

# Department of Pharmacology and Toxicology



UNIVERSITY OF  
**TORONTO**

**Summer Research Awards  
for Undergraduate Students**

**Summer 2018**

**DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY  
UNIVERSITY OF TORONTO**

**SUMMER RESEARCH AWARDS FOR UNDERGRADUATE STUDENTS  
SUMMER 2018**

The following categories of summer research awards will be available to undergraduate students on a competitive basis for 2018...

- Undergraduate Research Opportunity Program (UROP)
  - general medicine / health research in other areas (1 award)
  - cardiovascular / heart (1 award)
  - Dr. John P. Mitchell Award in the disease area cancer (1 award)
- Graduate and Life Sciences Education (GLSE) Undergraduate Summer Research Project Studentship (1 award)
- Departmental Summer Student Research Award (1 award)

Information regarding award descriptions, eligibility criteria, application procedures, and deadlines can be found in this package.

If you require further information about the summer research awards program in Pharmacology and Toxicology, please contact the program coordinator...

Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building  
University of Toronto  
1 King's College Circle  
Toronto, Ontario M5S 1A8  
Tel. (416) 978-0813  
Email. [david.riddick@utoronto.ca](mailto:david.riddick@utoronto.ca)

# **Department of Pharmacology and Toxicology**



UNIVERSITY OF  
**TORONTO**

**Undergraduate Research  
Opportunity Program (UROP)**

**Summer 2018**

# DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

## Undergraduate Research Opportunity Program (UROP)

### 2018 APPLICATION GUIDELINES

The Department of Pharmacology and Toxicology invites summer studentship applications from undergraduate students. The Undergraduate Research Opportunity Program (UROP), administered by the Graduate & Life Sciences Education (GLSE) Office in the Faculty of Medicine, provides UofT and non-UofT undergraduate students with an opportunity to gain valuable research experience during the summer session.

Students accepted into the program will work on a specific research project under the supervision of a faculty member and may meet on a weekly basis for group seminars and discussion at the discretion of their supervisor. All students are required to submit a written final report with a length of at least three double-spaced pages (not including references) and give a 10-15 minute oral presentation of their research to the department in August. Both forms of presentation should address the nature of research conducted by the student including: the scientific background relevant for the research topic, objectives/hypotheses, methodology, results, and discussion and conclusions. The supervisor should provide the student with feedback on the written and oral presentation, and must submit a copy of the final report to the Program Coordinator by August 31, 2018.

Students are responsible for contacting the professors of their choice to inquire about research projects and laboratory space. A list of potential supervisors and their research interests is available by accessing the faculty alphabetical list ([www.pharmtox.utoronto.ca/faculty](http://www.pharmtox.utoronto.ca/faculty)). Interested students should contact potential supervisors directly to arrange an appointment to meet. Most professors will ask the student to bring his/her academic record and a resume or curriculum vitae to the initial interview.

#### **Duration:**

- Students are expected to engage in full-time research for at least 12 weeks as agreed upon with the supervisor from May to August to be able to qualify for the full stipend of \$4,800 (\$2,000 from the UROP + \$2,800 paid by the sponsoring professor).

#### **Eligibility:**

- Students must have a minimum B+ average in the two terms of undergraduate studies immediately preceding award acceptance and must complete a full-time study term directly prior to the award period.
- Students who have completed their undergraduate program are not eligible to apply, unless they have been accepted into an undergraduate professional program.
- Students must be supervised by a faculty member of the Department of Pharmacology and Toxicology.
- Students may only submit one application to this program and each professor may only sponsor one student regardless of cross-appointments. Failure to comply with this rule may result in the application being denied.
- Preference will be given to students who have an interest in a research career in pharmacology or toxicology and who have taken at least an introductory course in pharmacology or toxicology.
- Research must be in: general medicine / health research in other areas; cardiovascular / heart; or cancer (for the Dr. John P. Mitchell Award)

Students participating in this program cannot receive a course credit (e.g., PCL472Y or PCL474Y) for this work. However, students on a co-op work term or PEY placement are eligible if all other criteria are met.

