Institutes for Health Research (CIHR) – Emerging Team Grant<br>Co-applicant: D Bowdish, M Surette   | \$200,000           |
| 2010-09-01-2015-08-31 | Drug Discovery in a post-antibiotic world: Infrastructure for development of novel immunomodulators<br>Canadian Foundation for Innovation (CFI) - Leaders Opportunity Fund<br>Principal applicant: D Bowdish  | \$500,000           |
| 2010-05-01-2015-04-31 | Novel signaling motifs in macrophage pattern recognition receptors<br>National Science & Engineering Research Council of Canada (NSERC)<br>Principal applicant: D Bowdish   | \$352,693           |
| 2014-10-2015-05       | SSI treatment as a novel immunotherapeutic<br>Industrial Contract – Qu Biologics  | \$33,000/yr x 5yrs  |
| 2013-03-01-2015-02-28 | Probiotics: Prevention of Severe Pneumonia and Endotracheal Colonization Trial (PROSPECT): A feasibility and proof of concept pilot trial<br>Canadian Institute for Health Research (CIHR)<br>PI: D Cook<br>Co-applicants: D Bowdish, D Heyland, J Johnstone, J Marshall, M Meade, M Surette, L Thabane | \$63,734.40         |
| 2012-03-01-2015-02-28 | Role of MARCO in Susceptibility & Resistance to Tuberculosis<br>Subcontract<br>Lead PI: K Sakamoto (University of Georgia)  | \$146,863/yr        |
| 2014-03-31-2014-09-01 | Lung Cancer Diagnostic (supporting Kyle Novakowski (MSc student) and Dr. Chris Verschoor (PDF))<br>Connect Canada Internship Awards – Miami Mice<br>Co-applicant: D Bowdish   | \$29,000/yr x 3 yrs |
| 2014-03-31-2014-09-01 | Quantitative immunoassay for TLE1 protein<br>National Science & Engineering Research Council of Canada (NSERC) - Engage, Industrial collaboration with Miami Mice<br>Principal applicant: D Bowdish   | \$20,000            |
| 2013-05-2013-12       | SSI treatment as a novel immunotherapeutic<br>Industrial Contract – Qu Biologics  | \$25,000            |

|                       |   |                      |
|-----------------------|---|----------------------|
| 2012-08-01-2013-08-01 | Age-associated pneumonia results from impaired immune control of nasopharyngeal carriage<br>Ontario Lung Association-Pfizer Canada Research Award<br>Principal applicant: D Bowdish   | \$25,200             |
| 2012-01-01-2012-05-01 | Effects of pneumococcal colonization on SSI therapy<br>Industrial contract- Qu Biologics (Vancouver).   | \$50,000             |
| 2010-07-01-2013-06-01 | Control of <i>Streptococcus pneumoniae</i> carriage<br>National Institutes of Health (NIH) – RO1 subcontract<br>Co-applicant: J Weiser  | \$25,575.68 x 0.5yrs |
| 2011-01-01-2011-12-31 | Intranasal administration of Linezolid to prevent seasonal & post-influenza pneumococcal pneumonia in the elderly<br>ASPIRE-Pfizer - New Investigator Award   | \$50,000/yr x 3yr    |
| 2010-06-01-2011-05-31 | Molecular mechanisms of monocyte/macrophage immunosenescence and susceptibility to <i>Streptococcus pneumoniae</i> infection in the nursing home elderly<br>Canadian Institutes for Health Research (CIHR) – Catalyst Grant<br>Principal applicant: D Bowdish | \$100,000/1yr        |
| 2010-12-01-2011-12-01 | Macrophage scavenger receptors – novel recognition receptors for <i>Mycobacterium tuberculosis</i><br>Ontario Lung Association - Grant-in-Aid<br>Principal applicant: D Bowdish   | \$50,000/1yr         |
| 2010-03-01-2011-03-31 | The role of macrophage function in prevention of <i>Streptococcus pneumoniae</i> infection in the nursing home elderly<br>CIHR (Canadian Institutes of Health Research)<br>Principal applicant: D Bowdish   | \$50,000/1yr         |
| 2010-05-01-2011-04-31 | Clinical markers of monocyte immunosenescence<br>Institute for Infectious Disease Research (IIDR)<br>Co- applicants: D Bowdish, J Bramson, J Gaudie   | \$100,000/yr x 1 yr  |
| 2009-05-2010-06       | Colonization vs Infection: Why aren't macrophage responses to <i>Streptococcus pneumoniae</i> immunizing?<br>Institute for Infectious Disease Research, McMaster University<br>Principal applicant: D Bowdish   | \$10,000/yr x 1 yr   |

## Patents

- Biological Membrane-Based Sensor. MC Rheinstädter, S Himbert, RJ Alsop, JM Moran-Mirabal, K Saem, DME Bowdish. U.S. Provisional Pat. Ser. No. 62/413,652, filed October 27, 2016
- Structured Glassy Surfaces for Use as Substrates for Immune Cell Assays. DME Bowdish, J Moran-Mirabal, J Boyle, Y Zhu. Disclosure agreement filed May 2016.



- Blockade of TNFalpha for treatment of age-related tissue damage and impaired anti-bacterial activity. D Bowdish, A Puchta. Provisional patent filed May 23rd, 2014, Serial No. 62/002,40, 6.
- Effectors of innate immunity. REW Hancock, B Finlay, M Scott, D Bowdish, C Rosenberger and JP Powers. U.S. provisional patent No 60/336,632, filed Dec. 3, 2001 Full US application 10/308,905 filed Dec. 2, 2002; published Sept 16, 2004. US patent 7,507,787, granted March 24, 2009.
- Effectors of innate immunity. REW Hancock, B Finlay, M Scott, D Bowdish, C Rosenberger, JP Powers, N Mookherjee, J Yu. CIP of US application 10/308,905; Application no. US11/400,411, filed April 7, 2006.
- Effectors of innate immunity. REW Hancock, B Finlay, M Scott, D Bowdish, C Rosenberger, JP Powers. South African Patent No. 2004/4919, granted May 31, 2006.
- Effectors of innate immunity. REW Hancock, B Finlay, M Scott, D Bowdish, C Rosenberger, JP Powers. Australian Patent No. 200223365675, granted April 5, 2007.
- Effectors of innate immunity. REW Hancock, B Finlay, M Scott, D Bowdish, C Rosenberger, JP Powers. Chinese Patent No. 02827327.3, granted Dec 2, 2007.
- Effectors of innate immunity. REW Hancock, B Finlay, M Scott, D Bowdish, C Rosenberger, JP Powers. Hong Kong Patent HK1075677, granted August 22, 2008.

#### **Lifetime Publications (Peer reviewed, trainees in bold):**

##### **Contributions to books (Book chapters)**

- 1 **Bowdish, D.**, Toscano-Rivero, D., Mazer, B. *COVID-19 Infections and Vaccinations in Older Adults and Long-term Care Residences*. COVID-19 Contextualized: A Mosaic of Interdisciplinary Works Through a Canadian Lens. University of Manitoba Press (2025, expected). Edited by Saman Arfaie, Peter J. Glinos, and Faraz Honarvar
- 2 **Adé, Kémy, Zhao, K., Bowdish, DME.** "The Macrophage." (2025). Encyclopedia of Immunobiology, 2nd edition. Editor: D. Philpott. doi:10.1016/B978-0-12-824465-4.00171-X 1
- 3 Orihuela C, McElhaney JE, **Bowdish DM.** *Consequences of Pneumonia in Older Adults*. Encyclopedia of Gerontology and Population Aging. Cham: Springer International Publishing. 2022 May 24: 1146-1153
- 4 Makaremi S, **Bowdish DME**, Moran-Mirabal JM. *New Fluorescence Techniques for Studying Biomembrane Diffusion*. Methods in Signal Transduction, Ed. JMK Irudayaraj. 2019. CRC Press
- 5 Rauh M, Cook E, **Bowdish DME.** *Myeloid-Derived Suppressor Cells in Aged Humans*. Handbook of Immunosenescence. Eds. Fulop T, Franceschi C, Hirokawa K, Pawelec G. Springer, Cham. 2018: pp. 1-12
- 6 **Novakowski KE, Loukov D, Chawla V, Bowdish DME.** *Assays for bacterial binding, phagocytosis and killing*. Methods in Molecular Biology: Phagocytosis and Phagosome Maturation. Ed. Botelho RJ. Methods Mol Biol. 2017: 1519: 297-309
- 7 **Bowdish DME.** *Macrophage Activation and Polarization*. Encyclopedia of Immunobiology. Ed. Ratcliffe MJH. Oxford Academic Press. 2016: (1); pp. 289–292
- 8 **Loukov D, Naidoo A, Bowdish DME.** *Immunosenescence: implications for vaccination programs in the elderly*. Vaccine: Development and Therapy. Aug 2015;5; pp. 17-29
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- 10 **Verschoor CP, Puchta A, Bowdish DME.** *The Macrophage*. Methods Mol Biol. 2012: 844; pp. 139-56. doi: 10.1007/978-1-61779-527-5\_10
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- 13 **Bowdish DME**, Davidson DJ, Hancock REW. *Immunomodulatory properties of defensins and cathelicidins*. Current Topics in Microbiology and Immunology. Ed. Shafer W. 2006: 306; pp. 27-66

### **Datasets**

1. BOWDISH, Dawn; COSTA, Andrew, 2025, "COVID-19 Infection and Immunity in Residents of Long-term Care Facilities [ C19-IIRLTF, study data contributed to the CITF Databank]", <https://doi.org/10.5683/SP3/5IO9WQ>, Borealis, V1

### **Journal Articles (trainees\*):**

- 1 **Bowdish D**, Benoit J\*, Breznik J\*, Wu Y, Kennedy A\*, Liu LM, Cowbrough B\*, Baker B, Hagerman M, Andary C\*, Mushtaha M, Abdalla N, Gauvreau G, Kim P, Denburg J, Costa A, Leong D, Nazy I, Duong M, Bramson J, Larché M, Verschoor CP. *No evidence of immune exhaustion after repeated SARS-CoV-2 vaccination in vulnerable and healthy populations*. Nov 2024 27; PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-5485352/v1>]
- 2 Thompson SL, Ellegood J, **Bowdish DME**, Lerch JP, Foster JA. *Sex-and brain region-specific alterations in brain volume in germ-free mice*. iScience. Nov 2024 19; 27(12), 111429. <https://doi.org/10.1016/j.isci.2024.111429>
- 3 **Bowdish D**, Kennedy K\*, DeJong E\*, Chan A, Kennedy A\*, Jamal A, Surette M, Larché M, Larch M, Hambly N, Ask K, Atkinson S, McNicholas P, McGeer A, Coleman B. *Mapping the intersection of demographics, behaviour, and government response to the COVID-19 pandemic*. Oct 2024 21; PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-5027153/v1>]
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- 5 Coleman BL, Gutmanis I, Bondy SJ, Harrison R, Langley J, Fischer K, Cooper C, Valiquette L, Muller MP, Powis J, **Bowdish D**, Katz K, Loeb M, Smieja M, McNeil SA, Mubareka S, Nadarajah J, Arnoldo S, McGeer A. *Canadian health care providers' and education workers' hesitance to receive original and bivalent COVID-19 vaccines*. Vaccine. 2024 Oct 24;42(24):126271. doi: 10.1016/j.vaccine.2024.126271. Epub 2024 Sep 2. PMID: 39226785
- 6 Kennedy AE\*, Dayes IS, Parpia S, Boreham DR, **Bowdish DME**. *Characterizing hematological changes following repeated exposure to non-targeted low-dose ionizing radiation in prostate cancer patients*. Dose Response. 2024 Oct 2;22(4):15593258241276120. doi: 10.1177/15593258241276120. PMID: 39464181
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- 16 **Bowdish DME**, Chandran V, Hitchon CA, Kaplan GG, Avina-Zubieta JA, Fortin PR, Larché MJ, Boire G, Gingras AC, Dayam RM, Colmegna I, Lukusa L, Lee JLF, Richards DP, Pereira D, Watts TH, Silverberg MS, Bernstein CN, Lacaille D, Benoit J, Kim J, Lalonde N, Gunderson J, Allard-Chamard H, Roux S, Quan J, Hracs L, Turnbull E, Valerio V, Bernatsky S; SUCCEED investigative team. *When Should I Get My Next COVID Vaccine? Data from the SURveillance of responses to COVID-19 vaCcines in systEmic immunE mediated*

