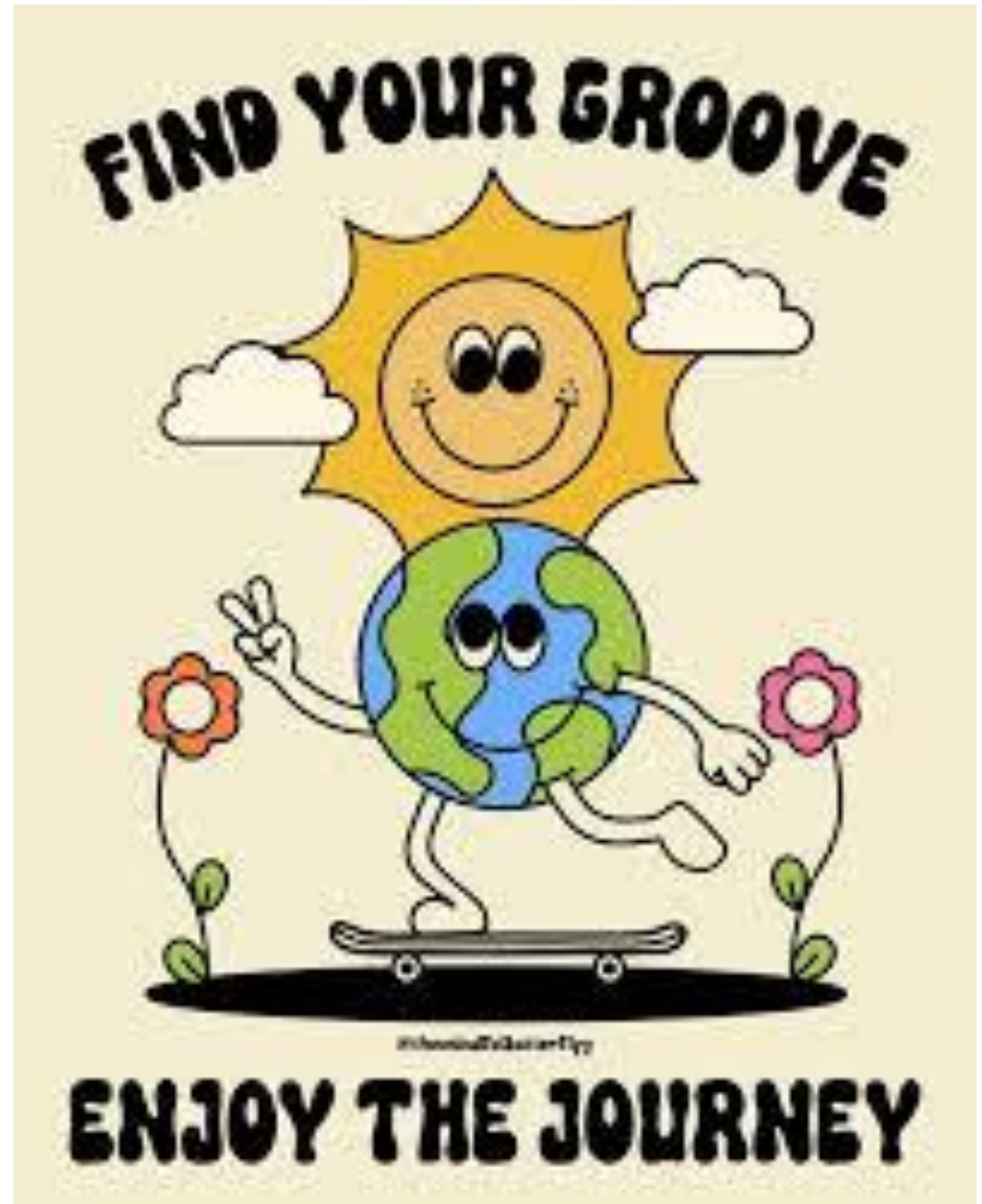


Graduate Pharmacology Orientation 2025



Agenda!!!

Collaborative Specialization in Biomedical Toxicology – Dr. Cindy Woodland

Accommodations

Leave of Absence and Stop-out

Stay informed, how to contact us

Program –specific info

September 8th – 11:30pm to 1pm MSB 4227 Pizza Social and more info!

