Immunology

UNIVERSITY OF TORONTO

WHY DO YOUR GRADUATE WORK WITH US?

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WHO WE ARE

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

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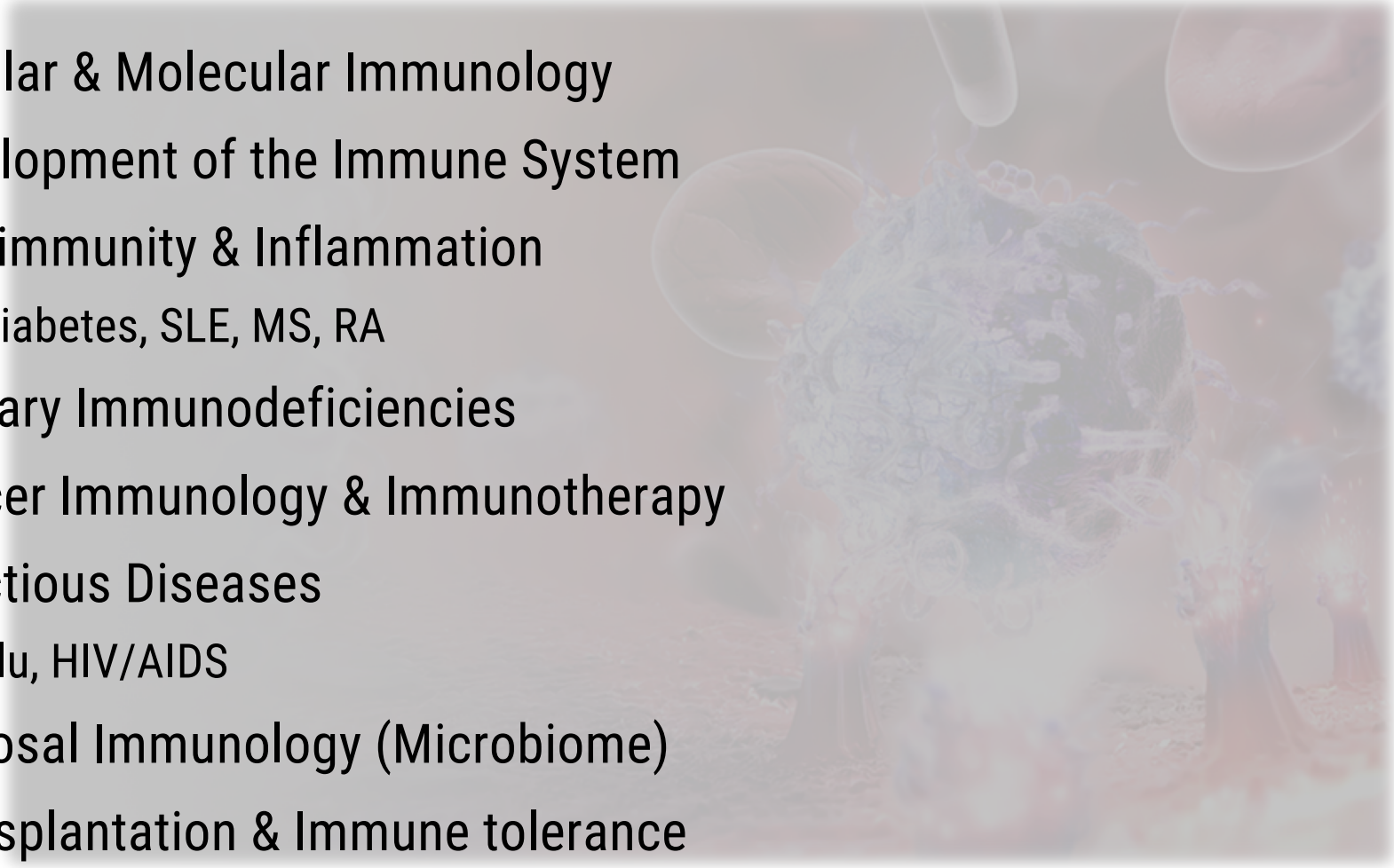
RESEARCH THEMES