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increased reinfection risk in older adults in long-term care and retirement facilities. *EClinicalMedicine*. 2023 Aug 21;63:102148. doi: 10.1016/j.eclinm.2023.102148. PMID: 37753447

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### **Conference Proceedings**

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## **Review articles & Editorials**

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#### **White Papers/Policy reports/Guideline:**

1. Hema-Net Serosurveillance Meeting Report. CITF (Canadian Immunity Task Force) Legacy Project. February 14-16. <https://www.covid19immunitytaskforce.ca/events/hema-net/>
2. Canadian Thoracic Society- Information and Guidance for Respiratory Health Care Professionals on COVID 19 Vaccination. [https://cts-sct.ca/wp-content/uploads/2021/05/Ver-5.0\\_CTS-COVID-19-Vax-Guide\\_May-25\\_2021.pdf](https://cts-sct.ca/wp-content/uploads/2021/05/Ver-5.0_CTS-COVID-19-Vax-Guide_May-25_2021.pdf)
3. Data used for the development of the National Advisory Council on Immunization’s guidelines for vaccination of vulnerable populations:
  - a. NACI rapid response: Booster dose in long-term care residents and seniors living in other congregate settings [2021-09-28] <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/statement-september-28-2021-booster-dose-long-term-care-residents-seniors-living-other-congregate-settings.html>
  - b. Recommendations on the use of COVID-19 vaccines [2021-10-22] <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html>
4. National Institute on Ageing. (2019). As One of Canada’s Top Killers, Why Isn’t Pneumonia Taken More Seriously? Toronto, ON: National Institute on Ageing White Paper. <https://www.ryerson.ca/nia/white-papers/why-isnt-pneumonia-taken-more-seriously.pdf>
5. The Lung Association Ontario in partnership with the National Institute on Ageing. (2019) “Prevention: The Best Medicine. The Importance of Immunization to the Health of Seniors.”
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#### **Publications for a lay/broad audience**

1. Teskey G, Bundalovic-Torma C, **Bowdish DME**. *Age-associated inflammation alters the aging trajectory*. Biochem (Lond) 1 February 2019; 41 (1): 22–25. doi: <https://doi.org/10.1042/BIO04101022>

## **Figures**

1. S Makaremi, H Luu, JP Boyle, Y Zhu, C Cerson, **DME Bowdish**, JM Moran-Mirabal... - Advanced Materials Interfaces, 2019. Plasma Membrane: The Topography of Silica Films Modulates Primary Macrophage Morphology and Function (Adv. Mater. Interfaces 21/2019)
2. S. Gordon. "Leukocyte migration" and "Phagocytosis & Autophagy" for: Macrophages and Phagocytosis. In: Fundamental Immunology 6th Ed. 2007. W. Paul Lippincott Raven. Publ. Philadelphia. Chapter 17.

## **Presentations (Invited):**

1. Firestone Institute for Respiratory Health Clinical Rounds. "Optimizing vaccination for people living with chronic lung disease". St. Joseph's Healthcare Hamilton. Hamilton, On. November 19, 2024.
2. Innovation Nation Student Innovation Showcase. "Ageism, infections & vaccinations: Lessons learned from the pandemic". Liuna Station, Hamilton, ON. October 27, 2024.
3. Farncombe institute invited speaker series. "On aging, infection, microbes & immunity". McMaster University, Hamilton, ON. October 24, 2024.
4. Class of '74 Medical School reunion. "Everything you know about the aging immune system is wrong (and possibly dangerous)". McMaster University, Hamilton, ON. June, 13, 2024.
5. University of Liverpool Invited Speaker Series. "Aging, infection & immunity: Four vignettes". Liverpool, UK. May 28, 2024.
6. McMaster Institute for Research on Aging Trainee Network. "Writing for a Lay Audience" McMaster University, Hamilton, ON. June 26, 2024
7. Medical Sciences Graduate Research Day. "My Scientific Eras Tour". McMaster University, Hamilton, ON. March 7, 2024.
8. Lung Health Foundation COPD Policy Forum. "Building Respiratory Resilience: Partnership for improved care and funding in COPD". March 7, 2024 with Dr. Joshua Wald, Dr. Maya De Zoysa and patient advocate Scott Bailey
9. Schlegel Villages Virtual Townhall. "New developments in Vaccinations - what's currently available, what's on the horizon and what you can get today?" March 5, 2024
10. Hema-Net Serosurveillance Meeting. "Assessing population representativeness of serosurveillance data: Lessons learned from the COVID-19 in LTC study" McGill University, Montreal, Quebec. February 14-16<sup>th</sup>.
11. Better Breathing Week. Toronto, Ontario "Vaccines for people living with lung disease." January 17<sup>th</sup>. 2024.
12. Division of Respiriology Clinical Rounds. Firestone Institute for Respiratory Health. McMaster University. "Challenges in Clinical Research- career progression". January 16, 2024.
13. Division of Respiriology Research Rounds. Firestone Institute for Respiratory Health. McMaster University. "The Firestone Institute for Respiratory Research – A year in review". January 9<sup>th</sup>, 2024.
14. University of Ottawa Heart Institute Weekly Research Conference. Ottawa, Canada. "Infections and vaccinations in older adults". November 27, 2023<sup>1</sup>
15. Future of Vaccinology Symposium. McMaster University, Canada. "COVID-19 vaccinations in vulnerable older adults." October, 13, 2023.
16. Occupational Health Clinics for Ontario Workers. Ontario, Canada. "COVID-19 infections and vaccinations in older adults: Managing infections and reinfections". October 6, 2023.
17. Hamilton Third Age Learning. Hamilton, ON. "The perils of being born in the Fall.". September 26, 2023.
18. Oxford Macrophage Symposium. "Macrophages, infection and immunity in youth and age." Oxford, U.K. September 13, 2023.
19. COVID-19 Immunology Consortium-BC Research Day. Vancouver, Canada. "Lessons learned from studying COVID-19 vaccinations and infections in long-term care". June 16, 2023.

20. McMaster Internal Medicine Research Day. Keynote presentation. McMaster University, Canada. "Finding your scientific voice and using it for the greater good". May 17, 2023.
21. COVID-19 Immunity Task Force. Plenary presentation on Infections in Vulnerable Populations. Co-presenters Drs. Sonia Anand, Upton Allen. Vancouver, Canada. March 8, 2023
22. Firestone Institute for Respiratory Health. "COVID-19 infections & vaccinations in vulnerable populations". February 23, 2023
23. Banff Inflammation Workshop. Banff, Alberta. "Early life adversity alters immunity". January 26, 2023.
24. Canadian Association for Laboratory Animal Science Webinar. Virtual. "Understanding non-genetic factors associated with healthy and unhealthy aging using the PreClinical Studies in Aging Lab". January 19, 2023
25. Infection and Immunity Research Forum. Western University. Keynote Speaker. "The myelopoiesis of Ms Macrophage – tales of a career in infection and immunity." November 4, 2022.
26. Centre for Vaccine Preventable Diseases Symposium – Vaccination in Older Adults. University of Toronto. "COVID-19 Vaccination in Long-term care". September 16, 2022.
27. 12<sup>th</sup> International Symposium on Pneumonia and Pneumococcal Disease (ISPPD). "Age-associated Inflammation Potentiates Pneumococcal Disease". June 6, 2022
28. University of Toronto Senior College Symposium – What have we learned from the pandemic. "COVID-19 vaccinations in vulnerable populations. Tales from a scientist turned science communicator." April 20, 2022
  - i. Presentation available:  
<https://www.youtube.com/watch?v=FUhABJCajKQ&list=PLqkMLowL3YG4gb-LR3wHMpsdb132dCBXM&index=4>
29. Institute for Research on Public Policy. "Health tech: The politics and policies of remote rehabilitation". April 1st, 2022. Panelist. <https://irpp.org/irpp-event/health-tech-the-politics-and-policies-of-remote-rehabilitation/>
30. Thrombosis & Atherosclerosis Research Institute (TAARI). Cardiovascular Research Seminar Series. "The aging immune system contributes to lung infections". March 2, 2022.
31. Better Breathing Week. COVID-19 in Long Term Care: Where Policy, Research and Practice Meet & COVID-19 Vaccine Dosing Intervals: Immune response "COVID-19 infections and vaccinations in long-term care and retirement homes". January 28, 2022
32. Hamilton Health Sciences. "Building confidence in vaccines" with Dr. Cora Costanescu (Alberta Health Services) and moderated by Dr. J. Pernica. January 26, 2022
33. Ontario Advisory Committee on Immunization. "COVID-19 infections & vaccinations in long-term care homes". December 13, 2021
34. Jackson Laboratories invited speaker series. "The microbiome and unhealthy aging – cause or consequence?". Novembers 30, 2021
35. Université Laval- Quebec Heart and Lung Institute Seminar Series. "The aging immune system contributes to lung infections". November 18, 2021
36. COVID-19 Immunity Task Force/Public Health Agency of Canada. "COVID-19 vaccinations & infections in long-term care". October 28, 2021
37. Masoro-Barshop Conference on Aging. Virtual Conference – The Aging Immune System. "Systemic inflammation inhibits macrophage function and predisposes to infections". October 15, 2021.
38. Systems Immunology in Aging and Complex disease. The Jackson Laboratories. Virtual Conference. "The microbiome in unhealthy aging". September 9, 2021.
39. American Association of Immunologists. Summer School in Immunology. Washington, USA. "Myeloid cells in health & disease". July 27, 2021.( Virtual seminar, due to COVID-19 restrictions).