PGSA

Graduate Student Union – Health and Dental plan benefit

Health and Wellness

EDIIA presentation



Pharmacology Graduate Students Association

pgsa@utoronto.ca

The Centre for Graduate mentorship & Supervision (CGMS)

FALL 2024

AZIZA KAJAN (she/her)
DIRECTOR, CGMS

LAUREN PAIS (she/her)
CASE COORDINATOR, CGMS



UNIVERSITY OF
TORONTO

CGMS Mandate

To support **successful** mentorship and supervisory relationships.

CGMS VISION STATEMENT

To ensure graduate students and supervisors experience a mentorship and supervisory relationship that is characterized by:

- Respect, inclusion, and support of the whole person
- Continued learning and collaboration by both the supervisor and the graduate student
- Shared responsibility and commitment to advancing academic and professional goals

Collaborative Specializations:

- Collaborative Specializations give you an opportunity to explore an interdisciplinary area complementary to your home degree program.
- Pharmacology participates in seven collaborative specializations:
- [Addiction Studies](#)
- [Cardiovascular Sciences](#)
- [Musculoskeletal Sciences](#)
- [Neuroscience](#)
- Resuscitation Sciences (*admissions have been administratively suspended*)
- [Toxicology](#)
- [Women's Health](#)



CST!

COLLABORATIVE SPECIALIZATION IN TOXICOLOGY

Administrative Home: Department of Pharmacology & Toxicology

Director: Dr. Cindy Woodland (cindy.woodland@utoronto.ca)

What is CST?

- An interdisciplinary academic specialization for MSc or PhD student conducting research related to toxicology

problematic substance use

receptor binding

drug-induced toxicity

kinetics

neurotransmitters

adverse drug reactions

genetic differences in drug handling

models of disease

drug interactions

metabolic pathways

antidotes

teratogenesis

proteomics

signal transduction

permissible exposure limits

environmental contaminants

Who participates?

- Laboratory Medicine and Pathobiology
- Medical Sciences
- Nutritional Sciences
- Pharmaceutical Sciences
- Pharmacology & Toxicology



Specialization Requirements

Research

- Research topic related to toxicology

Coursework

- JNP1016H Graduate Seminar in Toxicology (Prerequisite: background coursework in toxicology)
- PhD: additional 0.5 FCE elective toxicology course

Seminar Attendance

- MSc: Attend 6 seminars related to toxicology
- PhD: Attend 12 seminars related to toxicology

Some of the Benefits

- Breadth of knowledge in toxicology
- Collaboration
- Skill development
 - Effective communication
 - Critical appraisal
 - Building a network
- Designation on transcript, “Completed MSc/PhD Specialization in Toxicology”

Accommodations

The University of Toronto is committed to providing a learning environment that is accessible and open to all students, regardless of their disability.

- You might have a documented disability, health issues or special needs
- The University provides many resources to assist you with your academic progress. **If you believe you may need a disability-related academic accommodation, your first step should be to consult with the University of Toronto [Accessibility Services](#).**
- **confidential** assessment of your needs, helps you identify available resources, including adaptive technology, test and exam accommodations, note-taking, extensions, and tutoring among others.
- will **not** disclose to your supervisor personal medical information, including a medical diagnosis... **YOU ARE IN CONTROL**

Leave of Absence OR Stop-out

- You might encounter serious life events, health or personal problems that hinder your performance or progress in your program
- You might need time away from your studies – medical treatment / parental leave
- **Thesis-Based students** – possible to take a one-session to three-session [leave of absence](#) during their program of study. The leave period is not included in the time limit for completion of the degree.
- **ACP students** may take a leave of absence or [temporarily stop-out](#) and re-register within 12 months without re-applying to the program. However, unlike a leave of absence, the “stop-out” period is included in the time period for completion of the degree.
- Talk to me about Leave of Absence

Stipendial Support is available from Faculty of Medicine (talk to me)

School of Graduate Studies [SGS Parental Grant program](#)

Stay Informed / Stay Connected

- U of T Pharmacology: www.pharmtox.utoronto.ca
- U of T Faculty of Medicine Graduate and Life Sciences Education: www.glse.utoronto.ca/
- U of T School of Graduate Studies: www.sgs.utoronto.ca

Will and Diana – PCL Graduate Office – pharmtox.dept@utoronto.ca

Graduate Coordinator – Peter McPherson – peter.mcpherson@utoronto.ca,
416-892-4543

Getting Started Handbook

-get your Tcard, utorid, utoronto.ca email address, acorn, how to enroll in courses, GEMS, health and dental plan

'Weekly Roundup' – events, upcoming seminars, award deadlines

Agenda!!!

