



Department of Pharmacology and Therapeutics

**GRADUATE TRAINING PROGRAM
GUIDELINES**

Revised April 2021

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DEPARTMENT OF PHARMACOLOGY & THERAPEUTICS
GRADUATE TRAINING PROGRAM GUIDELINES

These guidelines were first prepared in January 1986 by the Graduate Training Committee. Members of the committee included: Dr. B. Sasyniuk (Graduate Training Committee Chair), Dr. A.C. Cuello (Departmental Chair), Ms. Lorella Garofalo (Student Representative), Dr. G. Kunos, Miss M. Levore (secretary), Ms. D. Mercier (Administrative Assistant), Dr. S. Nattel, Dr. A. Padjen, Dr. M. Quik.

They have been revised again by the Graduate Training Committee, the most recent major revision being in May 2021. The committee was comprised of: Dr. Gerhard Multhaup, (Chair), Dr. Terry Hebert (Graduate Program Director), Dr. Moshe Szyf, Dr. Jason Tanny, Dr. Jacquetta Trasler, Dr. Carolyn Baglolle, Dr. Paul Clarke, Ms. Kyla Bourque (Graduate Student Representative), and Ms. Tina Tremblay (Graduate Program Coordinator).

The graduate training program is governed by the Regulations of Graduate and Postdoctoral Studies (GPS) which allow departments to interpret these regulations as needed for their particular specialty. These guidelines are a description of recommended procedures which are subject to continuing revision by the Graduate Training Committee. Amendments and adjustments are implemented whenever identified which may better serve the objectives of graduate training in pharmacology and therapeutics.

Preamble

The training of graduate students in the ideas and methods of basic pharmacological science is one of the most important activities of the Department of Pharmacology & Therapeutics. The following specific guidelines for the graduate training program were written by the Graduate Training Committee, after consultation with Faculty and students of the Department, and were approved by full-time faculty members of the Department as a whole.

Introduction to the Graduate Program and the Department

At the beginning of the Fall and Winter semesters, all new students will attend an orientation session where they will be introduced to the Departmental Chair, Graduate Program Director, and Graduate Program Coordinator and are briefed about the Graduate Training Committee Guidelines, courses, responsibilities of the office staff and the students as well as about the facilities and services available to students.

In their first few weeks in the program, students are encouraged to familiarize themselves with the different areas of pharmacological research being carried out in the Department, and with the various pharmacological techniques being used. When a student is involved in a thesis project requiring extensive collaboration that is equivalent to joint supervision with a researcher who is not a member of the Department, the permission of the Department (through the Graduate Training Committee) must be obtained. This permission must be requested at the initiation of such an extensive collaboration specifying in writing the rationale, nature of the collaboration, responsibilities of all parties involved and the anticipated duration.

Course Requirements

<https://www.mcgill.ca/pharma/graduate/programs-requirements>

MSc Program Requirements (students admitted Fall 2020 or later)

1st Year MSc – Registration – Fall

- PHAR 602 – Principles of Pharmacology (3 credits)
- PHAR 609 – Research Professionalism for Pharmacologists (1 credit)
- PHAR 697 – Thesis Preparation (6 credits)
- PHAR 712 – Statistics for Pharmacologists (3 credits)

13 credits Total

1st Year MSc – Registration – Winter

- PHAR 601N1 – Research Seminar (1st Year Presentation) (3 credits)
- PHAR 610 – Scientific Communication for Pharmacologists (2 credits)
- PHAR 698 – Thesis Preparation (9 credits)

14 credits Total

2nd Year MSc – Registration – Fall

- PHAR 696 – Thesis Preparation (3 credits)
- PHAR 699 – Thesis Preparation (12 credits)

18 credits Total

(45 credit requirement met)

MSc – Option (Environmental Health) Requirements (students admitted Fall 2020 or later).