- 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

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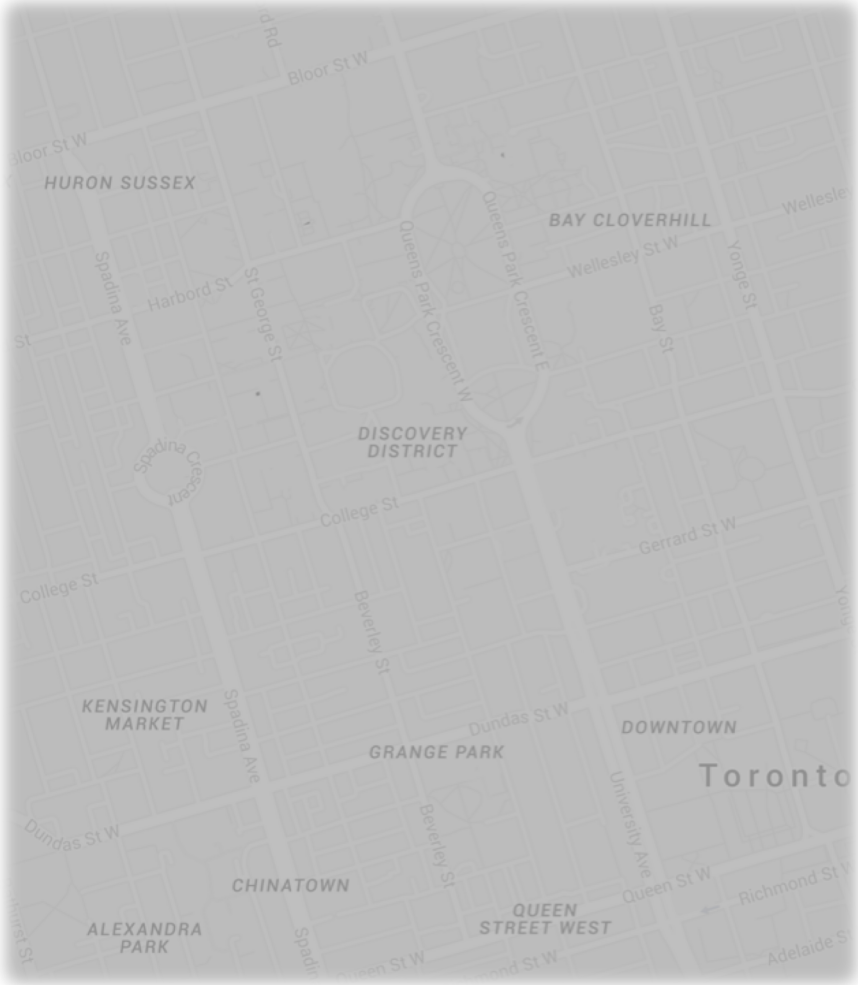
WHO WE ARE

72 Faculty Members	
Hospital for Sick Children	9
Medical Sciences Building	14
Mount Sinai Hospital	3
Sunnybrook Research Inst.	9
University Health Network	36
U of T – Scarborough	1



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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

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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

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STUDENT LIFE

Immunology Graduate Students' Association (IGSA)