40. AstraZeneca Mexico. Invited lecture for clinicians and respirologists. "Innate immunology of the lung". July 2021
41. Vanderbilt University Seminar Series. "Age-related changes in immunity & the microbiome predispose to infections" April 18, 2021.
42. iWISE (Women in Science and Engineering) conference. "The myelopoeisis of @MsMacrophage: My career in microbes, macrophages, and more recently COVID-19". Keynote. March 25, 2021
43. University of Birmingham. Institute of Inflammation and Ageing. "Age-related changes in immunity & the microbiome pre-dispose to infections". March 10, 2021
44. Johns Hopkins Bloomberg School of Public Health. Department of Molecular Microbiology and Immunology "Age-related changes in immunity & the microbiome pre-dispose to infections". February 11, 2021.
45. Wake Forrest University. Microbiology & Immunology Department Seminar Series "Age-associated inflammation impairs macrophage anti-pneumococcal immunity". November 19, 2020
46. USC Leonard Davis School of Gerontology Seminar series. "Age-related microbial dysbiosis alters innate immune function and increases risk of infection". October 21, 2020. (Virtual seminar due to COVID-19 restrictions).
47. University of California San Francisco Aging Science Symposium: Mechanisms of declining protective immunity despite heightened chronic inflammation during aging. "Secrets of the super-centenarians: the immunology of longevity". October 15, 2020. (Virtual seminar due to COVID-19 restrictions).
48. Canadian Institute for Advanced Research (CIFAR). "Microbial dysbiosis and unhealthy aging: Cause or consequence?". September 30, 2020. (Virtual seminar due to COVID-19 restrictions).
49. Yale Pulmonary Research Conference. Yale University. "Secrets of the super-centenarians: The immunology of aging well". September 24, 2020. (Virtual seminar due to COVID-19 restrictions).
50. VII International Meeting of Biosciences and Physiopathology. "The unusual immunology of COVID-19/SARS-CoV-2". September 16, 2020. (Virtual seminar)
51. 24<sup>th</sup> Annual Immunet Research Day. University of Alberta. Keynote Presentation. "The myelopoesis of @MsMacrophage: My career in macrophages and microbes". August 21, 2020. (Virtual seminar due to COVID-19 restrictions).
52. The Aging in Critical Care Interest Group & Lung Aging Research Working Group. "Promoting recovery in critically ill older adults with COVID-19: Bench to bedside". July 30, 2020. Panelist with Lekshmi Santhosh, MD and Leah Witt, MD.( Virtual seminar, due to COVID-19 restrictions).  
<https://www.thoracic.org/professionals/clinical-resources/critical-care/journal-club/promoting-recovery-in-critically-ill-older-adults-with-covid-19bench-to-bedside.php>
53. American Association of Immunologists. Summer School in Immunology. Washington, USA. "Myeloid cells in health & disease". July 27, 2020.( Virtual seminar, due to COVID-19 restrictions).
54. Life Sciences Seminar series. University of Nottingham. Nottingham, UK. "The role of inflamm-aging and immunosenescence in aging immune responses". July 17,2020 (Virtual seminar, due to COVID-19 restrictions).
55. Lung Health Foundation. Toronto, ON. "Everything you wanted to know about SARS-CoV-2/COVID-19 but were afraid to ask". June 25, 2020. (Virtual seminar, due to COVID-19 restrictions).
56. Infectious Disease-IIDR rounds. McMaster University. "The unusual immunology of SARS-CoV-2 infection". June 2, 2020. (Virtual seminar due to COVID-19 restrictions).
57. Infection and Immunity Seminar series. University of Calgary. Calgary, Alberta. "Age-related microbial dysbiosis alters innate immune function and increases risk of infection". March 5, 2020.
58. Biology of Aging Seminar Series. Yale University. New Haven, Connecticut. U.S. "Age-related microbial dysbiosis alters innate immune function and increases risk of infection". February 3, 2020.

59. Meakins-Christie Laboratories Seminar Series. McGill University, Montreal, Canada. "Age-related changes in the microbiome and susceptibility to pneumonia". January 28, 2020.
60. British Thoracic Society Annual Winter Meeting. London, U.K. "Inflammaging and the microbiome in the lung". December 4, 2019.
61. Department of Biomedical Sciences. Tufts University. Boston, US. "Microbial dysbiosis increases age-associated inflammation and susceptibility to pneumococcal infections". November 12, 2019.
62. Centre for Critical Illness Research. Lawson Health Research Institute. University of Western Ontario. London, Ontario. "Age-associated inflammation contributes to susceptibility to infection". October 29, 2019.
63. Biology of Ageing Symposium. Institute for Molecular Bioscience, University of Queensland. Brisbane, Australia. "Microbial dysbiosis drives age-associated inflammation and macrophage dysfunction". September 20, 2019.
64. 14th World Congress on Inflammation. Sydney, Australia. "The aging microbiome contributes to age-associated inflammation and immunosenescence". September 16, 2019.
65. Gordon Research Conference on Phagocytes. Waterville Valley, NH. USA. "Macrophage phagocytosis changes with age and chronic inflammation". June 6, 2019.
66. Washington University in St. Louis, Immunology Seminar Series. St. Louis, MO. "Age associated inflammation and microbial dysbiosis impair macrophage function". May 24, 2019.
67. International Infection, Immunity and Inflammation Conference (I4C). University of British Columbia. Vancouver, B.C. Canada. "Age-associated inflammation, macrophage function and longevity". May 14-15, 2019.
68. Oklahoma Geroscience Symposium -The Role of Inflammation in Aging and Age-Associated Diseases, Oklahoma City, OK. "Role of the microbiome in inflammaging". April 24, 2019.
69. University Health Network. Toronto, ON. "Age-associated inflammation and microbial dysbiosis alter the aging trajectory". April 15, 2019.
70. Ottawa Centre for Infection, Immunity and Inflammation (CI3). Ottawa, ON. "The aging microbiome contributes to age-associated inflammation and immunosenescence". March 29, 2019.
71. University of Toronto. Department of Immunology. Toronto, ON. "Age-associated inflammation and the microbiota alter monocyte and macrophage function". February 21, 2019.
72. McMaster's Central Animal Facility. "The aging immune system". February 14, 2019.
73. Farncombe Insitute. McMaster University. "Microbial dysbiosis and age-associated inflammation". February, 12, 2019.
74. North American Microbiome Conference. Washington, D.C. "Employing aged mice as a model to study the long-term relationship between the immune system and the microbiome". February 6th, 2019.
75. Better Breathing Conference. Toronto, Ontario. "Pneumonia in older adults". January 26, 2019.
76. Chang Gung Memorial Hospital. Taipei, Taiwan. "Age-related microbial dysbiosis contributes to systemic inflammation and impaired macrophage function". January 16, 2019.
77. McMaster Allergy & Immunology Rounds. "Myeloid immunophenotyping as a measurement of inflammatory tone". December 14, 2018.
78. Cedars-Sinai Immunology Seminar Series. Los Angeles, California. "Microbial dysbiosis drives age-associated inflammation and myeloid dysfunction". November 29, 2018.
79. Roswell Park Comprehensive Cancer Centre. Department of Immunology. Buffalo New York. "Microbial dysbiosis drives age-associated inflammation and myeloid dysfunction". November 20, 2018.
80. Society of Leukocyte Biology/ International Endotoxin Society Joint Meeting. Myeloid cells: Development, environment and inflammation. Chandler, Arizona, USA. "Microbial dysbiosis drives age-associated inflammation and impairs myeloid development". October 14-16, 2018.

81. University of Alabama at Birmingham Microbiology and Immunology Seminar Series. "Age, inflammation and microbial dysbiosis contribute to susceptibility to pneumonia". July 10th, 2018.
82. 31st Annual Canadian Society of Immunology Conference. London, ON. "Age-associated Inflammation Impairs Monocyte and Macrophage Development and Function". June 2, 2018.
83. Banff Conference on Infectious Disease. Banff, Canada. "Age-associated inflammation increases susceptibility to *Streptococcus pneumoniae* infection". May 25, 2018.
84. 2018 Canada Gairdner Global Health Lecture Series -Planetary health through food and microbes. "Novel strategies for preventing infectious disease". Friday May 4, 2018.
85. Canadian Trials Network Annual Meeting. Keynote talk "Aging less than gracefully: The microbiome drives age-associated inflammation and immune dysfunction." April 24, 2018.
86. University of Manchester. Department of Immunology Seminar Series. "Age-associated inflammation and microbial dysbiosis impair macrophage function and anti-microbial immunity". February, 27, 2018.
87. Experimental Human Pneumococcal Colonization (EHPC) Mid Term Programme Meeting. Liverpool, U.K. "Age-associated inflammation alters host defence to *Streptococcus pneumoniae*." February 28, 2018.
88. Biology Department, University of Waterloo. "Pneumococcal infections: Lessons from the four corners of the world". February 9, 2018.
89. Environmental Drivers of Aging: Proteostasis, Metabolism and Signalling Conference. NorthWestern University. "The aging microenvironment dictates monocyte phenotype and function". January 12, 2018.
90. MRC Institute for Inflammation Research. Edinburgh, U.K. "Age-associated inflammation & microbial dysbiosis impair macrophage function and anti-microbial immunity". November 3, 2017.
91. International Conference on Respiratory Pathogens – The Molecular Biology of Bacterial and Viral Respiratory Pathogens. University of Greifswald, Rostock Germany. Keynote speaker. "Age and inflammation predispose to *Streptococcus pneumoniae* infection". November 2, 2017.
92. Institute Pasteur. Immunology Seminar Series. "Metchnikoff's theory of aging: Intestinal permeability drives age-associated inflammation and susceptibility to infection". October 13, 2017.
93. Sick Kids Hospital. Molecular Medicine Seminar Series. Toronto, ON. "The microbiome drives age-associated inflammation and susceptibility to pneumonia". October 2, 2017.
94. Research Rounds. Firestone Institute of Respiratory Health. "Monocyte maturation is altered by age, inflammation and the microbiome and contributes to susceptibility to pneumonia". September 19, 2017.
95. Stanford University Immunology and Transplantation Department Seminar Series. "The microbiome drives age-associated inflammation and increases susceptibility to pneumonia". August 16, 2017.
96. Invited Seminar. Abbvie Immuno-oncology group. Redwood City, California. "Age-associated inflammation alters monocyte development: implications for immunotherapy". August 15, 2017.
97. Infectious Diseases/Microbiology Research Day. Keynote presentation. University of Toronto. "The microbiota drives age-associated inflammation and susceptibility to pneumonia". June 20, 2017.
98. MedImmune, Gaithersburg, MD. "Age-related inflammation: causes and immunological consequences". May 23, 2017.
99. American Thoracic Society Annual meeting. "Lung infection in an aging population". May 22, 2017.
100. Aging & Immunity Satellite Meeting to the American Association of Immunology. Bethesda, U.S. "Infections and changes in the microbiome with aging". May 10, 2017
101. Quebec Annual Scientific Meeting for the Genome Quebec/ le Ministère de l'Économie de la Science et de l'Innovation (MESI) Scientific Advisory Board Meeting for project "Exploiting plant-made vaccines to protect the elderly against respiratory infections" Keynote presentation. "Age-associated inflammation alters inflammatory responses to respiratory pathogens". May 4, 2017.
102. International Research Symposium Centred on Understanding and Preventing Infection in Children. Vancouver, BC. "The perils of inter-generational transfer of *Streptococcus pneumoniae*". April 28, 2017.



