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Combined Doctor of Medicine and Doctor of Philosophy Program

PROGRAM DESCRIPTION

(Updated November 2019)

Mission

The primary mission of the UBC combined Doctor of Medicine and Doctor of Philosophy (MD/PhD) Program is to train and nurture future clinician-scientists who excel both in clinical medicine and basic sciences. The program aims to be Canada's leader in preparing the future generation of clinician-scientists.

Overview

The combined MD/PhD Program is an integrated program jointly administered by the Faculty of Medicine and the Graduate & Postdoctoral Studies. Its purpose is to provide selected and highly qualified students the opportunity to combine their medical school experience with intensive scientific training in a PhD graduate program, in order to pursue careers as clinician-scientists. The program is designed such that students can receive the combined MD/PhD degree after successful completion of seven years of enrolment. The program of study is built upon the standard MD curriculum, but it is further "customized" to meet the unique PhD training program requirements of individual students based on their background, previous research experience, and chosen medical field of expertise.

In addition to fulfilling the requirements of the regular undergraduate MD curriculum, MD/PhD students will also undertake graduate level coursework as required by their chosen field of research. Curriculum planning, coursework, and research training are to be closely integrated and coordinated between the basic sciences and clinical disciplines throughout the 7-year program. Thus, graduates of the MD/PhD Program are trained as competent physicians as well as skilled scientists. The combined MD/PhD degree should adequately prepare the graduates to pursue a research-intensive track of residency and postdoctoral training in a specialty or discipline of their choice, ultimately leading to a competitive and independent clinical investigative career.

Student selection, curriculum planning, research supervision, and clinical training are jointly coordinated through the MD/PhD Committee. Close integration and coordination between the basic sciences and the clinical disciplines will ensure a smooth transition between academic course work, basic science training, research, and clinical rotations.

Program Administration

Director:

Dr. Torsten Nielsen

Co- Director:

Dr. Liam Brunham

MD/PhD Committee (2019-2020):

Dr. Maureen Ashe, Department of Family Practice
Dr. Shernaz Bamji, Department of Cellular & Physiological Sciences
Dr. Julie Bettinger, School of Population & Public Health
Dr. Alice Mui, Department of Surgery
Dr. Millan Patel, Department of Medical Genetics
Dr. Lynn Raymond, Department of Psychiatry
Mr. Daniel Kwon (Student Representative)

Ex-Officio Members (2019-2020):

Dr. Cheryl Holmes, Associate Dean, Undergraduate Medical Education, Faculty of Medicine
Dr. Shahin Shirzad, Assistant Dean, Admissions, Faculty of Medicine
Dr. Amil Shah, Regional Associate Dean, Vancouver Fraser, Faculty of Medicine
Dr. Robert McMaster, Interim Executive Associate Dean, Research, Faculty of Medicine
Dr. Janette McMillan, Associate Dean, Undergraduate Student Affairs, Faculty of Medicine
Dr. Michael Hunt, Associate Dean, Graduate & Postdoctoral Education, Faculty of Medicine
Dr. Ravi Sidhu, Associate Dean, Postgraduate Medical Education, Faculty of Medicine
Dr. Susan Porter, Dean and Vice-Provost, Graduate & Postdoctoral Studies

Coordinator:

Ms. Jane Lee

MD/PhD Committee

The MD/PhD Admissions/Advisory Committee consists of four Ex-officio members and six appointed members. Ex-officio members are appointed as for their primary positions(s), including Assistant Dean of Admissions, Assistant Dean of Graduate & Postgraduate Education, MD/PhD Program Director and MD/PhD Associate Program Director. Appointed members are composed of clinician-scientists, basic scientists, graduate program advisors, student research supervisors and a senior student representative. To ensure that the MD/PhD Committee may benefit from maximum faculty involvement and has a healthy turn-over rate, the appointed members' term is for three years, renewable once. The Committee meets at least twice a year to review the admissions process and to finalize the ranking of MD/PhD applicants and to assign studentship awards to individual MD/PhD students. Members of the Committee also serve on the student Supervisory Committees, the PhD Comprehensive Examination Committees and the PhD Final Oral Examination Committees.

Admission

Application for the MD/PhD Program is made by completing:

- 1) the on-line application form for admission to the MD Program, and
- 2) the on-line application form for admission to the MD/PhD Program.