#### **Interested students should:**

1. Seek a position with a faculty member of the Department of Pharmacology and Toxicology who is willing to supervise you and to complete the sponsorship agreement form providing a minimum of \$2,800 for the duration of the studentship program (i.e., minimum 12 weeks).
2. Submit a complete application by March 23, 2018 including the application form, a resume or curriculum vitae (CV), a list of references, an official academic transcript(s), and the sponsorship agreement form. Only complete applications received by the deadline date from students meeting the eligibility criteria will be reviewed.

**DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY  
UNIVERSITY OF TORONTO**

**Undergraduate Research Opportunity Program (UROP)**

**Application Form**

**Deadline for application: March 23, 2018**

**STUDENT INFORMATION:**

**NAME:** \_\_\_\_\_ / \_\_\_\_\_ **STUDENT NO:** \_\_\_\_\_  
Last Name First Name

**ADDRESS:** \_\_\_\_\_ / \_\_\_\_\_  
Street Number and Name Apt. #  
\_\_\_\_\_  
City Province/State Country

**TELEPHONE #:** (\_\_\_\_\_) \_\_\_\_\_ **E-MAIL:** \_\_\_\_\_

**Program/University:** \_\_\_\_\_ **Year of Study:** \_\_\_\_\_

**Pharmacology/Toxicology courses that you have taken (Course Name / Course Code / Course Mark):**

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**Statement of research interest and future goals:**

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**Previous research and/or other relevant experience (attach another page if necessary):**

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**\*\*Please attach a current resume or curriculum vitae (C.V.), a list of references and their contact information (professors or previous employers), an up-to-date official academic transcript, and the completed agreement form for supervisors.**

**SUPERVISOR INFORMATION:**  
(Must be a Department of Pharmacology and Toxicology Faculty Member)

**NAME:** \_\_\_\_\_

**TELEPHONE #:** (\_\_\_\_) \_\_\_\_\_ **E-MAIL:** \_\_\_\_\_

**FUNDING SOURCES:** UROP: \$ 2,000  
SUPERVISOR (minimum \$2,800): \$ \_\_\_\_\_  
TOTAL FUNDING FOR STUDENT: \$ \_\_\_\_\_

**Contact Name of Laboratory Business/Grants Officer:** \_\_\_\_\_

It is the responsibility of the supervisor to ensure that the student has the appropriate safety / ethics training. List all relevant protocol numbers under which the student will be working:

\_\_\_\_\_

**RESEARCH TOPIC:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SELECT THE AREA OF RESEARCH:**

General Medicine / Health Research in other areas (GM)

Cardiovascular / Heart (CH)

Dr. John P. Mitchell Award in the disease area cancer

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Supervisor

Applications should be submitted to:  
Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building, Room 4207  
University of Toronto  
Toronto, ON M5S 1A8

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Date

Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building, Room 4207  
University of Toronto  
1 King's College Circle  
Toronto, ON M5S 1A8

**RE: Undergraduate Research Opportunity Program (UROP) Summer 2018**

Dear Dr. Riddick:

I agree to sponsor \_\_\_\_\_ for an Undergraduate Research Opportunity Program Studentship in my laboratory during the summer of 2018. I understand that I am only allowed to sponsor one student for this program. I agree to assign a suitable research project, to supervise this student throughout the summer program, and to ensure that the student has the appropriate safety / ethics training. I also agree to provide a stipend of at least \$2,800 for this student, if the student has been granted an Undergraduate Research Opportunity Program (UROP) Award. I understand that the student is expected to work for an agreed upon duration of at least 12 weeks during the summer, and that the UROP funds administered by the Graduate and Life Sciences Education (GLSE) Office in the Faculty of Medicine will be used to provide the student with an additional \$2,000 for a total of \$4,800.

Sincerely,

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Signature of Supervisor

# **Department of Pharmacology and Toxicology**



UNIVERSITY OF  
**TORONTO**

**Graduate and Life Sciences  
Education (GLSE) Undergraduate  
Summer Research Project  
Studentship**

**Summer 2018**



# DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

## Graduate and Life Sciences Education (GLSE) Undergraduate Summer Research Project Studentship

### 2018 APPLICATION GUIDELINES

The Department of Pharmacology and Toxicology invites summer studentship applications from undergraduate students. The Graduate & Life Sciences Education (GLSE) Undergraduate Summer Research Project Studentship provides UofT and non-UofT undergraduate students with an opportunity to gain valuable research experience during the summer session.

