



Dear Friends and Neighbours,

Have you ever wondered what **IBD** (inflammatory bowel disease), **rheumatoid arthritis**, **allergies**, **lupus**, **cancer**, and **infectious diseases** like **pneumonia** and **influenza**, might have in common? Every day, scientists are learning more about how these—and many other conditions—are linked to **changes in the immune system that leave us vulnerable**. Even more exciting, **we're learning how good bacteria** that live in our bodies, also known as the **microbiome**, **work with the immune system to protect us from disease**.

As Head of Dalhousie Medical School's Department of **Microbiology & Immunology**, I am proud of our researchers' innovative work and the groundbreaking collaborations they're leading to improve patient care. I am especially thrilled that:

**Dalhousie Medical Research Foundation's Molly Appeal for 2016-17  
is dedicated to inflammation, infection & immunity research.**

Each year DMRF's Molly Appeal focuses on a different area of research at Dalhousie Medical School: cardiovascular, neuroscience, cancer and this year's collective area of inflammation, infection and immunity. **The Molly Appeal is named in honour of Molly Moore**, who inspired the creation of the annual appeal with her first gift to DMRF and her belief that **"if everyone gives what they can to support medical research, together we can make a big difference."** For over 35 years, generous donors throughout the Maritimes and beyond have supported the **Molly Appeal, with 100% of every gift going directly to medical research**.

**Michael Morley** and his family know only too well the **damage an overactive immune system can cause**. He was just 10 years old when he was diagnosed with Crohn's disease, a chronic inflammatory bowel disease that damages the digestive tract. Thanks to research, Michael received leading-edge **liquid nutrition**, **immune-moderating medications** and **surgery** that, after five years, sent his Crohn's into remission. His gastroenterologist, **Dr. Johan Van Limbergen**, is studying how the **gut microbiome could be the key to faster relief and healing** for children like Michael.

Another colleague, **Dr. Morgan Langille**, is leading a group effort to understand how each person's unique microbiome is influenced by age, diet, and exposure to medications, toxins, viruses and other factors—and how **microbiome analysis could be used to predict, diagnose, treat and prevent disease**.

Proceeds from this year's Molly Appeal will help **develop powerful new software tools for analyzing billions of bacteria in the microbiome, within seconds**.

Molly Appeal funds will **also purchase new flow cytometry equipment—powerful machinery that allows researchers to sort and analyze immune cells in detail**. This will help us pinpoint exactly what's happening when someone is suffering from an immune deficiency or inflammatory autoimmune disease, or from a cancer, infection, or allergy. *(cont'd)*



phone 902.494.3502 • toll free 1.888.866.6559 **mollyappeal.ca**

1-A1 SIR CHARLES TUPPER MEDICAL BLDG • 5850 COLLEGE ST • PO BOX 15000 • HALIFAX NS, B3H 4R2



**I support inflammation, infection  
and immunity research with my gift of:**

☐ \$35 ☐ \$50 ☐ \$75 ☐ \$120 ☐ other \$ \_\_\_\_\_

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

Town: \_\_\_\_\_ Province: \_\_\_\_\_

Postal code: \_\_\_\_\_ Phone: \_\_\_\_\_

E-mail: \_\_\_\_\_

**WHERE BREAKTHROUGHS BEGIN**

Please make your cheque or money order payable to:

**The Molly Appeal**

☐ I prefer to use my: ☐ VISA ☐ MC ☐ AMEX

Card Number: \_\_\_\_\_

Expiry Date: \_\_\_\_\_ CVV2: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

☐ I prefer my donation to remain anonymous. I do not wish to have my name appear in the DMRF annual report or have my gift publicly acknowledged in any donor recognition program.

A postage-paid envelope is included for your convenience.

Registered Charity BN# 11922 9318 RR0001



In my lab, **my team and I rely on flow cytometry to study Natural Killer (NK) cells**, which use receptors to identify cancer cells and viruses. Some people’s NK cells have weak receptors, so they are vulnerable to disease. We believe it’s possible to clone NK cells from people with strong receptors and administer them to people with weaker receptors, as an adjuvant immunotherapy to help them fight infections and cancer.

**Flow cytometry is pivotal to many studies Dr. Jean Marshall leads.** She and her collaborators require this technology in their efforts to find ways to: **control inflammation in rheumatoid arthritis and heart attacks; prevent food allergies** (by introducing foods in infancy while mothers are still breastfeeding); and **ramp up cancer immunity with safe over-the-counter drugs.**

For **Dr. Thomas Issekutz and Dr. Beata Derfalvi**, flow cytometry is the **crucial investigative tool** that lets them see exactly what’s going wrong in the immune systems of children with immune deficiency and autoimmune diseases. This essential information guides their treatment decisions, while **adding to the world’s scientific understanding of these rare and debilitating conditions.**

Our immune systems are crucial to our health—and yet, they can also work against us to cause suffering and disease. **Medical scientists strive to understand the complexities of this system** and how it interacts with the trillions of bacteria that live in, and on, our bodies.

Your gifts to the Molly Appeal help researchers and clinicians shed light on these vitally important mechanisms and develop new, more personalized approaches to diagnosing and treating disease. People of all ages—including young people like Michael—benefit from the impact of your gifts.

Sincerely,

Dr. Andrew Makrigiannis  
Professor and Head  
Department of Microbiology & Immunology  
Dalhousie Medical School

***P.S. Please give generously to DMRF’s 2016-17 Molly Appeal and help our researchers solve the mysteries of the immune system and the microbiome, to lead the way to better health care for us all.***



**Thanks to Crohn’s research, Michael is sunny side up.**

WHERE BREAKTHROUGHS BEGIN  
Give now: 1.888.866.6559  
[mollyappeal.ca](http://mollyappeal.ca)

**the Molly Appeal** for **MEDICAL RESEARCH**

**Dalhousie MEDICAL RESEARCH Foundation**

1-A1 SIR CHARLES TUPPER MEDICAL BLDG • 5850 COLLEGE ST • PO BOX 15000 • HALIFAX NS, B3H 4R2



## **Molly Appeal Monthly Contributions**

I wish to make a monthly contribution of: ☐\$10 ☐\$15 ☐\$20 ☐\$25 ☐other \$\_\_\_\_\_

\*Contributions will be processed on the 20th of each month.

Method of Payment: ☐ Pre-Authorized withdrawal (I have enclosed a void cheque)  
☐ Pre-Authorized payment: ☐VISA ☐MasterCard ☐AMEX

Card Number: \_\_\_\_\_ Exp. Date: \_\_\_\_\_ CVV2: \_\_\_\_\_

Signature: \_\_\_\_\_ Date signed: \_\_\_\_\_

This authorization may be cancelled/changed at any time upon written notice. Allow 2 to 4 weeks for processing of first payment. You will receive one cumulative tax receipt at the end of each calendar year.

☐ I have remembered the Foundation in my will. ☐ Please send me information on writing my will.