

# **Julia Green-Johnson, PhD**

**Associate Professor, Faculty of Science at University of Ontario Institute of Technology**  
Oshawa, ON, CA

Leading immunologist and microbiologist advancing knowledge of how microbes and food components influence the immune system

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## **Description**

Fascinated by the role bacteria play in interacting with our immune system, Julia-Green Johnson, PhD, an immunologist and microbiologist, has been leading important research in this area at the University of Ontario Institute of Technology (UOIT) for over a decade, with the goal of improving our understanding of the effects of diet and gut microbes on immunity and health of humans and animals.

An Associate Professor in UOIT's Faculty of Science, the impact of Dr. Green-Johnson's work has had far-reaching implications. Her research is supported by industry and government with the goal of understanding how microbes and foods components affect the immune system. Sharing her knowledge and expertise with her students, Dr. Green-Johnson hopes collaborative research will inspire them to continue pushing the boundaries of discovery.

Looking through a microscope teeming with microbes in her high school biology class was enough to pull Dr. Green-Johnson into world of science, and she has been immersed in the study of their effects on the immune system ever since. Dr. Green-Johnson earned both her Bachelor of Science (Honours) and her Master of Science from the Department of Microbiology at the University of Saskatchewan in 1983 and 1986, respectively. She obtained her Doctorate from the Department of Microbiology and Immunology at Queen's University in Kingston, Ontario in 1990, examining effects of aging on the immune system; and completed a Postdoctoral Fellowship at the Manitoba Institute of Cell Biology at the University of Manitoba in 1994, focusing on neuro-immune interactions.

She began her teaching and research career 20 years ago at Acadia University in Wolfville, Nova Scotia where she first held the position of assistant professor (CLT) in the Department of Biology; then she was appointed assistant professor (tenure track) in Acadia's School of Nutrition and Food Science, and later became an honorary research associate in the Department of Biology.

Actively involved in sharing her research for the benefit of organizations dedicated to advancing knowledge in microbiology, immunology and nutrition, Dr. Green-Johnson is a member of the Canadian Society of Microbiologists, the American Society of Microbiologists, the Institute of Food Technologists, the American Association of Immunologists, and the Canadian Institute of Food Science and Technology.

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## **Industry Expertise**

Dairy, Research, Laboratory Services, Health and Wellness, Education/Learning

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## **Topics**

Microbiology and Immunology, Diet and Immunity, Microbe-Host Cell Interactions, Neuroimmune Interactions, Gut Microbes, Immune System, Dietary Fibre, Fructans and Digestive Health, Mucosal and Systemic Immunity, Biological Effects of Dairy and Soy Ferments

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## **Affiliations**

Canadian Society of Microbiologists, American Society of Microbiologists, Institute of Food Technologists, American Association of Immunologists, Canadian Institute of Food Science and Technology

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## **Past Talks**

**Investigating Effects of Fructans on host and immune parameters in a human clinical trial**  
EFFoST (European Federation of Food Science and Technology) Annual Meeting

**Evaluating Influences of Fructans on Cytokine and Immunoglobulin Production in a human clinical trial**  
Cytokines 2013: From Molecular Mechanisms to Human Disease

**Effects of Dietary Fructo-oligosaccharides on Gender-based differences in Gut Mucosal Cytokines**  
Cytokines 2013: From Molecular Mechanisms to Human Disease

**Effects of soy ferments on the pro-inflammatory gene expression profile of HT-29 intestinal epithelial cells following TNF- $\alpha$  challenge**  
CIFST 50th Annual conference

**Tissue-specific cytokine microenvironments develop in the gastrointestinal tract of Bio-breeding rats fed wheat bran, oat bran or resistant starch diets**  
62nd Annual Conference of the Canadian Society of Microbiologists

**Host-Microbe Interactions: Does Gender influence Immune changes mediated by Dietary Fibre?**  
Canadian Society of Microbiologists 61st Annual Conference

**Immunomodulatory properties of bovine milks supplemented with dietary omega-3 fatty acids and fermented by lactic acid bacteria**  
Canadian Society of Microbiologists 61st Annual Conference

**Analysis of Anti-Inflammatory Effects of Lactobacillus strains on Human Intestinal Epithelial Cells in Response to a Range of Pro-Inflammatory Stimuli**  
Canadian Society of Microbiologists 61st Annual Conference

**Lactic acid bacteria as a novel differentiation agent for Dendritic Cells: Effects on KG-1 differentiation**  
Canadian Society of Microbiologists 61st Annual Conference

**Effects of soy and dairy ferments on monocyte viability, cytokine production and cell surface molecule expression: impact in a low-shear modeled microgravity system**  
61st International Astronautical Congress (IAC), Abstract and presentation #A1.7. Biology in Space

**Bioactivity of soy and milk ferments: effects on monocyte and macrophage cytokine production**  
2010 Annual CIFST/AAFC Conference

**Prebiotic effects on Serum Enzyme levels and Immune cell population**  
AFMNet 6th Annual Scientific Conference

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## **Education**

**Queen's University**  
PhD Department of Microbiology and Immunology

**University of Saskatchewan**  
MSc Department of Microbiology

**University of Saskatchewan**  
BSc Department of Microbiology

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## **Accomplishments**

**Associate Professor, Faculty of Science, UOIT**

Dr. Green-Johnson is the recipient of four UOIT Teaching Innovation Fund Awards, and helped lead the development of the university's Applied Biosciences Graduate Studies program. She supervises the research of her graduate and undergraduate students, and teaches undergraduate Microbiology and Immunology courses. She has received numerous research awards from industry and government including NSERC, DFC, and the Ontario Ministry of Agriculture and Food.

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