Information on admission requirement, admission deadline, application package component, selection process and application process are available on our website at <http://mdprogram.med.ubc.ca/mdphd/admission-requirements/>

MD/PhD Curriculum

The MD/PhD Program is interdisciplinary in nature and is jointly administered by the Faculty of Medicine and the Graduate & Postdoctoral Studies. In addition to fulfilling the requirements of the standard 4-year MD curriculum, MD/PhD students will also undertake graduate level coursework and research as recommended by their Supervisory Committee. Curriculum planning, coursework, and research training are to be closely integrated and coordinated between the basic sciences and clinical disciplines throughout the 7-year program.

The MD component of the MD/PhD curriculum has been developed to capitalize on a programmatic and multidisciplinary approach that represents a natural progression of the learning experience. This will allow overlap and concurrent activities in clinical training and research, and facilitate timely completion of the MD/PhD degree with the least possible interruption in either clinical experiences or research endeavours. Students must complete all the required courses in the regular Medical Undergraduate Program.

<http://mdprogram.med.ubc.ca/about/curriculum-educational-programs/>

The PhD component of the Program is coordinated in conjunction with various hosting departments and research programs within the Graduate and Postdoctoral Studies and the Faculty of Medicine. Students must complete 12 credits of coursework for the PhD component, and at least 9 credits must be 500-level or above and at least 9 credits must be of first class standing. Students must demonstrate proficiency in all required coursework by examination. Students are expected to complete any required graduate coursework by the end of Year 3 in the Program. Students must also successfully complete the comprehensive examination requirement in the hosting department within the first 36 months of starting their program. Advancement to PhD candidacy should also be done by the end of Year 3 in the Program.

Additionally, each student will be evaluated at least annually by the Supervisory Committee. Continuation in the combined degree program is contingent upon satisfactory scholastic and research progress.

The timeline for MD/PhD studies is available at <http://mdprogram.med.ubc.ca/mdphd/links/timeline/>

Research Co-ordination

a) Research Supervisor

Each MD/PhD student must have an identified research supervisor within the first year of admission. The research supervisor must be a full member of the Graduate & Postdoctoral Studies, and is usually from a Department, Interdisciplinary Program or Institute within the Faculty of Medicine. The research supervisor must hold a current CIHR research operating grant or any grants from an equivalent peer-reviewed, federal or provincial granting agency.

b) Hosting Department

The hosting department is usually the department in which the research supervisor has a primary academic appointment. Selection of and arrangement with the hosting department must have prior approval of the MD/PhD Program Director, the Graduate Advisor of the hosting department, the research supervisor and the MD/PhD student. The primary responsibility of the hosting department is to register the MD/PhD student in the PhD dissertation course, and to coordinate the student's Final Oral Defence.

c) Supervisory Committee

Each MD/PhD student is required to be guided by a Supervisory Committee that minimally consists of: 1) the research supervisor; 2) a second faculty member from the hosting department who is also a full member of the Graduate & Postdoctoral Studies; 3) a third faculty member from a different department; and 4) a faculty member representing the MD/PhD Program (usually a clinician-scientist or clinical investigator designated by the MD/PhD Program Director). It is the responsibility of the Supervisory Committee to recommend required course work, to evaluate academic and research progress at least annually, and to accept the PhD dissertation before its presentation for Final Oral Defence.

Supervisory Committee Meeting

The Supervisory Committee is responsible for guiding the student in selecting any required courses, planning the research and preparing the PhD dissertation. The committee should be established as soon as possible after the student has registered and the PhD dissertation topic is known and within the first 12 months. Towards the end of the first year of studies in the MD/PhD Program, and not later than 15 August, the student will provide to the Graduate Advisor of the hosting department and the MD/PhD Program Director a Canadian Institute of Health Research (CIHR) research grant proposal summary (one page) of his/her planned research which has been approved by the Supervisory Committee. It is expected that the student has had at least one Supervisory Committee meeting before the submission of this research proposal summary.

Meetings of the committee must be held at least once every 12 months, and after a Supervisory Committee meeting is held, the research supervisor and student should sign a formal report and send it to the MD/PhD Program Director and the Graduate Advisor of the hosting department. The report form is available at <http://mdprogram.med.ubc.ca/mdphd/links/thesiscommitteereport/>.