Program –specific info

- course curriculum
- money
- awards
- the ELEFANT document

Program Overview:

<https://pharmtox.utoronto.ca/program-guidelines-forms-and-links>

M.Sc. Thesis-based program – 2 year program

PCL3000H, PCL3001H plus one elective 0.25 FCE = 0.75 FCEs

Supervisor Report and Advisor Report, need one per year

First Year Seminars

Thesis write-up and MSc Oral Examination – contact me

Transfer to Ph.D. program – contact me

Ph.D. program – 4 year program / Direct-entry Ph.D. program – 5 year program

PCL3000H, PCL3001H, PCL3002H, plus 1.25FCEs + PCL1003Y = 3.0 FCEs

PhD minor course

PhD committee – at least once per year, let us know when you schedule the meetings!

First Year, midpoint and exit seminars

Thesis write-up and PhD Final Oral Examinations – contact me

PCL3000H (0.25FCE) Foundational Pharmacology Principles

Fall term: MS4227 Thursdays 3-5pm

Course Goals: The purpose of this course is to provide instruction to incoming graduate students on foundational principles in Pharmacology. Although a significant number of our incoming graduate class have mastered these concepts through our undergraduate PCL programs, an increasing number of our new graduate students come with undergraduate education that does not include a significant instruction in pharmacology. **Incoming students with undergraduate PCL will be allowed to opt out of completing this module provided they score 70% or greater on an 'opt out' exam scheduled for October 3rd. If you wish to write this exam, you will need to notify me by email no later than Friday September 20th. The exam will be two hours in duration and be composed of multiple-choice questions as well as short-answer questions. More information is available on the course website.**

PCL3000H (0.25FCE) Foundational Pharmacology Principles

Fall term: MS4227 Thursdays 3 – 5 pm

Date	Time	Topic
Oct 2nd	3 – 5pm	Opt-out Exam
Oct 9 th	3 – 5pm	Introduction Principles of Pharmacokinetics – Absorption & Distribution
Oct 23 rd	3 – 5pm	Principles of Pharmacokinetics – Biotransformation and Excretion Principles of Pharmacodynamics
Oct 30 th	3 – 5pm	Variability in Drug Response and other Factors Affecting Therapeutic Outcome
Nov 6 th	3 – 5pm	Adverse Drug Reactions Principles of Toxicology
Nov 13 th	3 – 5pm	Drug Development and Regulation
Nov 20 th	3 – 5pm	Exam

PCL 3001H Winter Session: - Thursday 3-5pm, Location: MSB 4227 / 777 Bay St 953

January 8th - Class 1 - Assessing research and useful communication tips

January 15th – Class 2 - Writing 101 – papers, research grants, fellowships, business grant

January 22nd - Class 3 - Running a research lab

January 29th – Class 4 - Biotech/Industry and Consulting

February 5th – Class 5 - Funding Research

February 12th – Class 6 - Science Advocacy and Policy

February 19th – Class 7 - Workshop on assignments 1 and 2

February 26th – Class 8 - Advocacy visit challenge

Mark – Pass / Fail - Overall mark of 70% to Pass

Criteria

- 1) Complete 3 assignments (25% per assignment)
- 2) Participation/Attendance (25%; 2.5% per class + 5% participation)

Note: class is run in person

Assignment formats

- 1) Individual written assignment – write a fellowship application
- 2) Group grant assignment for grant or review paper
- 3) Oral group assignment – mock advocacy meeting

PCL3002H Research Proposal

Tutorials to get PhD students ready for their first supervisory committee meeting

Summer (May / June)

PCL3100H Behavioural Pharmacology I – Zawertailo (next year)

PCL3101H Behavioural Pharmacology II – Zawertailo (next year)

PCL3102H Clinical Neuropsychopharmacology – Lanctot / Swardfager

PCL3103H Fundamentals of Pharmacogenomics – Chenoweth / Tyndale

PCL3104H Small Molecule Drug Discovery – Harding (next year)

PCL3105H Epilepsy Pharmacology – Poehlmann-Eden

PCL3106H Dopamine Neurotransmission – Salahpour/Beaulieu

PCL3107H G protein-coupled Receptors – Salahpour/Beaulieu (next year)

PCL3110H Molecular Approaches in Pharmacology Research – Recombinant DNA technology