- Social events
- Community Outreach
- Fundraising
- Organized Sports

GRADUATE PROGRAMS

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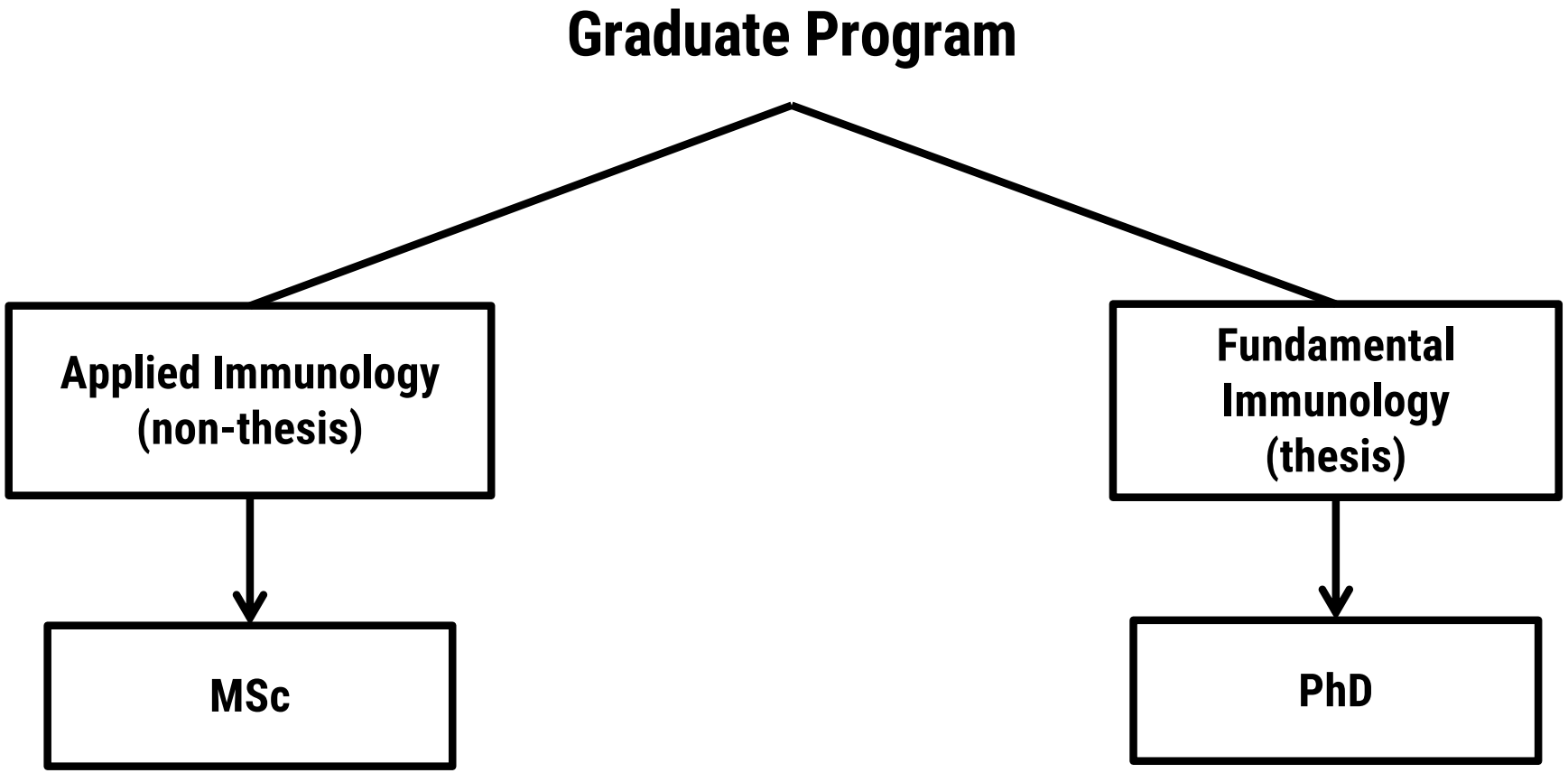
GRADUATE PROGRAMS IN IMMUNOLOGY



FUNDAMENTAL IMMUNOLOGY

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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

