PhD in Pharmacology
FACULTY OF MEDICINE | DEPARTMENT OF PHARMACOLOGY

Overview and specifics

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>3-520-1-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEVEL</td>
<td>Graduate</td>
</tr>
<tr>
<td>TYPE</td>
<td>Philosophiae Doctor [Ph. D.]</td>
</tr>
<tr>
<td>CREDITS</td>
<td>90 credits</td>
</tr>
<tr>
<td>PROGRAM TYPE</td>
<td>Dissertation or thesis track</td>
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</table>

Admission in fall, winter and summer
Day course
Offered at the Montréal
Full-time

Resource persons

PROGRAM INFORMATION

René Cardinal, responsable des études supérieures  514-343-6111, poste 3083
rene.cardinal@umontreal.ca

Graduate Secretary  514-343-6111, poste 3051

Objectives

The general goal of the program is to train independent researchers who have excellent knowledge of the discipline and its various related fields. Graduates from this program should be able to pursue a research career in academia, industry or government. The research training in this program aims to help students develop in-depth knowledge of pharmacology and related sciences; learn to develop an original research hypothesis and describe the method used to experimentally validate the hypothesis; conduct an original research project; present their research findings at scientific symposia; and publish their findings in high-impact journals.

Career prospects

All pharmacology graduates quickly find employment within academic institutions, the pharmaceutical industry, or governmental or paragovernmental agencies involved with health and medication.

Regulations

Studies in this program are governed by the educational regulations of the Faculty of Graduate and Postdoctoral Studies, and the following provisions:

1. Admission requirements
   To be admitted as a regular student in the PhD [Pharmacology] program, candidates must:
   - Meet the general admission requirements [section XI] of the “Règlement pédagogique de la Faculté des études supérieures et postdoctorales” [educational regulations of the Faculty of Graduate and Postdoctoral Studies].
   - Have an MSc [Pharmacology] in the chosen option, if applicable, or have equivalent education.
   - Have obtained a grade-point average at the graduate level of at least 3.3 out of 4.3 or the equivalent.
   - Demonstrate good knowledge of French [learn more].
   - Have satisfactory knowledge of English and show proof of proficiency before being accepted into the second year of the program.
   - Demonstrate sufficient knowledge of any other language deemed necessary for their research.
Application deadlines
Before submitting an application, check the application periods for the chosen session.

Fall
- **Fall 2020**: From January 1st, 2019 to July 1st, 2020

Winter
- **Winter 2020**: From May 1st, 2018 to November 1st, 2019
- **Winter 2021**: From May 1st, 2019 to September 1st, 2020

Summer
- **Summer 2020**: From September 1st, 2018 to February 1st, 2020

Programs of origin
Several Université de Montréal students in this program came from the following programs:

<table>
<thead>
<tr>
<th>PROGRAMS</th>
<th>TYPE</th>
<th>CREDITS</th>
<th>NUMBER</th>
<th>PERIOD</th>
<th>ENROLLMENT CAPACITY</th>
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<tbody>
<tr>
<td>Pharmacology</td>
<td>Master’s Degree</td>
<td>45 credits</td>
<td>2-520-1-0</td>
<td>Jour</td>
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</tr>
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</table>

Program structure (3-520-1-0)
The doctorate program consists of 90 credits.
It is offered as a Flexible Stream (70) or one of the following five options:

- Neuropharmacology (71)
- Pharmacogenomics (72)
- Clinical Pharmacology (73)
- Integrative Cardiovascular Pharmacology (74)
- Molecular Pharmacology (75)

Research must be done as a residency at either Université de Montréal or a research laboratory of an affiliated institute or hospital approved by the Advisory Board of the Faculty of Medicine.