103. NorthWestern University. Division of Pulmonary and Critical Care Medicine Invited Speaker Series. "The microbiome drives age-associated inflammation and myeloid immunosenescence". April 3, 2017.
104. Queen's University. Department of Pathology & Molecular Medicine Seminar Series. "Aging less than Gracefully: Age-associated inflammation alters monocyte development and increases susceptibility to infection". February 22, 2017.
105. Wilfred Laurier University. Department of Biology Seminar Series. "Aging less than gracefully: Age-associated inflammation alters monocyte development and increases susceptibility to infection". January 20, 2017.
106. Firestone Respiriology Research Christmas Rounds. "Kiss your grandmother: The perils of intergenerational contact during the holiday season". December 13, 2016.
107. University of Toronto Immunology Speaker Series. "Age, inflammation and microbial dysbiosis conspire to impair anti-microbial immunity". December 5, 2016.
108. Society for the Immunobiology of Cancer Annual International Meeting. "Myeloid-derived suppressor cells (MDSC), age and cancer". November 13, 2016.
109. University of Maryland (UMB) Invited Speaker Series. "Aging less than gracefully: Inflammation and the microbiome impair antimicrobial activity". November 9, 2016.
110. University of Georgia (UGA) Center for Vaccines & Immunology Seminar Series. Georgia, Alabama. "Age, infection & inflammation: More than the sum of their parts". October 17, 2016.
111. The Society for Leukocyte Biology's 49th Annual Meeting. "The aging microbiota reprograms inflammatory Monocytes". September 15-17, 2016.
112. Louisiana State University Invited Speaker Series. Baton Rouge, Louisiana. "Metchnikoff's theory of aging: Intestinal permeability drives age-associated inflammation and susceptibility to infection". September 8, 2016.
113. Canadian Critical Care Trials Network. Halifax, NS. "Mechanistic sub-study: Circulating inflammatory and immunomodulators in critically ill patients in the PROSPECT trial". June 14, 2016.
114. PROSPECT Launch and Investigator meeting. Informational sessions for research co-ordinators and nurses in the PROSPECT trial. Halifax, NS. "The potential of probiotics" and "Immunology for the uninitiated". June 13, 2016.
115. McMaster Geriatric Grand Rounds. Juravinski Hospital, Hamilton, ON. "Age-associated inflammation & susceptibility to *Streptococcus pneumoniae* infection". April 11, 2016.
116. Gordon Conference on Acute Respiratory Infections. Galveston, Texas. "Novel vaccination strategies for the elderly". February 26, 2016.
117. Invited Speaker series. Department of Microbiology & Immunology. University of Buffalo. "Age, infection & inflammation: More than the sum of their parts". November 18, 2015.
118. Invited speaker series. Department of Biology, Ryerson University. "Aging less then gracefully: How macrophage function declines with age and contributes to susceptibility to infection". October 22, 2015.
119. McMaster Institute of Geroscience Inaugural Symposium. "Age, infection & inflammation: More than the sum of their parts". October 1, 2015.
120. Allergy & Immunology Rounds. McMaster University. "The microbiome drives age-associated inflammation". May 22, 2015
121. Province of Ontario Neurodevelopmental disorders network Science Day. "Inflammation, infection, cognition and age". May 8, 2015
122. Ottawa-Carleton Institute of Biology Student Conference. Keynote speaker. "Aging gracefully: How aging and immunity intersect". April 29, 2015.
123. Buffalo Immunology Conference. Maryville NY. "The aging microbiome drives age-associated inflammation". April 23-24, 2015.

124. EMPHASIS seminar series, McMaster University. Keynote speaker. "The metabolism of age-associated inflammation". April 23, 2015.
125. University of Georgia Invited Speaker Series. "The role of phagocytic receptors in *Streptococcus pneumoniae* infections". March 28, 2015
126. Keystone Symposia: Dendritic Cells and Macrophages Reunite. Workshop presentation. Montreal, QC. "Metchnikoff's theory of aging: Intestinal permeability drives age-associated inflammation and macrophage dysfunction". Mar 8 -10, 2015.
127. Farncombe Institute of Digestive Health Seminar Series. "Age, inflammation & the microbiota: Why the choices that you make in youth haunt/help you in old age". January 7, 2015.
128. Biology of Aging Seminar Series. McMaster University, Hamilton, ON. "Aging or inflamm-aging? Which causes immune decline with age?" December 5, 2014.
129. Pfizer sponsored Research Exchange Meeting in conjunction with the Canadian Immunization conference. Ottawa, ON. "Age-associated inflammation contributes to susceptibility to pneumococcal infection". December 3<sup>rd</sup>, 2014.
130. Health Canada Invited speaker series. Ottawa, ON. "Aging, inflammation and the microbiome". December 3<sup>rd</sup>, 2014.
131. Labarge Optimal Aging Research Day. "Probiotics to prevent respiratory infections in the frail nursing home elderly". November 10, 2014.
132. Respiratory Research Rounds. Firestone institute. "Age-associated inflammation impairs host-defence towards *Streptococcus pneumoniae*". November 25 2014.
133. Nathan Shock Aging Center. San Antonio, Texas. "The microbiome drives age-associated inflammation". October 18, 2014.
134. Albany Medical School. Invited Speaker Series. "Inflammation drives macrophage dysfunction and susceptibility to pneumococcal infection". Sept 25, 2014
135. University of Guelph. Department of Pathobiology. Invited Speaker Series. "Macrophage scavenger receptors are required for control of colonization in the upper respiratory tract." Sept 19, 2014
136. British Society of Immunology. Inflammation and Immunity. University of Manchester, UK. "Metchnikoff's theory of aging: the intestinal microbiota drives age-associated inflammation and impaired macrophage function". September 9-10, 2014.
137. Federation of Clinical Immunology Societies (FOCIS) Annual Meeting. Chicago, Illinois. "Phagocytosis, Endocytosis and Motility: Scavenger Receptor Functions at the Interface of Homeostasis and Host Defense". July 25-28, 2014.
138. IIDR Colloquium. McMaster University. "A Breath of Fresh Air: Preventing pneumonia in older adults". May 30, 2014.
139. The American Association of Immunologist Annual Meeting. Pittsburgh, Pennsylvania. "Scavenger receptors and host-pathogen interactions". May 2-6, 2014.
140. iSci Symposium Keynote Speaker. McMaster University. "Pneumo a no no: Preventing pneumonia in older adults". April 3, 2014.
141. Biology of Acute Respiratory Infection Gordon Research Conference. Lucca Italy. Invited speaker. "Pneumonia, inflammation and age". Feb 23-28, 2014.
142. Lung Association. Better Breathing Conference. Pfizer sponsored keynote lecture "Age, inflammation and pneumonia". February 2, 2014.
143. McMaster University. Department of Chemistry & Chemical Biology Seminar Series. "Does macrophage metabolism decrease with age?" January 7<sup>th</sup>, 2014.
144. Vaccine Preventable Disease Program at Hamilton Public Health Services. Hamilton. "Vaccine hesitancy – why has the public turned against vaccines?" November, 21, 2013.

145. University of Western Ontario Department of Microbiology & Immunology Invited Speakers Series. "Macrophage phagocytosis is required for control of nasopharyngeal colonization". November 7<sup>th</sup>, 2013
146. McMaster Immunology Research Centre Infection & Immunity Seminar Series. "Macrophages- my favourite cell". May 29<sup>th</sup>, 2013.
147. Panel on the Status of Women in Science & Technology. The Canadian Science Policy Centre. Panel participant. April 23<sup>rd</sup>, 2013. <http://www.youtube.com/watch?v=18psL0ilZOk>
148. Macrophage Immunobiology, Current Research and Prospects. Kavli Royal Society International Centre U.K. "Macrophage scavenger receptors and immune defence in the upper respiratory tract". April 13, 2013.
149. MRC Centre for Inflammation Research Seminar Program. Edinburgh, U.K. "Interplay between chronic inflammation, age & anti-bacterial activity". April 12, 2013.
150. Molecular & Integrative Physiological Sciences seminar series. Harvard School of Public Health. Boston, U.S. "Macrophage phagocytosis - old cells protecting old people". March 26<sup>th</sup>, 2013.
151. Respiratory Research Rounds. Firestone institute. "Phagocytosis & age-associated inflammation - an evolutionary approach". February 12<sup>th</sup>, 2013.
152. Scavenger Receptors Nomenclature Workshop, Division of Allergy, Immunology, and Transportation, National Institute of Allergy and Infectious Diseases , National Institute of Health, Bethesda, Maryland. "Scavenger receptors and host-pathogen interactions". November 29 - 30, 2012.
153. Demystifying Medicine Seminar Series, McMaster University. "Pneumonia, still the old man's friend?" November 5, 2012.
154. Infection and Immunity Seminar Series, McGill University. "Aging gracefully with the pattern recognition receptors". October 25, 2012.
155. South-Western Ontario Pathogenesis Working Group meeting. University of Guelph. "Those "other" pattern recognition receptors: Phagocytic receptors in host defence to *Streptococcus pneumoniae*". September 29, 2012.
156. University of Calgary Invited Speaker. "The role of phagocytic receptors in recognition of *Streptococcus pneumoniae*". September 25, 2012.
157. Firestone Institute. St. Joe's Research Rounds. "Age-associated changes in monocyte/macrophage function predispose the elderly to infectious disease". January 27, 2012.
158. Department of Microbiology & Immunology. Queen's University, Kingston. "Save the grandparents! How an aging immune system predisposes the elderly to pneumonia". January 19, 2011.
159. Department of Pathobiology. University of Guelph. Invited speaker series. "Mechanisms of immune control of *Streptococcus pneumoniae* in the upper respiratory tract". January 14, 2011.
160. Society for Leukocyte Biology/International Endotoxin Society Meeting. Vancouver. "Immunosenescent macrophages cannot control *Streptococcus pneumoniae* colonization, resulting in invasive pneumococcal disease". October 7, 2010.
161. Institute of Molecular Biology and Biochemistry (IBMB) Invited Speaker Series. University of Waterloo. "The Scavenger Receptors: Ancient Pattern Recognition Receptors essential for the innate immune response". January, 26, 2010.
162. Department of Chemical Engineering. Invited Speaker Series. McMaster University. "Macrophage scavenger receptors: roles in adhesion, uptake & motility". November 11, 2009.
163. IIDR Opening Symposium. McMaster University. "New insights into an ancient disease: A novel macrophage receptor essential for host defence towards tuberculosis". October 24, 2009.
164. Bench-to-Bedside. McMaster University. "Recurrent pneumococcal infections: A breach in Innate Immunity". September 21, 2009.
165. Bowdish, D. "Cationic peptides in innate immunity", in Gordon, S. (ed.), Innate Immunity: Host recognition and response in health and disease, The Biomedical & Life Sciences Collection, Henry Stewart Talks Ltd, London. 2009. (online at <http://www.hstalks.com/?t=BL0612078-Bowdish>)