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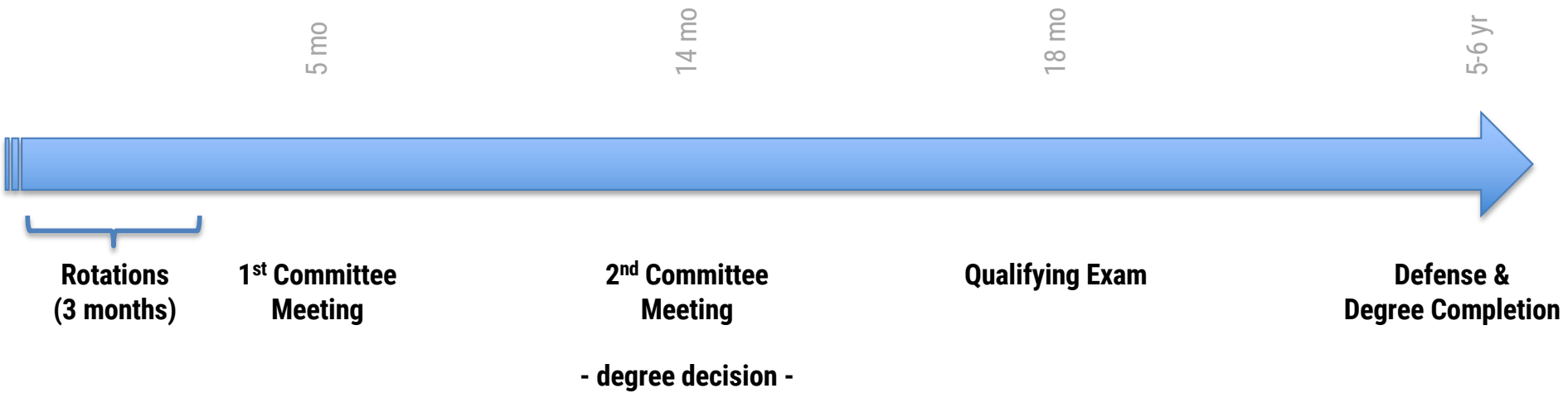
TIMELINE



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GRADUATE FUNDING – FUNDAMENTAL IMM

- **Incoming students**
  - ~$19,000 living allowance + tuition fees

- **Students who successfully pass their qualifying/reclassification exam**
  - ~$21,000 living allowance + tuition fees

APPLIED IMMUNOLOGY

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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)

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HOW LONG IS THE PROGRAM?

Standard Entry

Advanced Standing

	YEAR 1			YEAR 2		
	Fall	**Winter**	**Summer**	**Fall**	**Winter**	**Summer**
Core Courses	**IMM1450Y, IMM1435H, IMM1436H**		**IMM1550Y**	**IMM1650Y**		**IMM1651H**
Auxiliary Courses	Two from the following: • IMM1428H • IMM1429H • IMM1430H			1.0 Credits of Electives (one full-year course or two half-courses) Chosen from various graduate departments in the faculty		Practical Placement (either on- or off-campus)

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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.

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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**

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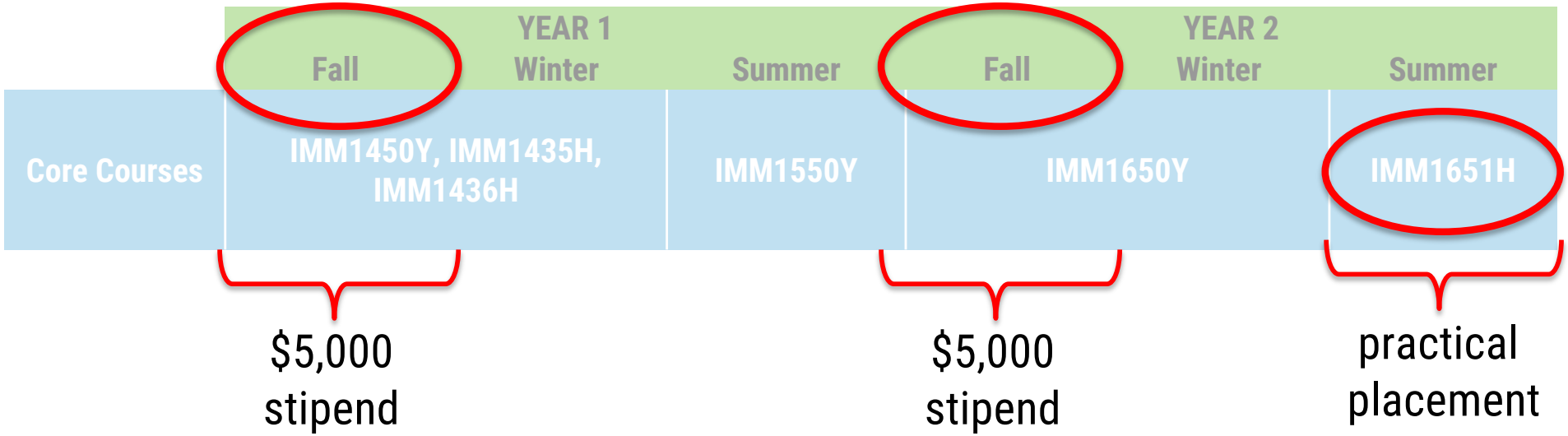
GRADUATE FUNDING – APPLIED IMM STD ENTY