Legend: CR: Credit, SC: Schedule, D: Day, E: Evening

**SEGMENT 70 FLEXIBLE STREAM OPTION**
All credits in this option are mandatory and are for research and a thesis.

**Block 70A Research and thesis**
Mandatory - 90 credits

<table>
<thead>
<tr>
<th>COURSE</th>
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<tbody>
<tr>
<td>PHL 7000</td>
<td>PhD Comprehensive Examination</td>
<td>0</td>
<td>PHL 7902</td>
<td>Thesis Seminar 2</td>
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<td>PHL 7901</td>
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<td>1</td>
<td>PHL 7910</td>
<td>Thesis</td>
<td>88</td>
</tr>
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</table>

**SEGMENT 71 NEUROPHARMACOLOGY OPTION**
All credits in this option are mandatory and are for research and a thesis.

**Block 71A Research and thesis**
Mandatory – 90 credits

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**SEGMENT 72 PHARMACOGENOMICS OPTION**
All credits in this option are mandatory and are for research and a thesis.
Block 72A Research and thesis

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**Mandatory – 90 credits**

**SEGMENT 73 CLINICAL PHARMACOLOGY OPTION**

All credits in this option are mandatory and are for research and a thesis.

Block 73A Research and thesis

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**Mandatory – 90 credits**

**SEGMENT 74 INTEGRATIVE CARDIOVASCULAR PHARMACOLOGY OPTION**

All credits in this option are mandatory and are for research and a thesis.

Block 74A Research and thesis

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**Mandatory – 90 credits**

**SEGMENT 75 MOLECULAR PHARMACOLOGY OPTION**

All credits in this option are mandatory and are for research and a thesis.

Block 75A Research and thesis

<table>
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<td>Thesis</td>
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**Mandatory – 90 credits**

Programs to explore

Applicants interested in this program also applied to the following programs:

<table>
<thead>
<tr>
<th>PROGRAMES</th>
<th>TYPE</th>
<th>CREDITS</th>
<th>NUMBER</th>
<th>PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biochemistry</td>
<td>Doctorate</td>
<td>90 credits</td>
<td>3-465-1-0</td>
<td>Jour</td>
</tr>
<tr>
<td>Pharmacogenomics</td>
<td>Short Graduate Program (Master Level)</td>
<td>13 credits</td>
<td>2-520-6-0</td>
<td>Jour</td>
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<tr>
<td>Pharmacy</td>
<td>Undergraduate Doctorate</td>
<td>164 credits</td>
<td>1-675-1-1</td>
<td>Jour</td>
</tr>
</tbody>
</table>
Research expertise at a glance

RESEARCH AREAS

- Drug metabolism and biotransformation
- Immunopharmacology
- Neuropharmacology
- Pharmacokinetics
- Pharmacodynamics
- Pharmacovigilance
- Pharmacoepidemiology
- Pharmacoeconomics
- Pharmacogenetics
- Clinical pharmacology
- Molecular pharmacology
- Cardiovascular pharmacology
- Pharmacology of the digestive system
- Pharmacology of the renal system
- Pharmacology of metabolic diseases and diabetes
- Pharmacology of addiction
- Pharmacology of pain
- Cancer pharmacology
- Natural products
- Gene therapies
- Toxicology

RESEARCH GROUPS

- Groupe de recherche universitaire sur le médicament (GRUM) : https://pharm.umontreal.ca/recherche/chaires-centres-et-groupe-de-recherche/unite/ur/13794/sg/Groupe%20de%20recherche%20universitaire%20sur%20le%20médicament%20/
- Groupe de recherche sur le système nerveux central (GRSNC) : http://www.grsnc.umontreal.ca/index_e.html

Find out more : http://www.pharmacologie.umontreal.ca/english.html

Professors

Consult the list of the department’s faculty members and their specializations : https://pharmacologie-physiologie.umontreal.ca/recherche/chercheurs/

Directory of theses and dissertations

Visit Papyrus, Université de Montréal’s institutional repository, to search for research projects by our faculty and researchers as well as theses and dissertations by our students : https://papyrus.bib.umontreal.ca/xmlui/?locale-attribute=en

Research news

Read the latest research news from UdeM : http://nouvelles.umontreal.ca/en/