166. Invited speaker. The University of British Columbia. "The Class A Scavenger receptors are associated with host defence to tuberculosis". May 15, 2009.
167. Tuberculosis and International Child Health meeting. Imperial College London, UK. "Macrophage receptors in innate immunity: The class A scavenger receptors in mycobacterial and neisserial disease". March 7, 2008.
168. The Karolinska Institute. Stockholm, Sweden. "Genetic analysis of the scavenger receptor, MARCO". January 20, 2008.
169. The Whitechapel Society Invited Speaker Series. London, UK. "MARCO – a macrophage receptor associated with mycobacterial infection". June 14, 2007.
170. Invited Speaker Series. Trinity College, Dublin, Ireland. "MARCO – a macrophage receptor associated with mycobacterial infection". April 27, 2007.
171. 5th PhD Students Workshop. Riva del Gara, Italy. "Fundamental concepts in immunology". January 25, 2007.
172. 6th Annual Meeting of the Canadian Society of Microbiology. "LL-37, a host defence peptide with immunomodulatory properties". June, 21, 2006.
173. Invited Speaker Series. University of Gothenburg, Sweden. "LL-37, a human host defence peptide with immunomodulatory properties". March 3, 2006.
174. Innate Immunity in Human Disease: BC Research Institute for Children's & Women's Health. "LL-37 is a host defence peptide which interacts directly with monocytes & epithelial cells and modulates the innate immune response". February, 1, 2005.
175. 8th Biennial Conference of the International Endotoxin Society. Kyoto, Japan. "The host defence peptide LL-37 is a multi-functional immunomodulator". November 15-18, 2004.
176. International Symposium SFB 617 – Molecular Mechanisms of Epithelial Defense. Kiel, Germany. "The involvement of peptides in host defense against infections". June 11-13, 2004

### **Artistic works**

- Wrote and performed "The Perils of Being Born in the Fall", a one-person performance that explores why being born in the Fall is associated with health risks.
  - Helen Gardiner Phelan Theatre, Toronto Fringe Festival. July 2-10, 2025 (6 performances)
    - 5/5 Review in Next Magazine. "Fringe review: 'The Perils of Being Born in the Fall' provides laughter, tears and scientific history". July 8, 2025. [Link](#)
  - Hamilton, Theatre Inc. Hamilton Fringe Festival. July 17-27, 2024 (4 performances)
  - The Zoetic Theatre. McMaster Institute for Research on Aging -Sage Conversations series. November 12<sup>th</sup>, 2024.

### **Community Engagement/Knowledge translation:**

#### **Topic: COVID-19**

#### **Text Interviews:**

- i. The Canadian Press (CTV and other syndicates). For Canadians seeking a non-mRNA COVID vaccine, lack of Novavax shot is 'unfair,' advocates say. Oct. 3, 2024 [Link](#)
- ii. CBC News. COVID rapid tests may be trickier to find at pharmacies this fall. Here's what you need to know. September 29, 2024. [Link](#)
- iii. Waterloo Region Record. Pandemic didn't take the summer off. 'There is still a lot of COVID-19 around,' expert says. September 20, 2024. [Link](#)

- iv. The Toronto Star. What a rising summer wave says about Canada's long-term future with COVID. July 27, 2024. [Link](#).
- v. CBC News. Scientists closing in on why some people never get COVID. That could help with future vaccines. Jun 27, 2024. [Link](#)
- vi. Waterloo Region Record. June 11, 2024. Waterloo Region stops reporting COVID-19 outbreaks, deaths and hospitalizations. [Link](#)
- vii. AFP Factcheck. Updated Alberta Covid-19 vaccine advice misrepresented online. April 23, 2024. [Link](#)
- viii. The Globe and Mail. February 9, 2024. An alarming number of my friends have COVID-19. Are we in another wave? [Link](#)
- ix. The Hamilton Spectator. February 9, 2024. McMaster creates mouse ICU to study link between dementia and respiratory infection. [Link](#)
- x. Toronto Star & syndicates. April 26, 2023. A new COVID subvariant is spreading quickly. Here's what you need to know. [Link](#)
- xi. The Record. March 17, 2023. The pandemic taught us that when disaster strikes, we are not equally at risk. [Link](#)
- xii. The Record. March 10, 2023. Deaths fell but hospitalizations surged in Waterloo Region in third year of the COVID-19 pandemic. [Link](#)
- xiii. The Record. January 20, 2023. Hospital cases still high as 'Kraken' looms. [Link](#)
- xiv. The Globe and Mail. January 6, 2023. What Canadians need to know about the Omicron 'Kraken' subvariant XBB.1.5. [Link](#)
- xv. The Saxon. December 27, 2022. Here's why public health predicts more COVID-19 infections in 2023. [Link](#)
- xvi. CBC News. December 26, 2022. The virus behind COVID-19 is mutating and immune-evasive. Here's what that means. [Link](#)
- xvii. Eminetra. November 10, 2022. Will Doug Ford and Kieran Moore reinstate mask mandates? [Link](#)
- xviii. Guelph Mercury Tribune. October 21, 2022. The sons of Omicron: New COVID variants — what researchers are seeing, and what they worry about. [Link](#)
- xix. National Post & syndicates. July 30, 2022. Is COVID prematurely aging our immune systems? [Link](#)
- xx. Eminetra Canada. July 30, 2022. Is COVID prematurely aging our immune systems? [Link](#)
- xxi. Toronto Star. April 16, 2022. Everyone has COVID but you? Could you be immune? [Link](#)
- xxii. The Canadian Press. Apr 6, 2022 'A PR disaster': Experts worry messaging may hinder fourth-dose uptake. [Link](#)
- xxiii. The Toronto Star. February 28, 2022. Discussing challenges for people who are immunosuppressed and cannot be fully protected by vaccination. [Link](#)
- xxiv. CBC. February 17, 2022. Discussing challenges for people who are immunosuppressed and cannot be fully protected by vaccination. [Link](#)
- xxv. CBC. January 28, 2022. Explaining differences in waning immunity between adults and children. [Link](#)
- xxvi. CBC. January 13, 2022. Explaining challenges with relying on rapid tests. [Link](#)
- xxvii. The Hamilton Spectator. December 30, 2021. Hospitalizations growing as Hamilton reports nearly 1,000 new COVID cases. [Link](#)
- xxviii. The Hamilton Spectator. December 29, 2021. Omicron has reached Hamilton's long-term care homes. What does this mean? [Link](#)
- xxix. Medical Press. December 16, 2021. COVID-19 vaccine inequity allowed Omicron to emerge. [Link](#)
- xxx. The Conversation. December 14, 2021. COVID-19 vaccine inequity allowed Omicron to emerge. (picked up by other news sources) [Link](#)
- xxxi. CBC Manitoba. November 23, 2021. 4th-wave COVID outbreaks at Manitoba care homes upsetting but 'not surprising,' expert on aging says. [Link](#)

- xxxii. Zoomer. November 8, 2021. Your nutritional blueprint to better health. [Link](#)
- xxxiii. CBC. October 29, 2021. Booster shots, 3rd doses and who needs them. [Link](#)
- xxxiv. Edmonton Journal. August 23, 2021. COVID-19, kids and schools: Why we need to put the risks in perspective. [Link](#)
- xxxv. Scientific American. Vaccines need not completely stop COVID to curb the pandemic. January 18, 2021 [Link](#)
- xxxvi. Global News. October 20, 2020. Lab supply shortages affecting Canadian research on COVID-19. [Link](#)
- xxxvii. CBC. September 5, 2020. What the level of COVID-19 immunity in Canada could mean for the vaccine hunt. [Link](#)
- xxxviii. CBC. June 30, 2020. There's no quick post-pandemic fix for Canada's long-term care facilities, say experts. [Link](#)
- xxxix. Zoomer. May 22, 2020. COVID-19 primer: What we know and what we don't know. [Link](#)
- xl. CBC. April 21, 2020. Federal government has limited ability to ramp up COVID-19 testing nationwide, say officials. [Link](#)
- xli. Slate. April 11, 2020. WHO investigating reports of coronavirus patients testing positive again after recovery. [Link](#)
- xl.ii. CTV. April 9, 2020. Lack of resources led to limited COVID-19 testing, but new options are on the way. [Link](#)
- xl.iii. Energetic City. April 9, 2020. Coronavirus: Why isn't Canada using blood tests for COVID-19? [Link](#)
- xl.ii. Global News. April 7, 2020. Coronavirus: How B.C. is 'bending' the curve and why there's hope for Ontario and Quebec. [Link](#)
- xl. Global News. April 2, 2020. Canada may be missing thousands of coronavirus cases, experts say. [Link](#)
- xlvi. Timmins Today. April 1, 2020. CANADA: How long will coronavirus measures last? Experts say June or July. [Link](#)
- xl.ii. Global News. April 2, 2020. How families are managing being 2 metres away from grandparents. [Link](#)
- xl.ii. ABC News. March 30, 2020. 'No metro area will be spared': Officials warn more cities will face outbreaks. [Link](#)

## Broadcast Interviews:

- i. CBC. The National. June 28, 2024. Some people never get COVID-19 – researchers may now know why. [Link](#)
- ii. CBC Ontario Today Radio program. November 1, 2023. What do you need to know about the new XBB.1 vaccine?
- iii. CBC Ontario Morning Radio Programs. January 20, 2023. Omicron subvariant expected to become dominant.
- iv. The Agenda with Steve Paikin. November 14, 2022. What does COVID-19 do to immunity? [Link](#)
- v. Ontario Today. September 6, 2022. Syndicated interview answering live questions about COVID-19, immunity and booster shots.
- vi. CityNews Ottawa. July 15, 2022. Ottawa Public Health reporting increase in COVID-19 hospitalizations. [Link](#)
- vii. This Matters - The Toronto Star Podcast. COVID restrictions are lifting but some are left behind. March 3, 2022. [Link](#)
- viii. Sickboy podcast. March 28, 2020. Busting myths about COVID-19. [Link](#)
- ix. The Future of podcast. April 6, 2020. Coronavirus special. [Link](#)
- x. CTV News: Who should get 4th doses? [Link](#) April 25, 2024
- xi. Global News. April 16, 2022. How should vulnerable people protect themselves during the 6th wave? [Link](#)
- xii. The Agenda. March 24, 2022. What to know about the latest variant, BA.2. [Link](#)
- xiii. CBC. April 8, 2022. Is a vaccine that blocks COVID-19 altogether possible? [Link](#)
- xiv. CBC National. Syndicated series of radio shows for National audiences. March 31, 2022. Who gets 4th doses and why?
- xv. CBC Ontario. Syndicated series of radio shows for Ontario audiences. March 1, 2022. What does the lifting of restrictions mean for the vulnerable?
- xvi. Instagram Live with Dr. Zain Chagla. August 3, 2021. Vaccine hesitancy. [Link](#)
- xvii. City News Ottawa. The Rob Snow Show. January 10, 2022. Is deltacron real?
- xviii. CBC. January 10, 2022. Series of syndicated interviews on how to best use rapid tests and what it means not to have accurate numbers of COVID infections without PCR tests.
- xix. Global News. March 20, 2022. COVID-19: Should mask mandates continue in Canada? [Link](#)
- xx. The Conversation. December 19, 2021. Vaccine hesitancy.
- xxi. Global News: November 29, 2021. How to handle unvaccinated loved ones during the holidays. [Link](#)
- xxii. CBC. October 4, 2021. Series of syndicated interviews on how influenza and other seasonal viruses intersect with COVID infections.