PhD Comprehensive Examination

Students in the MD/PhD Program are required to pass the comprehensive examination in the hosting department within the first 36 months of starting the 7-year MD/PhD Program.

PhD Dissertation and Final Oral Defence

The MD/PhD students defend their PhD dissertation by oral defence (usually at the end of Year 5), which is coordinated by the Graduate Advisor of the hosting department. The PhD Final Oral Defence is subject to the same regulations as all graduate programs of the Graduate & Postdoctoral Studies. The MD/PhD Program Director will ensure that the oral defence is completed in a timely manner before the students re-entering the basic clinical clerkship rotations.

Tuition

The 2019/2020 tuition is \$5194.77 per year, payable in 3 instalments of \$1731.59 per year for the first six years, and a single continuation fee of \$2282.40 per year in each subsequent year. This fee is charged in place of, rather than in addition to, the MD-only program tuition fee. It is expected that there will be a modest tuition increase of fees for MD/PhD students in the coming years.

Financial Assistance

Funding will be provided to the MD/PhD student by a combination of program sources for a maximum of 6 years for the 7-year combined program. Beginning May of the first year of the combined program, the student will receive an annual stipend of at least \$21,000 from the program.

- a) The student is required to apply for external awards in his/her second year and if unsuccessful, again in Years 3 and 4 of the combined program. In the unlikely event that the student is unsuccessful in obtaining external funding, the primary research supervisor is obligated to provide bridge funding in the minimum amount of \$21,000 per annum for the student stipend for one year, usually Year 5 of the combined program.
- b) In the case that the student is required to take extra time to complete PhD research that will extend the combined program beyond 7 years, the primary research supervisor is also obligated to provide bridge funding in the minimum amount of \$21,000 per annum for that period.
- c) Student stipends will be supported by the program for all of Year 6 and up to end of Year 7 of the combined program (i.e. while the student completes Years III and IV of the MD curriculum).

Financial Structure and Support of Students

Due to budgetary considerations, all MD/PhD Studentship stipends and research allowance are administered by the MD/PhD Program office. These resources are pooled and shared among the students.

The research allowance is used to support research related travel by our students. Other educational expenses (e.g. computer or textbook purchase) are not normally allowable costs. All expenses charged to the research allowance must receive prior approval by the Program Director.

Other top-up stipend awarded to the students from other funding institutions is currently maintained by the Graduate & Postdoctoral Studies. The research supervisor is responsible for the legitimate use of any research allowance connected to these top-up awards.

Student Activities Specific to the MD/PhD Program

The MD/PhD Program is devoted to creating a cohesive group of students, with their own identity in a medical scientist training program which is distinct from other medical or graduate programs. In order to create a supportive and nurturing ambience, special research seminars, informal gatherings and social interactions, a regular newsletter, a national journal devoted to the training clinician-scientists (Clinical and Investigative Medicine), and other communication devices have been implemented to promote morale and facilitate collegial interactions among the students. The informal monthly MD/PhD student meeting with the Program Director enables the students to meet with clinician-scientist role models in different fields, and to carry out various discussions of special interest to MD/PhD students.

The UBC MD/PhD Student Research Forum and Open House is held annually in September. This annual function provides a valuable opportunity for the MD/PhD students to showcase their research and promote the program to the University community. MD/PhD students are given the opportunity to meet various graduate advisors, research supervisors, other students, and potential applicants to the program.

MD/PhD students are offered the opportunity to attend and present their research annually at national and international research forums such as the annual CSCI/CITAC Joint Program for Clinician Scientist trainees (usually in November), and the annual Western Student Medical Research Forum in conjunction with the Western American Federation for Medical Research, Western Society for Clinical Investigation, Western Association of Physicians, and the Western Society for Paediatric Research.

MD/PhD students are also required to regularly attend and present their research in a designated research seminar series organized by the program and the hosting department of the student.

Student Progress Evaluation

All students are required to provide an annual progress report to the Program Director. All students and the supervisor(s) are required to meet with the Program Director at least once a year. The purpose of the meeting is to evaluate student annual progress and review academic/research goals in the coming year.

Student Vacation Timeline

Students are required to discuss their vacation plan with the research supervisor at the beginning of the academic year. Students should follow the MD Undergraduate Program student vacation policy.

For additional information, please contact:

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