1st Year MSc – Registration – Fall

- PHAR 602 – Principles of Pharmacology (3 credits)
- PHAR 609 – Research Professionalism for Pharmacologists (1 credit)
- PHAR 696 – Thesis Preparation (3 credits)
- PHAR 670 – Principles of Environmental Health Sciences 1 (3 credits)
- PHAR 712 – Statistics for Pharmacologists (3 credits)

13 credits Total

1st Year MSc – Registration – Winter

- PHAR 601N1 – Research Seminar (1st Year Presentation (3 credits)
- PHAR 610 – Scientific Communication for Pharmacologists (2 credits)
- PHAR 671 – Principles of Environmental Health Sciences 2 (3 credits)
- PHAR 698 – Thesis Preparation (9 credits)

17 credits Total

2nd Year MSc – Registration – Fall

- PHAR 601N2 – Research Seminar (1st Year Presentation (3 credits)
- PHAR 699 – Thesis Preparation (12 credits)

15 credits Total

(45 credit requirement met)

**Thesis Preparation credits include the research performed towards an MSc thesis (in order to obtain the required 45 credit requirement of the program. PhD students do not take the Thesis Preparation Course.*

PhD Program Requirements (Students admitted as of Fall 2020).

1st Year PhD – Registration – Fall

- PHAR 602 – Principles of Pharmacology (3 credits)
- PHAR 609 – Research Professionalism for Pharmacologists (1 credit)
- PHAR 712 – Statistics for Pharmacologists (3 credits)

1st Year PhD – Registration – Winter

- PHAR 610 – Scientific Communication for Pharmacologists (2 credits)
- 700 level requirement

2nd Year PhD – Registration – Fall

- PHAR 701 – Comprehensive Exam (Thesis Proposal)
- 700 level requirement

PhD – Option (Environmental Health) Requirements (As of Fall 2020).

1st Year PhD – Registration – Fall

- PHAR 602 – Principles of Pharmacology (3 credits)
- PHAR 609 – Research Professionalism for Pharmacologists (1 credit)
- PHAR 670 – Principles of Environmental Health Sciences 1 (3 credits)
- PHAR 712 – Statistics for Pharmacologists (3 credits)

- PHAR 610 – Scientific Communication for Pharmacologists (2 credits)
- PHAR 671 – Principles of Environmental Health Sciences 2 (3 credits)
- 700 level requirement

2nd Year PhD – Registration – Fall

- PHAR 701 – Comprehensive Exam
- 700 level requirement

Requirements for students admitted prior to September 2020

MSc Program Requirements

Required Courses (12 credits)

PHAR 601D1/D2 Research Seminar (6 credits)

PHAR 609: Research Professionalism for Pharmacologists (1 credit) PHAR

610: Scientific Communication for Pharmacologists (2 credits) PHAR 712:
Statistics for Pharmacologists (3 credits)

In addition, either 6 credits chosen from the following courses: PHAR

562 Neuropharmacology (3 credits)

PHAR 563 Endocrine Pharmacology (3 credits)

PHAR 503 Drug Discovery & Development 1 (3 credits) OR PHAR 505 Structural Pharmacology (3 credits)

OR completion of an equivalency exam

OR an exemption granted by the GTC on the basis of previous courses

Students who have taken these 500 level courses as part of their undergraduate degree, passed the equivalency exam, or been exempted, will register for the following course:

PHAR 697 Thesis Preparation 1 (6 credits)

One additional 700-level PHAR course, or the equivalent, upon approval by the Graduate Training Committee (GTC) (3 credits)

Thesis Courses (24 credits)

PHAR 696 Thesis Preparation (3 credits)

PHAR 698 Thesis Preparation 2 (9 credits)

PHAR 699 Thesis Preparation 3 (12 credits)

PhD Program Requirements

Required Courses (12 credits)

PHAR 701 Comprehensive Exam (6 credits)

PHAR 609: Research Professionalism for Pharmacologists (1 credit) PHAR

610: Scientific Communication for Pharmacologists (2 Credits) PHAR 712:

Statistics for Pharmacologists (3 credits)

In addition, EITHER 6 credits chosen from the following courses:

PHAR 562 Neuropharmacology (3 credits)

PHAR 563 Endocrine Pharmacology (3 credits)

PHAR 503 Drug Discovery & Development 1 (3 credits) OR PHAR 505 Structural Pharmacology (3 credits)

OR completion of an equivalency exam

OR an exemption granted by the GTC on the basis of previous courses

Two additional 700-level PHAR courses, or the equivalent, upon approval by the Graduate Training Committee (GTC) (3 credits each)

The method of student evaluation in courses is to be announced to the students at the beginning of the course. Copies of course content, method of evaluation, etc. must be given to the Graduate Training Committee and the Graduate Program Coordinator at the beginning of the term so that records can be kept on file regarding course offerings.