PCL3111H Molecular Approaches in Pharmacology Research – Flow Cytometry

PCL3112H The DNA damage response in Pharmacology & Toxicology – McPherson

PCL3113H Clinical Trials - DiCiano

PCL3114H *In silico* approaches for drug discovery – Schapira

PCL3116H Endocrine Disruptors – Elyse Caron-Beaudoin (next year)

PCL3117H Gene and Nucleic Acid-based Therapies – Hubbard & Colleagues

PCL3118H Career Readiness for the Pharmaceutical Industry – McPherson and Zhou

PCL3119H Theoretical and Applied Pharmacogenetics – Goncalves (next year)

PCL3120 – Diabetes Pharmacology – Treatments and Complications

2025-2026 Student Base Funding for Full Time Doctoral Stream MSc and PhD Students^a					
Domestic				International	
MSc (2024-25 start)	MSc (2025-26 start)	PhD		MSc	PhD
29,819.88	29,819.88	32,910.48	Living Allowance	29,819.88	32,910.48
9,438.48	9,608.48	8,448.48	Tuition & Fees ^b	34,108.48	8,448.48
n/a	n/a	n/a	UHIP	792.00	792.00
39,258.36	39,428.36	41,358.96	Total	64,720.36	42,150.96

**U of T Open Fellowships – payment once a term
Graduate Student Supplement**

Your supervisor

3. Top-Up Practices

All awards that require student applications are eligible for a top-up from their supervisor or graduate unit.

The top-up amounts are as follows:

Award Amount	Top-Up*
\$0.00 to \$2,000	There will be no top-up but the student gets to keep the award(s), up to a combined maximum of \$2,000. The amount of the award will not be deducted from the base funding.
Between \$2,001 to \$9,999 (cumulative awards)	Award goes towards the base funding and the student receives a \$2,000 top-up over their base funding.
Between \$10,000 to \$15,000 (cumulative awards)	Award goes towards the base funding and the student receives a \$3,000 top-up over their base funding.
Over \$15,000 (cumulative awards \$15,001 and up)	Award goes towards the base funding and student receives a \$4,000 top-up over their base funding.

how to get a graduate award/scholarship - the inside scoop

It has never been harder to win scholarships and awards

The percentage of students that win major awards has declined significantly in the past 20 years
-expectations of supervisor vs. applicant expectation

Many 'major' awards contribute less and less to the cost of the total student stipend.

Less than 20% will hold a major award at any time during their graduate training.

Many of you will never win an award – you are in the majority – everything is ok

But hey, it would still be cool to win one...

Now is great time to plan AHEAD and figure out what to apply for in the coming year

What are 'they' looking for? Excellence through Evidence

Academic Record – this is calculated in various ways for different awards

- last two years
- combined graduate GPA if 3 years or more (OGS)
- anything goes

Evidence of Research Excellence

- tangible evidence of productivity
- publications and presentations

Letters of Reference

- essentially need to be perfect
- some reference letters use a 'ranking' system e.g. top 2% vs. top 5%
- excellence through evidence

Service and Engagement

- outreach activities, leadership, student community involvement

Types of Awards

National

Provincial

University level – administered by SGS

Faculty level – administered by GLSE

Research Institute level

Collaborative Programs / Specialized research units / Research Societies

PCL Department

Types of Awards

National

CGS-D awards – CIHR or NSERC (aka CIHR Doctoral Research Awards)

CGS-M awards

Provincial

University level – administered by SGS

Faculty level – administered by GLSE

Research Institute level

Collaborative Programs / Specialized research units / Research Societies

PCL Department

Canada Graduate Research Scholarship – Doctoral (CGRS D) - through Government of Canada, provides financial support to outstanding graduate students pursuing a doctoral degree in natural sciences or engineering. Canada Graduate Scholarship Doctoral awards are valued at **\$40,000/year** for 36 months (depending on eligibility).

They've changed the process this year..

In the past, U of T a set number of awards to send to national competition (275) – PCL has quota we can send – adjudicated at SGS level, then at National level

The competition will be open to international students who are currently enrolled in a doctoral program of study at an eligible Canadian institution at the time of application. Up to 15% of all doctoral awards will be awarded to international applicants, who may only hold the award in Canada.