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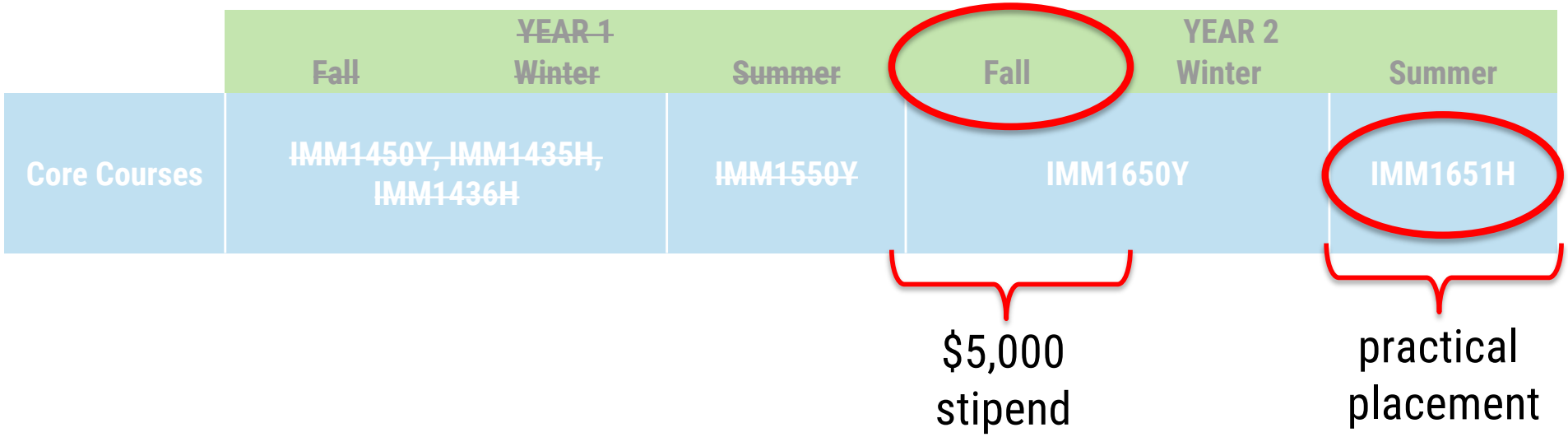
GRADUATE FUNDING – APPLIED IMM ADV STDN



How do I apply for these programs?

GRADUATE ADMISSIONS

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ADMISSION REQUIREMENTS

PhD

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- 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

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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

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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

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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)

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GAMES NIGHT & HALLOWEEN PARTY/PUB!

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HOLIDAY PARTY (BEST ONE ON CAMPUS!!)

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DEPARTMENTAL SUMMER RETREAT – GENEVA PARK

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DEPARTMENT PICNIC @ THE ISLANDS!

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SPORTS! THE IMMUNODOMINATORS

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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!