Student Course Evaluations

Student evaluations of courses are integrated into the Mercury online evaluation system. At the end of the evaluation period, the Graduate Program Coordinator will send the evaluation results to the course coordinator, Graduate Program Director and Chair of the Department. The results will be discussed at meetings of the Graduate Training Committee.

Letter of Understanding

A supervisor who agrees to accept a new student must provide the student and Graduate Program Coordinator with a letter stating the annual stipend and the initial source of funding. The student must provide evidence of acceptance of this offer.

Each September, supervisors must notify the Graduate Program Coordinator of the funding source and stipend amount of each student enrolled in the Department.

Degree Milestones

MSc Milestones

1st Year Milestones – Fall

- ✓ Letter of Understanding
- ✓ Advisor Selection (October)
- ✓ Select members of Thesis Advisory Committee with notification to Graduate Program Coordinator (December)

1st Year Milestones – Summer

- ✓ Schedule Thesis Advisory Committee Meeting (August)

2nd Year Milestone – Fall (September)

- ✓ PHAR 601 – Research Seminar (1st Year Presentation (FYP))
- ✓ Opportunity to fast-track to PhD possible at this point for following Winter semester

2nd Year Milestones – Winter

- ✓ Schedule Annual Thesis Advisory Committee Meeting (May)
- ✓ Possible Initial Thesis Submission

3rd Year MSc – Milestones – Fall

- ✓ Possible Initial Thesis Submission (August Deadline)
- ✓ Possible final Thesis Submission (December deadline)

3rd Year MSc – Milestones – Winter

- ✓ Schedule Annual Thesis Advisory Committee Meeting
- ✓ Initial Thesis Submission (April deadline)
- ✓ Final Thesis Submission (August deadline)

PhD Milestones

1st Year Milestones – Fall

- ✓ Letter of Understanding
- ✓ Advisor Selection (October)
- ✓ Thesis Advisory Committee Selection (November)
- ✓ Confirm to Graduate Program Coordinator (December)

1st Year Milestones – Summer

- ✓ Schedule Thesis Advisory Committee Meeting (June to August)

2nd Year Milestone – Fall (September)

- ✓ PHAR 601 – Research Seminar (1st Year Presentation)

2nd Year Milestones – Winter

- ✓ Schedule Thesis Proposal (PHAR 701 – Comprehensive Exam)

*** Once you have completed your course requirements (700 level Topic course included), you must schedule an annual Thesis Advisory Committee meeting by the end of every Winter semester ***

PhD Final Milestones

- ✓ With your Thesis Advisory Committee approval, you will schedule a Senior Seminar 6 months before your initial thesis submission.
- ✓ Consult Graduate Program Coordinator a few months before your initial thesis submission to regarding the forms needed, deadlines and the timeline of your thesis defense.

Mandatory Workshops and Seminars

All applicable McGill-mandated workshops (e.g. WHMIS, Biosafety etc.) are obligatory.

Animal Workshops - McGill mandates workshops and online exam(s) on animal care and handling for all students who use animals in their work.

Departmental Seminars

Departmental seminars, given by faculty members, graduate students and invited speakers, constitute an integral part of the graduate training program. Students are expected to attend ALL seminars, except in extenuating circumstances.

Attendance at seminars in other departments, hospitals and research institutes is also considered desirable and is encouraged, as the student and supervisor deem appropriate.

Student Presentations

Planning the First Year Presentation

The Graduate Program Coordinator will poll graduate students and supervisors on their availability. Possible dates will be between mid-September and mid-October (Fall registrants), early January to mid-January (Winter registrants).

Thesis Advisory Committee meeting

All students must meet with their Thesis Advisory Committee 1-3 weeks prior to their first-year presentation. An Abstract must be provided in advance (see below). The meeting will start with a (timed) 10-min presentation given by the student without interruption. Next, committee members will ask questions related to the project or more broadly testing pharmacological knowledge. Lastly, the student will be evaluated by, and receive feedback from, the Committee.