Pay attention to CIHR priority announcements

Unpredictable outcomes

I recommend you apply for this in year 2 or year 3 of your PhD studies

Canada Graduate Research Scholarships-Master's (CGS M) Program - The objective of the Canada Graduate Scholarships-Master's (CGS M) Program is to help develop research skills and assist in the training of highly qualified personnel by supporting students who demonstrate a high standard of achievement in undergraduate and early graduate studies. Awardees will receive an annual stipend of **\$27,000** for one year.

This is a 'pseudo quota' system

PCL is given x nomination spots

– goes into SGS pool of applicants that then get ranked by committee

-don't assume each member of the committee is an expert in your field

-don't assume each application is handled equally well

'e.g.' there might be 102 award applications, and 80 can move forward

-many times our 1st overall pick is rejected and our 3rd overall pick wins the money

85% of winners are 1st year students entering their second year of program

Apply in your first year of MSc or direct-entry PhD

Types of Awards

**National
CIHR Doctoral Research Awards**

Provincial - OGS and QEII-GSST

University level – administered by SGS

Faculty level – administered by GLSE

Research Institute level

Collaborative Programs / Specialized research units / Research Societies

PCL

THE QUEEN ELIZABETH II GRADUATE SCHOLARSHIPS IN SCIENCE AND TECHNOLOGY (QEII-GSST)

- some are offered through Fac of Medicine (GLSE) but some are restricted to certain departments or research units
- usually 15K a year

Ontario Graduate Scholarships (OGS)

The Ontario Graduate Scholarship Program recognizes academic excellence in graduate studies at the master's and doctoral levels in all disciplines of academic study. The OGS program at U of T is jointly funded by the Province of Ontario and the University of Toronto. The Province of Ontario provides about \$30 million towards these scholarships and eligible institutions provide \$15 million. Departments nominate their own students to hold an OGS award in their allocation of awards. For further information, visit: [Ontario Graduate Scholarships](#)

- **About 60 applicants for 9 – 10 awards**
- **Our allotment for these awards has been going up each year**
- **Decided IN HOUSE by award committee**
- **These are advertised as 15K / year but actually are only worth 10K**

Types of Awards

National

CIHR Doctoral Research Awards

Provincial

University level – administered by SGS OR

Faculty level – administered by GLSE

OSOTF and other endowed awards

Research Institute level

CAMH Grad Student Award – November

Collaborative Programs / Specialized research units / Research Societies

PCL

OSOTF and other endowed awards (Ontario Student Opportunity Trust Fund)

Usually theme-based – ‘ovarian cancer research, neurological illness, pediatric cancer’

OSOTF – there is a ‘financial needs’ form you fill out

Merit based vs. financial needs based

Amount of money depends on what committee decides, how much donor allocates

Can range by thousands of dollars from year to year

Your best chance of winning an award, as long as you meet the criteria ... but they are still very competitive
ALSO you can hold this AND hold major award

There is a set of OSOTFs looked after by SGS, another set looked after by GLSE (Fac of Medicine)
– don’t get confused!

Types of Awards

**National
CIHR Doctoral Research Awards**

Provincial

University level – administered by SGS

Faculty level – administered by GLSE

**Research Institute level
CAMH Grad Student Award – November**

Collaborative Programs / Specialized research units / Research Societies

PCL

Types of Awards

National

CIHR Doctoral Research Awards

Provincial

University level – administered by SGS

Faculty level – administered by GLSE

Research Institute level

CAMH Grad Student Award – November

Collaborative Programs and Specialized research unites

Frist award in neuropsychpharmacology

Mito2i

TC3

PCL

Types of Awards

National

CIHR Doctoral Research Awards

Provincial

University level – administered by SGS

Faculty level – administered by GLSE

Research Institute level

CAMH Grad Student Award – November

Collaborative Programs and Specialized research unites

Frist award in neuropsychopharmacology

Mito2i

TC3

PCL –

**Amar K Sen
Book Fund**

**U of T open
EDI award**

**Harold Kalant award
Romet**

MSc award

Our website

Link to award deadlines

PCL deadline vs. 'Real' deadline

Things to remember

- **We have your original transcripts (are they up to date?)**
- **Original and UP TO DATE transcripts of your current program are a MUST**

- **Your ability to secure an award will not dictate your success in getting a postdoc, a career in academia or just about anything else**

Principles for Transparency Agreement

for Thesis-based MSc and PhD Graduate Students and Supervisors

ELEFANT

Environment | Limits | Employment | Funding | Academics | Non-Academics | Thesis



Success in Graduate Pharmacology

'do as I say, but don't do what I did'