Students accepted into the program will work on a specific research project under the supervision of a faculty member and may meet on a weekly basis for group seminars and discussion at the discretion of their supervisor. All students are required to submit a written final report with a length of at least three double-spaced pages (not including references) and give a 10-15 minute oral presentation of their research to the department in August. Both forms of presentation should address the nature of research conducted by the student including: the scientific background relevant for the research topic, objectives/hypotheses, methodology, results, and discussion and conclusions. The supervisor should provide the student with feedback on the written and oral presentation, and must submit a copy of the final report to the Program Coordinator by August 31, 2018. The student's final report will be part of a required activity report to be submitted by the Program Coordinator to the GLSE Office.

Students are responsible for contacting the professors of their choice to inquire about research projects and laboratory space. A list of potential supervisors and their research interests is available by accessing the faculty alphabetical list ([www.pharmtox.utoronto.ca/faculty](http://www.pharmtox.utoronto.ca/faculty)). Interested students should contact potential supervisors directly to arrange an appointment to meet. Most professors will ask the student to bring his/her academic record and a resume or curriculum vitae to the initial interview.

#### **Duration:**

- Students are expected to engage in full-time research for at least 12 weeks as agreed upon with the supervisor from May to August to be able to qualify for the full stipend of \$4,800 (fully funded by the GLSE Office in the Faculty of Medicine such that the supervisor is not required to contribute to the stipend).

#### **Eligibility:**

- Students must be currently enrolled in second or third year of a specialist or major program in a Faculty of Medicine basic science department; non-UofT students should have equivalent qualifications.
- Students must have obtained a cumulative GPA of 3.0 (B) or higher and must complete a full-time study term directly prior to the award period.
- Students must be supervised by a faculty member of the Department of Pharmacology and Toxicology.
- Students may only submit one application to this program and each professor may only sponsor one student regardless of cross-appointments. Failure to comply with this rule may result in the application being denied.
- Preference will be given to students who have an interest in future graduate training, a research career in pharmacology or toxicology and who have taken at least an introductory course in pharmacology or toxicology.
- No restrictions on research topics.

Students participating in this program cannot receive a course credit (e.g., PCL472Y or PCL474Y) for this work. However, students on a co-op work term or PEY placement are eligible if all other criteria are met.

#### **Interested students should:**

1. Seek a position with a faculty member of the Department of Pharmacology and Toxicology who is willing to complete the sponsorship agreement form and to supervise you for the duration of the studentship program (i.e., minimum 12 weeks).
2. Submit a complete application by March 23, 2018 including the application form, a resume or curriculum vitae (CV), a list of references, an official academic transcript(s), and the sponsorship agreement form. Only complete applications received by the deadline date from students meeting the eligibility criteria will be reviewed.

**DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY  
UNIVERSITY OF TORONTO**

**Graduate and Life Sciences Education (GLSE)  
Undergraduate Summer Research Project Studentship**

**Application Form**

**Deadline for application: March 23, 2018**

**STUDENT INFORMATION:**

**NAME:** \_\_\_\_\_ / \_\_\_\_\_ **STUDENT NO:** \_\_\_\_\_  
Last Name First Name

**ADDRESS:** \_\_\_\_\_ / \_\_\_\_\_  
Street Number and Name Apt. #  
\_\_\_\_\_  
City Province/State Country

**TELEPHONE #:** (\_\_\_\_\_) \_\_\_\_\_ **E-MAIL:** \_\_\_\_\_

**Program/University:** \_\_\_\_\_ **Year of Study:** \_\_\_\_\_

**Pharmacology/Toxicology courses that you have taken (Course Name / Course Code / Course Mark):**

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**Statement of research interest and future goals:**

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**Previous research and/or other relevant experience (attach another page if necessary):**