- xxiii. Global News: September 27, 2021. Explaining vaccine branding. [Link](#)
- xxiv. CBC. September 27, 2020. Nurse with long-haul COVID and one vaccine dose asks for exemption from vaccination rules. [Link](#)
- xxv. The National (CBC). Explaining who needs a 3rd dose of the COVID vaccine. August 18, 2021
- xxvi. CBC. August 18, 2021. Series of syndicated interviews on defining a breakthrough infection and who is most likely to have them.
- xxvii. CBC. August 3, 2021. Series of syndicated interview on what the 4th wave of COVID will look like in Canada.
- xxviii. CBC. July 2021. Series of syndicated interviews on what to expect for cold & flu season.
- xxix. The Agenda with Steve Paikin. April 17, 2020. In search of COVID-19 immunity. [Link](#)
- xxx. CHCH. April 17, 2020. Researchers at McMaster University looking into different ways to treat the Coronavirus. [Link](#)
- xxxi. Newstalk 1010. October 28, 2020. Explaining why some studies show antibody levels to SARS-CoV-2 decrease with time.
- xxxii. CBC. October 5, 2020. Series of syndicated interviews on ‘superspreading’ COVID-19.
- xxxiii. CBC. September 24, 2020. Series of syndicated interviews on the COVID response in the 2020 Throne Speech.
- xxxiv. Big 96.3. Explaining vaccine strategies: [Link](#)
- xxxv. Explaining age-related changes in immune responses [Link](#)
- xxxvi. CBC Radio 1. July 15, 2020. Series of Syndicated interviews on the relative risk of opening bars, nightclubs and restaurants in the context of school re-openings.

#### Knowledge Translation:

- i. ‘COVID-19 vaccines webinar’ Canadian Arthritis Patient Alliance. With Dr. Inés Colmegna (McGill), Natalie Lalonde (Patient partner) and Dawn Richards (patient partner and president of CAPA). November 4, 2023. [https://youtu.be/NmtP34\\_FVxM?si=zwCV-BUSeQ7CaSb8](https://youtu.be/NmtP34_FVxM?si=zwCV-BUSeQ7CaSb8)
- ii. “Ageism and the pandemic: How Canada continues to let older adults suffer and die from COVID-19”. Article for The Conversation. April 2, 2023.
- iii. Study update for research participants in the TIMING study. “The immunology of vaccines & dosing intervals”. August 15, 2022.
- iv. St Thomas Moore High School. Keynotes speaker for their “Brain Bee” event. “COVID information and misinformation - lessons learned from a scientist turned science communicator”. March 18, 2022.
- v. “COVID-19 infections and vaccinations in long-term care”.
  - a. Presentation to COVID-19 Immunity Task Force Field Studies. March 11, 2022.
  - b. Presentation to long-term care, retirement and assisted living communities. March 23, 2022
  - c. Town hall for research participants and their families. October 20, 2022.
- vi. Moderated discussion on how to incorporate vaccination (influenza, pneumococcal, COVID-19) and surveillance into the National Lung Health Agenda. January, 24, 2022.
- vii. “Preventing a twindemic through vaccination”. (Moderator – speakers include Dr. Mark Loeb, Dr. Jennie Johnstone and Dr. Marek Smieja) Policy forum on the importance of preventing influenza and pneumococcal pneumonia as well as COVID-19 via vaccination. Hosted by the Lung Health Foundation.
- viii. “COVID-19 4th doses in long-term care”. Partner update for 23 long-term care and retirement communities in our CITF-funded study. December 2021



- ix. Q&A session for partners of our CITF-funded grant of vaccine efficacy in First Nations Communities. December 16, 2021
- x. "COVID-19 infections & vaccinations in long-term care homes" Town Hall for Schlegel Villages. April 28, 2021, September 22, 2021 November 11, 2021
- xi. Speaker. COVID-19 Immunity Task Force Seminar. "Protecting Canada's long-term care residents from COVID-19: The evidence behind the policies". October 28, 2021. [Link](#)
- xii. "COVID-19 infections & vaccinations in long-term care homes" Town Hall for St. Joseph's Villa. June 10, 2021, September 8, 2021
- xiii. Explaining infection, immunity and how to keep a healthy immune for the Lung Health Foundation. [Link](#)
- xiv. Critical Thinking: Vaccines and Hesitancy Workshop presented by CMASTE and GlycoNet (Nov 26, 2021). This workshop covered the topics of vaccines, vaccine hesitancy, and the role that science teachers play as key knowledge translators for students. New resources were developed to help teachers to promote scientific literacy while tackling the issues surrounding the COVID pandemic, especially issues surrounding vaccines. These resources are adaptable to all K-12 levels. [Link](#)
- xv. Videos with Dr. Bowdish talking about her career as a scientist and tips and tricks she uses for discussions around vaccine hesitancy. [Link](#)
- xvi. "COVID in long-term care" Province of Ontario Lung Health Caucus meeting hosted by the Lung Health Foundation. November 11, 2020
- xvii. "Influenza vaccination in the context of COVID-19/SARS-CoV-2" Province of Ontario Lung Health Caucus meeting hosted by the Lung Health Foundation. September 24, 2020
- xviii. "Vaccination & COVID-19". Lung Health Forum for policymakers. July 9, 2020
- xix. "Protective immunity wanes in vaccinated long-term care residents" Invited presentation of my CITF funded work to the Vaccine Advisory group, which included representatives from PHAC, PHO and the Ontario Ministry of Health. These data were used to make recommendations for 3<sup>rd</sup> doses for long-term care residents in Ontario.
- xx. "Waning immunity and breakthrough infections and correlates of protection in Long Term Care Residents". Invited presentation of my CITF funded work to Variants of Concern Working Group. Public Health Agency of Canada.
- xxi. "Ongoing immunology research in COVID-19". Invited panelist for the Public Health Agency of Canada
- xxii. Can schools reopen safely? Infections in kids versus adults. [Link](#)
- xxiii. Content used by the Globe & Mail: [Link](#)
- xxiv. Newswise information series for journalists. [Link](#)

#### Topic: Infectious Disease

#### Text Interviews:

- i. The Guardian. June 6, 2025. A huge outbreak has made Ontario the measles centre of the western hemisphere. [Link](#)
- ii. Press Reader. June 5, 2025. Doctors warn of 'frightening' measles complication that can strike a decade after initial infection. [Link](#)
- iii. CBC News. June 4, 2025. Doctors warn of 'frightening' measles complication that can strike a decade after initial infection. [Link](#)
- iv. CBC News. April 24, 2025. Do I need a third dose of the measles vaccine? And other common questions answered. [Link](#)

- v. Pressreader. April 23, 2025. New potential measles exposure in southern Alberta including Calgary: AHS. [Link](#)
- vi. CBC News. April 12<sup>th</sup>, 2025. Measles outbreaks spark concern about ‘horrific’ neurological disorder. [Link](#)
- vii. The Hamilton Spectator. April 3, 2025. Hundreds of Hamilton students still suspended over missing vaccine records. [Link](#).
- viii. National Post. March 14, 2025. Amid measles outbreak in Ontario, RFK Jr.'s advice has Canadian experts alarmed. [Link](#)
- ix. The Chronical Herald (Metro). March 18, 2025. Why RFK Jr.'s measles interview has Canadian experts alarmed. [Link](#)
- x. Medscape. March 13, 2025. Measles Surging in Ontario. [Link](#)
- xi. The Hamilton Spectator. March 7, 2025. Religious groups in Norfolk are at the epicentre of a measles outbreak. Here’s why it affects you. [Link](#)
- xii. CBC News. March 4, 2025. With measles cases rising, Southwestern Public Health steps up immunizations. [Link](#)
- xiii. CBC News. March 4, 2025. Medical experts urge vaccination after more than 100 measles cases confirmed in Ontario this year. [Link](#)
  - Syndicated by NationTalk. March 5, 2025 [Link](#)
- xiv. The Hamilton Spectator. February 13, 2025. As measles spreads in southwestern Ontario, top docs urge early vaccination. [Link](#)
- xv. The Hamilton Spectator. January 22, 2025. Disease expert warns of danger of growing measles cases in Brantford-Brant, Haldimand-Norfolk. [Link](#)
  - Syndicated in other local news. [Penticton Herald](#) & [The Expositor](#)
- xvi. CBC. November 20, 2024. Largest N.B. measles outbreak in decades pushing Canada's case count to 5-year high. [Link](#).
- xvii. The Canadian Press. Jun 20, 2024. Video shows public health officials planning for possible H5N1 spread, not 'gearing up' for 'hoax'. [Link](#)
- xviii. CBC News. March 26, 2024. What to know about the measles vaccine — from who should get one, to how long immunity lasts. [Link](#)
- xix. Macleans Magazine. March 13, 2024. What comes next for Canada’s measles surge. [Link](#)
  - Summarized in other news outlets. [Link](#)
- xx. The Globe and Mail. Op-Ed. March 6, 2024. Measles is not some harmless childhood infection. [Link](#)
- xxi. CTV News. March 4, 2024. Four provinces confirm measles cases with Montreal deemed Canada’s epicentre [Link](#)
- xxii. The Hamilton Spectator. February 9, 2024. McMaster creates a mouse ICU to study the link between dementia and respiratory infection. [Link](#)
  - Discussion of our CIHR Brain Aging Grant studying post-pneumonia cognitive decline using our CFI infrastructure of the PreClinical Studies in Aging Laboratory
- xxiii. Toronto Star. January 22, 2023. Is cold and flu season worse this year? And is ‘immunity debt’ or ‘immunity theft’ at play? [Link](#)
- xxiv. CBC News. December 16, 2022. Why doctors recommend you get a flu shot this week. [Link](#)
- xxv. The Globe and Mail. November 11, 2022. Return of seasonal flu, RSV and other viruses could spell disaster for older Canadians, experts say. [Link](#)
- xxvi. McMaster Daily News. November 15, 2022. McMaster continues to strongly encourage masking & vaccination. [Link](#)
- xxvii. Toronto Star. November 2, 2022. Next two weeks are critical for getting flu vaccines, Dr. Kieran Moore warns. [Link](#)