A one-page abstract (font size 10-12, margins 0.75") must be submitted to the Graduate Program Coordinator (GPD) at least one week in advance for distribution. Abstracts should be formatted in the following manner:

- Project title
- Student's and supervisor's Name
- Background/Rationale
- Hypothesis (and/or Objectives)
- Methods
- Results
- Discussion
- Funding source(s)

The Thesis Advisory Committee will provide a recommendation on performance to the Graduate Program Director. The Pre-FYP committee meeting has both an advisory and evaluative role, and its conclusions carry significant weight when we discuss fast tracking to the PhD program after the FYP.

Progress Tracking Form:

https://www.mcgill.ca/gps/files/gps/gps_graduate_student_research_progress_tracking_report_2021.pdf

After the first-year presentation, members of the Graduate Training Committee will convey its evaluation in person to the student. The evaluation must be signed by the Student, Supervisor, Advisor, other Committee members, and the Graduate Program Director. Any recommendation to offer fast-track from a M.Sc. to a Ph.D must be carefully articulated. Students with cGPA < 3.5 in graduate courses in their present program will not be eligible for fast-tracking.

First-year presentation

Students will give an oral presentation (10 minutes, followed by a Q&A period). The session will be open to all members of the Department. The topic of the first-year presentation should be based on laboratory research already completed or research in progress, and each student will be questioned after their formal presentation by faculty members only. Questions may be related to the student's research project or broader aspects of pharmacology.

The GTC will then convene with supervisors and interested faculty members to evaluate students, taking account of the evaluation in the student committee meeting, course work to date and the first year presentation. Students will receive verbal feedback from the GPD.

In case of supervisor's absence:

The supervisor must nominate an appropriate replacement (i.e. individual who is fully knowledgeable of the student's research work and scholastic record- most likely the advisor or a member of the student's committee), and notify the GPD. The supervisor must hold a verbal discussion with the GPD, and provide him/her with a short written report of the student's progress, which will be added to the student's dossier. Students will not be permitted to continue with their first-year presentation if the supervisor/substitute is absent or the dossier is incomplete.

Student committee meetings – Subsequent Years

All M.Sc. students will give a progress report in the form of an oral presentation to their Thesis Advisory Committee (approximately 20 minutes, followed by a discussion) in the second year of graduate studies. A one-page abstract must be submitted to the advisory committee members at least one week in advance. The student's Advisor is responsible for ensuring that a written evaluation is completed and signed by the committee and student. Progress Tracking Form:

https://www.mcgill.ca/gps/files/gps/gps_graduate_student_research_progress_tracking_report_2021.pdf

Thesis proposal. All students enrolled in the PhD program must provide a written proposal and an oral presentation in the form of a thesis proposal to their Thesis Advisory Committee 12 months from commencement of their PhD program, as follows.

The written component must comprise a one-page abstract followed by a 5-10 page text that should include a review/background for the project and a plan for the PhD thesis. A summary of any data obtained to date may also be included. This document should be sent to all committee members at least one week prior to the scheduled committee meeting. The oral presentation should last approximately 20 minute and should include the rationale for the project, an outline of the research aims, progress made to date, and a proposed timeline for each aim. A question period will follow.

Information deriving from any student's presentation is considered privileged information that committee members agree to hold in confidence. This is to protect students and supervisors who may be developing intellectual property as part of their graduate work.

Senior Seminar

The purpose of the senior seminar is not evaluative; rather, it is to give departmental members an overall view of the student's thesis work, before he or she leaves the department. Hence, the format is as for regular departmental seminars, i.e. a presentation of around 45 minutes followed by a Q&A period during which any audience member may ask questions. *The senior seminar is mandatory for PhD students* and should be given within 6 months of the intended date of thesis submission. It is the student's responsibility to contact the seminar organizers well in advance in order to find a suitable date.

Thesis preparation and submission

Regulations regarding deposition of thesis, thesis format, dates and other procedural guidelines are periodically revised by the Faculty of Graduate and Postdoctoral Studies. Students are therefore advised to obtain the current regulations, announcements and calendar of dates from the Thesis Office. Refer to <https://www.mcgill.ca/gps/thesis> for policy and regulations on Ph.D. oral defense from the Graduate and Postdoctoral Studies Office.