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**\*\*Please attach a current resume or curriculum vitae (C.V.), a list of references and their contact information (professors or previous employers), an up-to-date official academic transcript, and the completed agreement form for supervisors.**

**SUPERVISOR INFORMATION:**  
(Must be a Department of Pharmacology and Toxicology Faculty Member)

**NAME:** \_\_\_\_\_

**TELEPHONE #:** (\_\_\_\_) \_\_\_\_\_ **E-MAIL:** \_\_\_\_\_

<b>FUNDING SOURCES:</b>	GLSE:	\$ 4,800
	SUPERVISOR (N/A):	\$ 0
	TOTAL FUNDING FOR STUDENT:	\$ _____

**Contact Name of Laboratory Business/Grants Officer:** \_\_\_\_\_

It is the responsibility of the supervisor to ensure that the student has the appropriate safety / ethics training. List all relevant protocol numbers under which the student will be working:

\_\_\_\_\_

**RESEARCH TOPIC:**

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\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Supervisor

Applications should be submitted to:  
Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building, Room 4207  
University of Toronto  
Toronto, ON M5S 1A8

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Date

Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building, Room 4207  
University of Toronto  
1 King's College Circle  
Toronto, ON M5S 1A8

**RE: Graduate and Life Sciences Education (GLSE) Undergraduate Summer Research Project Studentship 2018**

Dear Dr. Riddick:

I agree to sponsor \_\_\_\_\_ for a Graduate and Life Sciences Education (GLSE) Undergraduate Summer Research Project Studentship in my laboratory during the summer of 2018. I understand that I am only allowed to sponsor one student for this program. I agree to assign a suitable research project, to supervise this student throughout the summer program, and to ensure that the student has the appropriate safety / ethics training. I understand that the student is expected to work for an agreed upon duration of at least 12 weeks during the summer, and that the Graduate and Life Sciences Education (GLSE) Office in the Faculty of Medicine will provide the student with the full required stipend of \$4,800.

Sincerely,

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Signature of Supervisor

# **Department of Pharmacology and Toxicology**



UNIVERSITY OF  
**TORONTO**

**Departmental Summer  
Student Research Award**

**Summer 2018**

# DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY

## Departmental Summer Student Research Award

### 2018 APPLICATION GUIDELINES

The Department of Pharmacology and Toxicology invites summer studentship applications from undergraduate students. With the generous financial support provided by the Department of Pharmacology and Toxicology, we are pleased to offer this award on a competitive basis in order to provide UofT undergraduate students with an opportunity to gain valuable research experience during the summer session.

Students accepted into the program will work on a specific research project under the supervision of a faculty member and may meet on a weekly basis for group seminars and discussion at the discretion of their supervisor. All students are required to submit a written final report with a length of at least three double-spaced pages (not including references) and give a 10-15 minute oral presentation of their research to the department in August. Both forms of presentation should address the nature of research conducted by the student including: the scientific background relevant for the research topic, objectives/hypotheses, methodology, results, and discussion and conclusions. The supervisor should provide the student with feedback on the written and oral presentation, and must submit a copy of the final report to the Program Coordinator by August 31, 2018.

Students are responsible for contacting the professors of their choice to inquire about research projects and laboratory space. A list of potential supervisors and their research interests is available by accessing the faculty alphabetical list ([www.pharmtox.utoronto.ca/faculty](http://www.pharmtox.utoronto.ca/faculty)). Interested students should contact potential supervisors directly to arrange an appointment to meet. Most professors will ask the student to bring his/her academic record and a resume or curriculum vitae to the initial interview.

#### **Duration:**

- Students are expected to engage in full-time research for at least 12 weeks as agreed upon with the supervisor from May to August to be able to qualify for the full stipend of \$4,800 (\$2,400 from the Department of Pharmacology and Toxicology + \$2,400 paid by the sponsoring professor).