- xxviii. CBC News. October 20, 2022. McMaster doctors warn upcoming flu season to be more 'intense and pronounced' than previous years. [Link](#)
- xxix. The Canadian Press & syndicates. October 12, 2022. Kids at higher risk of catching flu this season, experts warn. [Link](#)
- xxx. The Toronto Star & syndicates. August 12, 2022. Polio is back on the radar of Canadian health officials. [Link](#)
- xxxi. Toronto Star & syndicates. January 24, 2022. Beware of claims that promise to boost your immune system through superfoods or supplements, experts say. [Link](#)
- xxxii. CBC. December 24, 2021. Omicron's prevalence should shake off COVID-19's lingering stigma, experts say. [Link](#)
- xxxiii. Saltwire. December 10, 2021. Breakthrough cases rising in P.E.I., but experts say vaccines prevent death, hospitalization. [Link](#)
- xxxiv. CBC. August 26, 2021. What do we know about breakthrough COVID-19 cases? Experts break down the science. [Link](#)
- xxxv. Maple Ridge-Pitt Meadows News. September 1, 2021. 'Elusive' herd immunity: what will it take to get there with COVID-19? [Link](#)
- xxxvi. The Free Press. August 26, 2021. What do we know about breakthrough COVID cases? Experts break down the science. [Link](#)
- xxxvii. The Toronto Star. (Syndicated in the St. Catharines Standard and elsewhere). November 4, 2019. In the throes of a cold you do what makes you feel better. But are you treating the symptom or the disease? [Link](#)
- xxxviii. Chatelaine. January 19, 2016. 8 things you can do every day to avoid the flu. [Link](#)
- xxxix. Everything Zoomer. November 16, 2018. Ask the expert: Canada Research Chair talks flu & pneumonia prevention. [Link](#)
- xl. YouAreUNLTD. December 6, 2018. Flu shot? Done! Now get vaccinated against the dangers of pneumonia. [Link](#)

#### Broadcast Interviews:

- i. CBC Metro Morning. September, 5, 2025. Ontario's Chief Medical Officer calls for a provincial vaccine registry.
- ii. ABC (Australian Broadcasting Corpor Listen. July 22, 2025. Canada at the centre of North American measles outbreak. [Link](#)
- iii. CBC Radio 1. April 7, 2025. A major study suggests that the shingles vaccine could reduce dementia risk by 20 percent. Series of 16 syndicated radio interviews. [Link](#)
- iv. CBC Radio Ontario. April 4, 2025. Measles uptick and vaccine hesitancy. Series of 7 syndicated radio shows across Ontario.
- v. CBC Radio 1. Your World Tonight. April 3, 2025. New research suggests that getting the shingles vaccine could significantly lower your risk of dementia. [Link](#)
- vi. CBC Television. The National. April 3, 2025. New research suggests that getting the shingles vaccine could significantly lower your risk of dementia.
- vii. Barrie Today. March 3, 2025. Why measles cases are suddenly surging in Ontario. [Link](#)
- viii. The Current. March 3, 2025. Measles is surging. Do you need a booster? [Link](#)
- ix. CBC Radio 1. November 20, 2024. Series of syndicated interviews commenting on a measles outbreak in New Brunswick. [Link](#)

- x. CBC Radio 1. Day 6. Researchers create a mouse ICU. Discussion of our CIHR Brain Aging Grant studying post-pneumonia cognitive decline and our CFI infrastructure of the PreClinical Studies in Aging Laboratory. [Link](#)
- xi. 680 CJOB Radio. December 29, 2022. Risk of the flu.
- xii. CBC News. December 16, 2022. Health officials urge flu vaccines before holiday rush. [Link](#)
- xiii. October – November 2018. Spokesperson for the Canadian Lung Association’s pneumococcal vaccination campaign. [Link](#)
- xiv. CBC Radio. April 3, 2018. Series of 15 syndicated interviews commenting on a recent study (<http://rdcu.be/KwK5>) on germs in children’s bath toys and our homes in general.

#### Knowledge Translation:

- i. Clinical Roundtable on Vaccines and the Management of COPD. Canadian Thoracic Society. Sponsored by Pfizer Canada (no honorarium or speaking fees received, Pfizer had no control over the content). Moderated a round table discussion on pneumococcal vaccination in patients living with COPD. May 19, 2022.
- ii. Dundas Central Public School. Hamilton, ON. “Food Microbiology”. March – April, 2019
  - This is a series of lessons designed to complement the grade 5 curriculum and to teach how pH, osmosis, filtration, acidity and pasteurization are used to kill microbes in food.
- iii. National Medical Laboratory Week. “The microbiome & aging: How the microbes that live on and in you conspire against you.” April 26, 2018.
- iv. Amica Retirement Community. Hamilton, ON. “Why are older adults more susceptible to pneumonia and respiratory infections?”
- v. Public outreach event at Amica Retirement Community. “Age, infection and inflammation”. July 12, 2016.
- vi. PROSPECT trial mechanistic sub-study retreat. “What are endotoxins and cytokines?” June 9, 2014.
- vii. Lung Association Webinar. “A Breath of Fresh Air: Preventing Pneumonia in Older Adults”. April 14, 2014.

#### Topic: Immunology

#### Text Interviews:

- i. Maclean’s. Canada Needs a National Vaccination Registry. August 7, 2025. [Link](#)
- ii. CBC News. Vaccination, immunity and records: Your questions on measles answered. July 13, 2025. [Link](#)
- iii. Toronto Star. Ontario’s flu season is the worst in years. Here’s what you need to know. February 24, 2025. [Link](#)
- iv. CBC News. Why so many people in Canada seem to be sick right now. February 12, 2025. [Link](#)
- v. The Globe and Mail. January 26, 2025. COVID-19 vaccines: What to expect in the next few months. [Link](#)
- vi. Waterloo Region Record. January 21, 2025. Flu ramps up, putting children and seniors at risk, Ontario says. [Link](#)
- vii. CBC News. August 28, 2024. You might want to wait until fall for your next COVID-19 shot, doctors say. Here's why. [Link](#)
- viii. The Globe and Mail. August 8, 2024. There’s been a summer surge in COVID-19 cases. Should I get a booster shot now or wait until the fall for the new updated COVID vaccine? [Link](#)

- ix. Hamilton Spectator. July 5, 2024. New report shows ‘striking’ rate of COPD, lung cancer in Brant. Here’s what could be causing it. [Link](#)
- x. Brighter World, McMaster University. May 26, 2023. The right vaccine at the right time protects older adults. [Link](#)
- xi. CHATELAINE. April 6, 2023. Is Immunity Debt Real? Two Experts Debunk The Health Phenomenon. [Link](#)
- xii. The Record. March 23, 2023. Vaccine uptake falters after ‘huge misstep in our public communication’. [Link](#)
- xiii. The Globe and Mail. March 10, 2023. Why isn’t everyone being offered a COVID booster this spring? [Link](#)
- xiv. McGill University. February 10, 2023. Does COVID-19 Mess with the Immune System? [Link](#)
- xv. CBC News & syndicates. February 8, 2023. COVID-19 vaccination during pregnancy helps protect newborns, Canadian study suggests. [Link](#)
- xvi. Toronto Star. February 7, 2023. COVID-19 vaccine uptake plunges in Canada. [Link](#)
- xvii. The Globe and Mail. January 20, 2023. Does COVID-19 disrupt the immune system? [Link](#)
- xxiii. The Bobr Times. January 8, 2023. A new type of vaccine could curb COVID-19. [Link](#)
- xix. Global News. January 7, 2023. A mucosal vaccine could be a COVID-19 game-changer. So why doesn’t Canada have one? [Link](#)
- xx. CTV News. December 20, 2022. Managing your child's asthma during flu season is easier with these resources: experts. [Link](#)
- xxi. Ottawa Citizen & syndicates. December 16, 2022. The viral immunity debate has no simple answer — but masks make a difference, says researcher. [Link](#)
- xxii. Eminetra. November 16, 2022. Will mask mandates doom us to a perpetual pandemic by slowing children’s immunity? [Link](#)
- xxiii. CityNews & syndicates. September 1, 2022. Canada approves Moderna's Omicron COVID vaccine. [Link](#)
- xxiv. Best Health. August 15, 2022. Should You Get Another COVID Vaccine? [Link](#)
- xxv. The Hamilton Spectator. July 28, 2022. Which three doses protect older people better: Moderna or Pfizer? McMaster study finds Moderna more effective in long-term-care. [Link](#)
- xxvi. McKights Long-Term Care News. July 28, 2022. Moderna vaccine better at protecting long-term care residents: study. [Link](#)
- xxvii. Newswise. July 26, 2022. Moderna vaccines better protect long-term care home residents. [Link](#)
- xxviii. The Toronto Star. July 14, 2022. Should you get a fourth COVID vaccine dose now or in the fall? Five experts weigh in. [Link](#)
- xxix. The Hamilton Spectator. June 28, 2022. What do we know and don’t about COVID-19 vaccines. [Link](#)
- xxx. CBC News. June 21, 2022. Some Quebecers should get periodic COVID-19 boosters, province's vaccine committee says. [Link](#)
- xxxi. The Scientist. April 26, 2022. Smallpox vaccine recruits skin bacteria to fight disease. [Link](#)
- xxxii. Scientific American. Syndicated by the [Irish Times](#), Slate and elsewhere. April 10, 2020. What immunity to COVID really means [Link](#)
- xxxiii. Advisory Board. April 15, 2020. We can't reopen the country without answering these 3 questions. [Link](#)
- xxxiv. Canadian Medical Journal. September 7, 2021. What’s the evidence for COVID-19 booster shots? [Link](#)
- xxxv. CBC. January 12, 2022. Quebec recommends 3rd dose for those who've recently had COVID-19. [Link](#)
- xxxvi. CBC. October 28, 2021. The latest on the coronavirus outbreak for Oct. 18. [Link](#)
- xxxvii. National Post & syndicates. August 19, 2021. COVID booster shots are being rolled out for all Americans. What about Canada? [Link](#)
- xxxviii. Saltwire & syndicates. August 19, 2021. COVID booster shots are being rolled out for all Americans. What about Canada? [Link](#)
- xxxix. Canadian Medical Association Journal. August 20, 2021. What’s the evidence for COVID-19 booster shots? [Link](#)

- xl. Medical Press. August 19, 2021. Study supports third vaccination for seniors. [Link](#)
- xli. Global News. April 12, 2019. Remember to get your vaccine booster - adults can lose immunity as they age. [Link](#)
- xlii. Caledon Enterprise. April 26, 2021. Can grandparents in Peel see their grandkids after their first COVID vaccine shot? [Link](#)

#### Broadcast Interviews:

- i. CBC Metro Morning. Why doesn't Canada have a national vaccine registry? August 22, 2025
- ii. CityNews. Ontario ERs hit hard by intense flu season. February 12, 2025. [Link](#)
- iii. CJOB January 4, 2024. What is human metapneumovirus and is it causing outbreaks in Canada?
- iv. CJOB. June 3, 2024. Why aren't older adults getting their shingles vaccine?
- v. CBC Radio 1 Syndication (16 interviews). April 29, 2024. National Immunization Awareness Week.
- vi. Zoomer Media. April 18, 2024. Everything explained: The importance of immunization. [Link](#)
- vii. Inside the Village. March 29, 2024. Suspensions loom for thousands of unvaccinated students. [Link](#)  
•Thorold Today. March 19, 2025. The Hot Take: Niagara's measles outbreak has Covid roots. [Link](#)
- viii. The Province. April 12, 2023. Ageism and the pandemic: How Canada continues to let older adults suffer. [Link](#)
- ix. CBC Radio Metro Morning. February 2, 2023. A COVID-19 vaccine maker in Quebec is shutting down. Immunologist Dawn Bowdish weighs in on what that means for Canadians. [Link](#)
- x. CityNews. December 13, 2022. Why are children across Canada getting so sick this year? [Link](#)
- xi. Billy Kelly Show on CHML 900. September 1, 2022. COVID-19 booster doses, what is available and how they work.
- xii. Global News. July 30, 2022. Who should take the second booster shot? [Link](#)
- xiii. CHCH. July 26, 2022. Moderna vaccines better protect long-term care home residents: study. [Link](#)
- xiv. CTV News. April 25, 2022. Experts advise Canadians to consider personal risk before getting 4th COVID vaccine dose. [Link](#)
- xv. Interview in which I discuss the benefits of vaccination for older adults on Metro Morning podcast, Thu Nov 12, 2015, from CBC Radio Toronto (Highlights). Released: 2015. Track 1. Genre: Podcast. and on London AM 960 The Pulse with Devon Peacock (airdate: Nov 13, 2015). [Link](#)