The Department has approved both thesis formats listed in the regulations of Graduate and Postdoctoral Studies.

The Graduate Program Coordinator is responsible for final scheduling of the thesis defense and informing committee members of the time and place.

Evaluations

Monitoring of the student's performance in experimental work, seminars, teaching, etc. is the responsibility of the supervisor, assisted by the Thesis Advisory Committee. Reports of the student's progress are provided by the supervisor and the Thesis Advisory Committee to the Graduate Training Committee at the time of the student's annual presentation.

An ad hoc review of any student's progress may be requested by the Chair of the Department. The format is decided upon by the Chair in consultation with the Graduate Program Director and with the student's supervisor.

Financial Support

The Graduate Program Coordinator informs new students of any opportunities to various granting agencies. Approximate deadlines for studentship and fellowship applications are: FRQS, CIHR, NSERC and Faculty of Graduate and Postdoctoral Studies –October to December; Faculty of Medicine - March. Students are expected to make all reasonable efforts to obtain funding for their stipend. Students should also be aware that applications take time and that confidential referee letters must be solicited well in advance of submission deadlines.

Applications for funding renewals are the student's responsibility; the student acts in consultation with the supervisor.

To ensure that students have adequate support, a minimum level of funding is set by the Graduate Training Committee, in line with FRQS and other granting agency norms for MSc and PhD; students paid from CIHR or NSERC funds must be paid according to the guidelines of the agency in question. M.Sc. and PhD students must receive at least \$22,000 annually. This will be set out in the letter of agreement between student and supervisor.

Tuition Funding for MSc Out of Province and PhD International students

MSc students from outside of Quebec will receive a GEF award for tuition in the amount of \$2600 for the first three semesters. The tuition fees falls to the Quebec rate in the fourth semester. PhD out of province students pay the Quebec rate of tuition.

As of Fall 2021, International PhD students will receive a GEF award for tuition in the amount \$5000 per semester from PhD2 to PhD4 (Tuition falls to the Quebec rate at the start of PhD 5). The student will be responsible in paying the equivalent of the Quebec tuition rates (in green) and the supervisor will be responsible for the remaining amount (in yellow). These numbers are approximate (International tuition is raised approximately 3% to 4% annually). International MSc students will receive \$5000 per semester for three semesters (Tuition falls to the Quebec rate in the 4th semester for MSc students). The MSc student will be responsible for the Quebec tuition rate and the supervisor will be responsible for the remaining amount). This will be set out in the letter of agreement between student and supervisor.

	New Funding Scheme						
	PhD 2		PhD 3		PhD 4		Totals
	Fall	Winter	Fall	Winter	Fall	Winter	
Total Fees	\$10,139.70	\$8,760.27	\$10,443.90	\$9,023.08	\$10,757.22	\$9,293.77	\$58,417.94
GEF	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$5,000.00	\$30,000.00
Left to pay	\$5,139.70	\$3,760.27	\$5,443.90	\$4,023.08	\$5,757.22	\$4,293.77	\$28,417.94
Quebec Fees (Student responsibility)	\$2,637.15	\$2,010.72	\$2,716.26	\$2,071.04	\$2,797.75	\$2,133.17	\$14,366.09
Supervisor	\$2,502.55	\$1,749.55	\$2,727.64	\$1,952.04	\$2,959.47	\$2,160.60	\$14,051.85

Files and Records

It is the responsibility of the student to provide all necessary documents and information required in order to keep his/her file up-to-date. It should be noted that students' files are used for evaluation purposes by the Graduate Training Committee, and so it is in the student's best interest to ensure that it is complete.

The student is permitted to examine the contents of his/her file. To do so, the student must send a written request to the Registrar's office. The Registrar will request that the Department send the file (or specific documentation) to her/his attention. The student will be permitted to review the file, under the Registrar's supervision.

The departmental file (hardcopy or electronic) includes the following documents: admission materials (transcripts, letters, etc.), registration forms, verification forms, the Graduate Training Committee comprehensive evaluations and abstracts of presentations, copies of all documents relating to thesis submission and evaluation, copies of appointment forms, copies of applications and award letters pertaining to graduate studies.

