WHY DO YOUR GRADUATE WORK WITH US?
WHO WE ARE

- City wide academic unit
- Training programs:
  - Undergraduate
  - Graduate
  - Postdoctoral
- Research Powerhouse
- Leading Immunology Program in Canada
RESEARCH THEMES

• Cellular & Molecular Immunology
• Development of the Immune System
• Autoimmunity & Inflammation
  – Diabetes, SLE, MS, RA
• Primary Immunodeficiencies
• Cancer Immunology & Immunotherapy
• Infectious Diseases
  – Flu, HIV/AIDS
• Mucosal Immunology (Microbiome)
• Transplantation & Immune tolerance
### WHO WE ARE

<table>
<thead>
<tr>
<th>Institution</th>
<th>Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital for Sick Children</td>
<td>9</td>
</tr>
<tr>
<td>Medical Sciences Building</td>
<td>14</td>
</tr>
<tr>
<td>Mount Sinai Hospital</td>
<td>3</td>
</tr>
<tr>
<td>Sunnybrook Research Inst.</td>
<td>9</td>
</tr>
<tr>
<td>University Health Network</td>
<td>36</td>
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<tr>
<td>U of T – Scarborough</td>
<td>1</td>
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</tbody>
</table>

**Total Faculty Members:** 72
RESEARCH POWERHOUSE

• Over 1,100 publications in past 10 years
  – With >32,000 citations

• >$20M in operating grant support

• $15M in recent infrastructure support
  – Host-Microbiome Research Network

• 110 Graduate students and over 220 Postdoctoral fellows
RESEARCH POWERHOUSE

Seminal Discoveries

- Identification of the T cell receptor
- Identification of early hematopoietic stem/progenitor cells
- Isolation of genes for Crohn’s disease
- Identification of CTLA4 immune-regulatory function
- Function of adipose tissue regulatory T cells
- Characterization of tyrosine phosphatases, SHP1
- Isolation of primary immunodeficiency genes, CD3d
- Mechanisms of T cell co-stimulation
- Molecular characterization of positive selection of T cells
- Description of an independent intestinal Immune system
- Use of interferons for the treatment of SARS
- Development of an in vitro system for the generation of T cells
STUDENT LIFE

Immunology Graduate Students' Association (IGSA)

- Social events
- Community Outreach
- Fundraising
- Organized Sports
GRADUATE PROGRAMS
GRADUATE PROGRAMS IN IMMUNOLOGY

Graduate Program

Applied Immunology (non-thesis)

MSc

Fundamental Immunology (thesis)

PhD
FUNDAMENTAL IMMUNOLOGY
An advanced research program intended to reflect a level of training consistent with the ability of the student to function as an independent research scientist.

Thesis-based; Successful completion of course work as well as a demonstrated ability to carry out research of publishable quality.
TIMELINE

- Rotations (3 months)
- 1st Committee Meeting
- 2nd Committee Meeting
- Qualifying Exam
- Defense & Degree Completion

- degree decision -
• Incoming students
  —~$19,000 living allowance + tuition fees

• Students who successfully pass their qualifying/reclassification exam
  —~$21,000 living allowance + tuition fees
APPLIED IMMUNOLOGY
HOW IS THIS PROGRAM DIFFERENT?

• Not necessarily hypothesis driven
• Focus is more on applying technical knowledge to solve problems and create efficiencies
  – assay development and optimization
  – hone skills desired by modern biomedical research companies
• Fixed-length (20 months; or 16 months with Advanced Standing)
## HOW LONG IS THE PROGRAM?

### Standard Entry

<table>
<thead>
<tr>
<th>Core Courses</th>
<th>Auxiliary Courses</th>
<th>Fall</th>
<th>YEAR 1</th>
<th>Winter</th>
<th>Summer</th>
<th>Fall</th>
<th>YEAR 2</th>
<th>Winter</th>
<th>Summer</th>
</tr>
</thead>
</table>
| IMM1450Y, IMM1435H, IMM1436H | Two from the following:  
  - IMM1428H  
  - IMM1429H  
  - IMM1430H | IMM1550Y | IMM1650Y | IMM1651H |

### Advanced Standing

- Practical Placement (either on- or off-campus)
DO I GET TO WORK IN A LAB?

• Yes!

• Major research project will be to develop a new assay / technique or improve upon an existing one that will ultimately benefit your host lab.

• At the end of the term, you'll submit a report on your findings and give an oral presentation.
WHAT CAN I DO WITH THIS DEGREE?

- **Business**
  - Management Consulting
  - Innovations Officer (MaRS)
  - Market Analyst

- **Communications**
  - Writing/Editing for Scientific Journals, Newspapers, etc.
  - Technical Consultant/Tech Transfer Officer/Patent Agent
  - Science Translation
  - Regulatory affairs/Med Affairs

- **Government**
  - Research and Development
  - Office of Innovations
  - Policy

- **Biotech Industry**
  - Field or Application Scientist
  - Product/Project Manager
  - Pharma or Biotech Sales
  - Food & Agricultural Immunology R&D
  - Technologist for Immune Assays

- **Education**
  - High School Teacher / Head of Science
  - Science/Immunology Outreach Programs

- **Non-profit**
  - Independent Science Research Foundations
  - Social Programs & Public/Global Health Organizations
  - Public Policy & Research
  - Laboratory Technologist at Hospitals or Academia

- **Preparation for MD/PhD/DDS**
<table>
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<tr>
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- **Fall**: IMM1450Y, IMM1435H, IMM1436H
- **Winter**: IMM1550Y
- **Summer**: IMM1650Y
- **Fall**: IMM1651H

- $5,000 stipend
- $5,000 stipend
- Practical placement
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- Fall: $5,000 stipend
- Practical placement
How do I apply for these programs?

GRADUATE ADMISSIONS
ADMISSION REQUIREMENTS

PhD
FUNDAMENTAL IMMUNOLOGY
• 4 year Life Sciences BSc, with at least a A- in the final two years
• 4th year courses in Immunology
• Strong research experience e.g. senior thesis or equivalent

MSc
APPLIED IMMUNOLOGY
• 4 year Life Sciences BSc, with at least a B+ in the final two years
• 2nd/3rd year courses in Immunology
• Some lab experience
SUPPORTING DOCUMENTS

• CV
• Letter of intent
  – max 2 pages, single spaced, 1-inch margins
• Three letters of reference
  – from people familiar with your academic and research capabilities
  – webform: questions + letter
• Transcripts
  – scanned is acceptable
  – official, final transcript required prior to registration
ONLINE APPLICATION

• Apply via the School of Graduate Studies Online Admissions Application
  
  https://apply.sgs.utoronto.ca

• Information on procedure, required documents, admissions FAQ
  
  http://uoft.me/applytoimmunology
Admissions Assistance

- Fundamental Program
  - Kate Sedore, MSB 7205
  - graduate.immunology@utoronto.ca

- Applied Program
  - Korosh Kianizad, MSB 7255A
  - applied.immunology@utoronto.ca
We’re a fun place to be!

IMMUNOLOGY GRADUATE STUDENTS ASSOCIATION (IGSA)
GAMES NIGHT & HALLOWEEN PARTY/PUB!
HOLIDAY PARTY (BEST ONE ON CAMPUS!!)
DEPARTMENT PICNIC @ THE ISLANDS!
SPORTS! THE IMMUNODOMINATORS
LEARN AND GIVE BACK!

• “Meet the Speaker” Lunches
• Blackboard Immunology
• Career development sessions

• Fundraising
  – Nellie’s Shelter

• Community outreach
  – Let’s Talk Science
  – SciChat
  – International Day of Immunology
THANK YOU!