#### **Eligibility:**

- Students must be from any Pharmacology or Biomedical Toxicology program offered by the department; this includes second-year students who are currently general departmental specialists or majors.
- Interested applicants must have completed at least two terms in an undergraduate program, be returning to an undergraduate program in the fall following the award, and have a minimum of a B average in the two most recently completed terms.
- Students must be supervised by a faculty member of the Department of Pharmacology and Toxicology.
- Students may only submit one application to this program and each professor may only sponsor one student regardless of cross-appointments. Failure to comply with this rule may result in the application being denied.
- Preference will be given to students who have an interest in a research career in pharmacology or toxicology.
- No restrictions on research topics.

Students participating in this program cannot receive a course credit (e.g., PCL472Y or PCL474Y) for this work. However, students on a PEY placement are eligible if all other criteria are met.

#### **Interested students should:**

1. Seek a position with a faculty member of the Department of Pharmacology and Toxicology who is willing to supervise you and to complete the sponsorship agreement form providing a minimum of \$2,400 for the duration of the studentship program (i.e., minimum 12 weeks).
2. Submit a complete application by March 23, 2018 including the application form, a resume or curriculum vitae (CV), a list of references, an official academic transcript(s), and the sponsorship agreement form. Only complete applications received by the deadline date from students meeting the eligibility criteria will be reviewed.

**DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY  
UNIVERSITY OF TORONTO**

**Departmental Summer Student Research Award**

**Application Form**

**Deadline for application: March 23, 2018**

**STUDENT INFORMATION:**

**NAME:** \_\_\_\_\_ / \_\_\_\_\_ **STUDENT NO:** \_\_\_\_\_  
Last Name First Name

**ADDRESS:** \_\_\_\_\_ / \_\_\_\_\_  
Street Number and Name Apt. #  
\_\_\_\_\_  
City Province/State Country

**TELEPHONE #:** (\_\_\_\_\_) \_\_\_\_\_ **E-MAIL:** \_\_\_\_\_

**Program/University:** \_\_\_\_\_ **Year of Study:** \_\_\_\_\_

**Pharmacology/Toxicology courses that you have taken (Course Name / Course Code / Course Mark):**

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**Statement of research interest and future goals:**

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**Previous research and/or other relevant experience (attach another page if necessary):**

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**\*\*Please attach a current resume or curriculum vitae (C.V.), a list of references and their contact information (professors or previous employers), an up-to-date official academic transcript, and the completed agreement form for supervisors.**

**SUPERVISOR INFORMATION:**

**(Must be a Department of Pharmacology and Toxicology Faculty Member)**

**NAME:** \_\_\_\_\_

**TELEPHONE #:** (\_\_\_\_) \_\_\_\_\_ **E-MAIL:** \_\_\_\_\_

**FUNDING SOURCES:** Department of Pharmacology & Toxicology: \$ 2,400  
SUPERVISOR (minimum \$2,400): \$ \_\_\_\_\_  
TOTAL FUNDING FOR STUDENT: \$ \_\_\_\_\_

**Contact Name of Laboratory Business/Grants Officer:** \_\_\_\_\_

It is the responsibility of the supervisor to ensure that the student has the appropriate safety / ethics training. List all relevant protocol numbers under which the student will be working:

\_\_\_\_\_

**RESEARCH TOPIC:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Supervisor

Applications should be submitted to:  
Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building, Room 4207  
University of Toronto  
Toronto, ON M5S 1A8



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Date

Dr. David S. Riddick  
Department of Pharmacology and Toxicology  
Medical Sciences Building, Room 4207  
University of Toronto  
1 King's College Circle  
Toronto, ON M5S 1A8

**RE: Departmental Summer Student Research Award 2018**

Dear Dr. Riddick:

I agree to sponsor \_\_\_\_\_ for a Departmental Summer Research Studentship in my laboratory during the summer of 2018. I understand that I am only allowed to sponsor one student for this program. I agree to assign a suitable research project, to supervise this student throughout the summer program, and to ensure that the student has the appropriate safety / ethics training. I also agree to provide a stipend of at least \$2,400 for this student, if the student has been granted a Departmental Award. I understand that the student is expected to work for an agreed upon duration of at least 12 weeks during the summer, and that the Department of Pharmacology & Toxicology will provide the student with an additional \$2,400 for a total of \$4,800.

Sincerely,

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Signature of Supervisor