Roles of the Student, Graduate Training Committee Members, Graduate Program Director, Departmental Chair, Supervisors, Advisors and Graduate Program Coordinator

Roles of the student

- a) Students are expected to choose a broad line of research in full agreement with the selected supervisor. Thereafter, they should work with the supervisor to define projects, acquire the necessary techniques to perform the research and build toward a finished MSc thesis or a PhD thesis.
- b) The student is expected to produce the bulk of the data to be used in his/her thesis.
- c) The student should meet with his/her Advisor whenever he/she wishes to report on progress and/or difficulties.
- d) Students must arrange a meeting with his/her Thesis Advisory Committee at least once per year.
- e) The student is responsible for providing the Graduate Program Coordinator with all necessary information and documents for his/her file (see section 8 above) so that up-to-date information is available for assessment and reporting purposes.
- f) It is the student's responsibility to pay fees and register during the prescribed time periods set by Graduate and Postdoctoral Studies. Failure to do so will entail penalties levied by the University.
- g) Students must have their applications for funding approved by their immediate supervisor and the Chair of the Department, or his/her representative, before submission.
- h) Students may not use departmental stationery without the explicit approval of their immediate supervisor. Computer use is restricted to academic activities.
- i) Students are responsible for the preparation of their theses.
- j) Students should aim to complete their M.Sc. program within 2 years. Those entering with a B.Sc. degree should aim to complete their Ph.D. program within 4-5 years from initial registration in the

- graduate program.
- k) Students must cite their affiliation with the Department of Pharmacology and Therapeutics in all published scientific papers and presentations that are based on their graduate training research project in this Department.
 - l) Students must be familiar with the Graduate and Postdoctoral Studies policies. <http://www.mcgill.ca/gps/policies>
 - m) Students have a responsibility to properly document their work in accordance with university and funding agency policies, and in accordance with the supervisor's expectations. A suggested method of documentation is shown in Appendix III; students should discuss specific methods with their supervisor.
 - n) Students have a responsibility to access and read University e-mail correspondence regularly (see "Policy on E-Mail Communication with Students". A Handbook on Student Rights and Responsibilities, Chapter 13; see also "McGill Student E-mail Policy": <http://www.mcgill.ca/email-policy/policy/>).

Selection and Roles of Graduate Training Committee Members

The Graduate Training Committee is composed of the Graduate Program Director, Departmental Chair, a graduate student representative, five other members of academic staff, and one *ex officio* member - the Secretary to the committee (usually the Graduate Program Coordinator). The six academic members of the Graduate Training Committee (aside from the Department Chair) will be elected by the Department via secret ballot, from a list of academic staff eligible according to department criteria.

The procedure for electing a new Graduate Program Director is as follows: the election will take place in the early summer, when the newly-elected and outgoing members overlap. Voting is by secret ballot and is restricted to academic committee members (incoming, continuing, and outgoing members) and the student representative. Members nominate candidates from among the core academic members of the department, excluding the outgoing GPD. Nominees must indicate that they are willing to stand and need not be currently on the GTC. Members will then vote and the candidate having the most votes becomes new Graduate Program Director. The newly elected GPD's term of office will be for a 3 year period; GPDs cannot be elected for consecutive terms.

The six elected members of the Graduate Training Committee will serve for a term of three years. There must be a lapse of at least one year before a Graduate Training Committee member can be re-elected.

Members of the Graduate Training Committee will:

- a) review applicants' files (see 1.3.)
- b) interview potential students
- c) attend meetings to discuss issues related to graduate student education in the Department
- d) monitor the progress of all graduate students

Student representative. The student representative has the same responsibilities as other members of the committee (see items a to d, above), except that the term of office is for one year only unless re-elected. Including a student representative on the committee ensures that students have input into decisions affecting the program and also provides an additional perspective to the committee.

The deliberations of the committee are confidential (although minutes are available for perusal by all faculty). Communication to applicants and registered students about Graduate Training Committee discussions must not be conveyed by committee members to the individual concerned unless he/she is specifically requested to do so.

Role of the Graduate Program Director

The Graduate Program Director is responsible for ensuring the smooth operation of the graduate program (oversees admissions, makes recommendations to the Committee regarding acceptance or rejection of applicants, devises mechanisms for attracting high calibre graduate students, monitors student performance and graduate courses) and for bringing problems to the attention of the Graduate Training Committee. The Graduate Program Director reports to the academic staff and the Chair, and chairs the meetings of the Graduate Training Committee.