#### Knowledge Translation:

- i. Discussing vaccination decisions in long-term care and retirement homes (with reference to our CITF funded research). January 2022. [Link](#)
- ii. Series of "Back to Mac" posts on questions around 3rd doses. [Link](#)
- iii. Newswise. Discussing third doses/boosters with reference to our CITF funded study on waning immunity in long-term care. November 16, 2021. [Link](#)
- iv. Healthing. Should those in LTC homes get a third COVID shot? [Link](#)
- v. Insauga. Ontario's move to add third booster for seniors backed by study at McMaster in Hamilton. August 18, 2021. [Link](#)
- vi. PROSPECT knowledge users meeting (research coordinators, nursing staff, and others). "Immune dysregulation and PROSPECT patient possible impact". April 16, 2019. I contributed to this educational session by explaining our findings on immune dysregulation in critically ill patients and describing how this affects patient outcomes.



- vii. Moderator at the Vaccination Policy Forum hosted by the Lung Association- Ontario. The purpose of this event was to provide up-to-date information on adult vaccinations to policy makers, health professionals and community groups. November 27, 2018 [Link](#)
- viii. Dundas Library. April, 9, 2018. "The Aging Immune System".
- ix. Westdale Library. September, 19, 2017. "The Aging Immune System".
- x. PROSPECT webinar. June 7th, 2017. "The role of the microbiome in immune dysfunction."
- xi. PROSPECT (Probiotics for prevention of infection clinical trial) retreat. "The immunology of frailty and implications in the ICU". October, 3, 2016. Talk for research co-ordinators, nurses and PIs of the PROSPECT clinical trial. Gravenhurst, ON.
- xii. Amica Retirement Community. December 12, 2013. "Health & the aging Immune system". With Dessi Loukov.
- xiii. Café Scientifique. Canadian Human Immunology Network. April 26<sup>th</sup>, 2013. Panel speaker. "Vaccines: Truths and Myths". Hamilton, ON.

### Topic: Aging & Immunity

#### Text Interviews:

- i. How the microbiome can affect your overall health and its effects on aging. Ep 15, Decoding Healthcare Research. Agora Health. December 2023.
  - a. YouTube: <https://youtu.be/yhlsiAqnxZM?feature=shared>
  - b. Spotify: <https://open.spotify.com/episode/0flH90zGfa5bXAVoy1ZiiF?si=f3680075df4b4a2a>
  - c. Amazon Music: <https://music.amazon.com/podcasts/2e2f7513-9491-40e9-a9dc-a31859560d1d/episodes/fce86aa3-0d05-4245-ab87-08be6b86323b/decoding-healthcare-research-how-the-microbiome-can-affect-your-overall-health-and-its-effects-on-aging-ep-15>
  - d. Apple Podcasts: <https://podcasts.apple.com/co/podcast/how-the-microbiome-can-affect-your-overall-health-and/id1712499485?i=1000642050180&l=en-GB>
- ii. PsyPost. July 15, 2022. New research suggests adverse childhood experiences accelerate the biological processes of aging. [Link](#)

#### Knowledge Translation:

- i. Science on Tap. March 22, 2019. "Secrets of the Super-Centenarians: What does it take to live a long (and healthy) life?". Hamilton, ON.
  - This was a public lecture (100+ people) organized by the McMaster Graduate Students Union.
- ii. Hamilton Association of Arts, Literature and Science. September 10, 2016. "Age, infection and inflammation".

### Topic: Lung Health

#### Text interviews:

- i. Canadian Press. "How to protect yourself from bad air quality due to wildfire smoke" July 29, 2024. [Link](#)
  - Syndicated in 62 news outlets.
- ii. Cottage Life. "A new public alert is notifying Canadians about poor air quality from wildfires." June 20, 2024. [Link](#).

#### Broadcast interviews:

- i. CFRA. The Morning Rush with Bill Carroll. March 18, 2024. What is COPD and why aren't we doing more about it? [Link](#) (starts at 1:29:29)

#### Knowledge Translation:

- i. McMaster Undergraduate Student Lung Health Club. "Lung health research in the Bowdish lab and across campus". November 13, 2018
- ii. Deputation for the Standing Committee on Social Policy on Bill 41 – "The Lung Health Act will benefit older adults." Queen's Park, Toronto, ON. June 6, 2016.
- iii. Ontario Lung Association – Breathe Gala. January 28<sup>th</sup>, 2016. I was the MC for the major fundraising event for the Ontario Lung Association. This evening raised >\$168,000 to support lung health research in Ontario.
- iv. Lung Association Pop-up Park "Take a Breather" event. "Why I'm Taking a Breather with the Lung Association." November 3, 2016.
- v. Lobby day in support of Bill 41 "The Lung Health Act". Queen's Park, Toronto, ON. November 30, 2015
  - I, and some of my trainees, met with MPPs including Speaker of the House, MPP Dave Levac on the importance of establishing a Lung Health Act for Ontarians.
- vi. Ontario Lung Association/Firestone Respiratory Health Institute joint presentation & fundraiser. "Introducing the Breathing as One campaign". October, 26, 2015
- vii. Presentation hosted by the Lung Association for the Investors Group. "Lung Health is Good Health in Older Adults". August 25, 2015.

#### Topic: Miscellaneous

#### Text Interviews:

- I. Next Magazine. July 8, 2025. 'Fringe review: 'The Perils of Being Born in the Fall' provides laughter, tears and scientific history.' [Link](#)
- II. Bio-Rad: Lab Crunches. February 7, 2025. Voices of Women in Science: Professor Dawn Bowdish. [Link](#)
- III. The Hamilton Spector. July 9, 2024. This McMaster infectious-disease researcher is taking her work to the Fringe stage. [Link](#)
- IV. Policy Options - Institute for Research on Public Policy. October 18, 2022. Remote rehabilitation can offer health-care relief, but there are still problems. [Link](#)

#### Broadcast interviews:

- I. CBC Radio Kelowna. RFK has cancelled contracts on mRNA vaccines – what does this mean for Canada? August 7, 2025
- II. CBC Listen. June 20, 2025 Scientific Sovereignty – How Canadian scientists are coping with U.S. cuts and chaos. [Link](#)
- III. CTV News. 'Incredibly worrisome': Canadian research facing uncertainty after U.S. funding freeze. February 12, 2025. [Link](#)
- IV. CHCH. Canadian research funding uncertain under Trump administration. February 6, 2025. [Link](#)

#### Knowledge Translation:



- I. "The perils of being born in the Fall" A solo-storytelling show at the Toronto Fringe Festival. July 2-10, 2025 (6 performances)
- II. "The perils of being born in the Fall". A solo-storytelling show at the Hamilton Fringe Festival. July 25-28, 2024. (4 performances)
- III. "Insights into obstacles and challenges in Clinical Research". Career development seminar for clinician scientists in the Division of Respiriology. Clinical Research Rounds. The Firestone Institute for Respiratory Health. January 16, 2023.
- IV. Janssen Future Leaders Program. McMaster University. "How I lead an Academic Research Institute". September 21, 2022.
- V. Aldershot High School, I-STEM Program, Human Book Event. November 14, 2018.
- viii. I was a "human book" where the students could ask me anything about a career in STEM.
- VI. Donor Appreciation Day. Research participants were invited to the lab to hear a presentation on our progress, meet the trainees who performed the work and have a tour of the lab and facilities. June 19, 2018. [Link](#)
- VII. Dundas Central School grades 3-5. "Who's got more cooties – boys or girls?". February 22, 2018.
- VIII. McMaster Women in Science and Engineering. Mentor of the Month. "Speaking as an expert...Finding your scientific voice and using it for the greater good." June 21, 2017.
- IX. McMaster Children and Youth University. "Who's got more cooties, boys or girls?". April 29, 2017.
- X. McMaster Undergraduates in Research Association. "Opportunities for undergraduates in research." December 1, 2016.
- ix. The Human Book event, "Careers" edition. Halton District School Board. May 4, 2016.
- x. At this event I was a "Human Book". Participants could check me out for 20 min intervals and ask me questions about science or research. Media coverage by the radio station Y108. [Link](#)
- xi. The Cerebral Café – a discussion of Death & Disease. Hamilton, ON with Drs Ellen Badone, Megan Brickley and Ms Rochelle Martin.
- XI. Research2Reality social media campaign. Research2Reality is a groundbreaking initiative that shines a spotlight on world-class scientists engaged in innovative and leading edge research in Canada. This video series is continually updated to celebrate the success of researchers who are establishing the new frontiers of science and to share the impact of their discoveries with the public. February 24, 2015. [Link](#)
- XII. "Lung Health is Good Health in Older Adults". Presentation to Hamilton Probus club. April 14, 2015.
- XIII. "My career path as a scientist". Westdale High School- Career day. Hamilton, Ontario. March 31, 2015.
- XIV. Lung Association Breathe Gala. Interview in support of lung health. January 29, 2015.
- XV. Café Scientifique "Breathing Easy: Lung Health is Good Health for Older Adults". Public event co-sponsored by the Ontario Lung Association and the Canadian Longitudinal Study of Aging. Hamilton, Ontario. November 27<sup>th</sup>, 2014.
- XVI. Ontario Lung Association Board meeting. "Aging and Lung Health – spreading the word." Toronto, ON. October 24, 2014.
- XVII. McMaster Undergraduates in Research Association (MURSA). "Undergraduate opportunities in Research". October 22, 2014.
- XVIII. Presentation of donation from Gamma-Dynacare to the Lung Association. "Lung Health is Good Health in Older Adults" July 16, 2014
- XIX. MIRC Trainee Association Event. "Choosing a post-doctoral position, in Canada or overseas." August 12, 2013.
- XX. FHS Post-doctoral fellow association. "Advice on applying for a faculty position." June 5, 2013.
- XXI. Presentation for the Hamilton chapter of CAGIS (Canadian Association of Girls in Science). McMaster University. "Good germs/Bad germs." March 7th 2013.

- XXII. Biomedical Leadership conference. University of Guelph. "My career path: From McMaster & back again." January, 26th, 2013.
- XXIII. McMaster Undergraduates in Research Association (MURSA). "Undergraduate opportunities in Research." October 12, 2012.