Role of the Departmental Chair

The Departmental Chair delegates administrative responsibility for the graduate program to the Graduate Program Director and the Graduate Program Coordinator. The Departmental Chair attends meetings of the Graduate Training Committee and is briefed on student progress by supervisors, advisors and the Graduate Program Director. The Departmental Chair is ultimately responsible for the enforcement of Graduate and Post-Doctoral Studies regulations as well as these Graduate Training Program Guidelines.

Role of the Supervisor

The role of the supervisor of a M.Sc. or Ph.D. candidate is to orient the student in the conceptual problems related to the selected project and to ensure that the student develops critical thinking, masters key elements of experimental design and execution and gains expertise with the techniques required to complete the research project.

The Graduate Training Committee should monitor professors to ensure that they can adequately supervise the number of students in their lab. All full-time academic staff members are entitled to supervise graduate students. Part-time and adjunct members may also be eligible to act as co-supervisors* (subject to the approval of the Graduate Training Committee), providing they accept the obligation of ensuring that the student participates in all aspects of the departmental graduate program (e.g. seminars, courses and other requirements as determined by the Graduate Training Committee).

*McGill University Graduate Studies Guidelines and Policies (Section 10.1) permit adjunct and emeritus members only to co-supervise, and in such cases the student must therefore be co-supervised by a full-time core academic departmental member. Adjunct and emeritus members should therefore make such an arrangement for each of their students. This arrangement should be agreeable to all parties and confirmed in a written letter addressed to the Graduate Program Director and signed by both co-supervisors and the student. If applicable, the letter should state that the internal co-supervisor takes no financial responsibility for the student.

The supervisor will provide the Graduate Program Coordinator with an annual written assessment of the progress of each of their students.

The supervisor is responsible for monitoring the thesis drafts while work is in progress, for reading the entire thesis and suggesting changes prior to the completion of the thesis.

As a rule, the supervisor remains the same for the entire duration of the student's program. In the event that a supervisor retires, leaves, dies, or has no research funding, the Department will aid the student in finding an appropriate alternative supervisor. However, the Department cannot guarantee to find an alternative supervisor or financial support.

Students may be allowed to change supervisors, but only with the approval of the Graduate Training Committee. Written notification must be sent by the new supervisor and by the student to the Graduate Program Director. Students in the rotation program will confirm their thesis supervisor at the end of their rotations.

Role of the Advisor

The Advisor is selected by the student, generally at the end of the second month in the program. The thesis supervisor (or co-supervisor) cannot be the student's Advisor

The main role of the Advisor is to offer personal advice and moral support. The advisor, for example, may help assure that the relationship between student and supervisor is mutually acceptable. The Advisor is usually the *first* staff member approached in case of difficulties. If the Advisor feels that the project and/or relationship of the student with his/her supervisor is undergoing difficulties, the Advisor should, with the assent of the student, first approach the supervisor informally, then, if the problem persists, more formally to the supervisor and the Graduate Program Director. If problems persist, the Departmental Chair should be consulted. The Advisor is also responsible of chairing annual committee meetings. The student will send the progress report form to the advisor (with their portion completed) at least 24 hours before the meeting is scheduled. Any matters that the student discusses with his/her Advisor are privileged information. The Graduate Program Director usually does not accept to serve as an Advisor to any additional students during his/her term. Faculty members should not advise more than five students (amended in 2017).

Roles of Thesis Advisory Committee

The Thesis Advisory Committee will assist and supplement the supervisor(s) in offering scientific direction to a student throughout the training. It will assist the Department in assessing a student's progress.

The committee shall consist of the supervisor(s), the advisor, plus at least 2 other members selected for their scientific knowledge and recruited from the available "community at large" (i.e. the Department, other McGill units or other local institutions). The committee shall be formed and meet at least 1 week before a student's "first year presentation"; thereafter it will meet at least once per year. The student's Advisor will chair each meeting of the Thesis Advisory Committee and shall prepare the written consensus evaluation of student performance to be presented to the Graduate Training Committee and Department to supplement the supervisor(s) assessment. The student will send the progress report form to the Advisor (with their portion completed) at least 24 hours before the meeting is scheduled. The Thesis Advisory Committee shall be formed by the supervisor(s) with input and agreement of the student; its meetings will be coordinated by the student and chaired by the student's Advisor. The student must provide an abstract to the committee members and the Graduate Program Coordinator at least 1 week in advance, together with a list of committee members.

Any experimental results that the student discusses with the Thesis Advisory Committee should be taken as privileged information.

Role of the Graduate Program Coordinator

With general guidance from the Graduate Program Director, this person performs wide-ranging duties relating to the graduate program including handling applications, admissions, registration, funding

meetings, student presentations, thesis submissions and oral defenses; prepares agendas and records minutes of Graduate Training Committee meetings; compiles and maintains a computerized information database of all students (past and present); provides statistics on applications, admissions and funding, as needed; compiles stipend information (amount and fund number) for the Financial Administrator of the AEC (Academic Excellence Centre); processes internal fellowships and acts as a resource person for students and applicants.

"AD PERSONAM" JOINT PROGRAMS

In exceptional cases, it will be appropriate for a student to qualify for a joint doctoral degree in Pharmacology and Therapeutics and another discipline. This concept relates to a graduate program which is tailored to a specific student (i.e., "ad personam" - to a specific person). As such, the instances in which it will apply are likely to be unusual and each request for such a program will have to be approved, based on its own merits, by the Graduate Training Committee. In general, requests for an "ad personam" joint program should be made early in the course of a student's graduate training. Based on the merits and requirements of each case the Committee will then decide:

- a) to approve or reject the "ad personam" program.
- b) in the case of approval, the requirements for the "ad personam" joint degree, including course requirements, examinations, presentations to the Department, and departmental representation on examination committees.

If the requirements outlined in (b) are acceptable to the other department involved and the Faculty of Graduate and Postdoctoral Studies, the student will be permitted to formally register in an "ad personam" program and a copy of the specific requirements will be sent to the student in writing.

Postdoctoral Fellows/Researchers

Postdoctoral fellows and postdoctoral researchers are in a critical stage of their training. The Graduate Training Committee is responsible for supporting postdoctoral trainees and applying the guidelines relating to Postdoctoral Education, as described on the GPS website for Postdoctoral Fellows: <https://www.mcgill.ca/gps/postdocs/fellows>.

GUIDELINES FOR DOCUMENTING DATA

1. The data you collect or produce as a graduate student at McGill belongs to the University, and your supervisor is the person to whom the University assigns the principal responsibility for how they are used and maintained. Your protocol books and experimental data must be accessible to your supervisor at all times.
(<http://www.mcgill.ca/research/files/research/policyonintellectualproperty.pdf>)
2. Your lab book and other primary data records must be deposited for safekeeping with your supervisor at the end of your studies. CIHR, for example, currently (2015) requires grant and award holders to retain original data sets arising from CIHR-funded research for a minimum of five years after the last date of the "Authority to Use Funds" period of the grant. This applies to all data, whether published or not.
3. Each entry should be properly dated. All entries should be made in ink.
4. The objective of the experiment should be briefly described.
5. Describe experimental details, including codes for animals used (weight, age, sex, strain) and samples obtained.
6. When using established protocols enter reference (even if it is a self-reference), very importantly, enter all modifications to established protocols. Indicate solutions used and source of reagents (including catalog and lot numbers where relevant). Also, clearly enter notes of precaution taken to avoid or reduce errors.
7. Enter read-out of measurements from scintillation counters, spectrophotometers, plate readers etc. Glue original or copy of print-outs in the book. Identify the individual samples in a clear manner. Please incorporate everything from the obvious to the unusual.
8. Enter schemes, stereotaxic landmarks, and descriptions of apparatus or number of photographs when required.
9. Enter copies of tabulation of results or graphs, where applicable.
10. Indicate the statistical methods utilized.
11. Write your INTERPRETATIONS and proposed new experiments.
12. If the book contained original observations whose validity or authenticity might be contested, ask a colleague or supervisor (faculty members, students, post-doctoral fellows) to initial and date the entry (essential for patent claims or industrial use).
The student should discuss specific methods of documentation with his/her supervisor.