MD/PhD Program Overview
& discussion
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UNIVERSITY OF ALBERTA
FACULTY OF MEDICINE & DENTISTRY

“uplifting the whole people”
HENRY MARSHALL TORY, FOUNDING PRESIDENT, 1908
- MD/PhD: intensive, dual degree program to develop Clinician-Scientists
- MD/STIR: developing research as a competency in your medical education
The goal of the MD/PhD program is to provide training towards becoming a Physician-Scientist.

Create leaders in medicine that are fluent in both research and clinical practice.
The Rising Challenge of Training Physician-Scientists: Recommendations From a Canadian National Consensus Conference

Michael J. Strong, MD, FRCPC, Nick Busing, MD, CCFP, FCFP, Danika L. Goosney, PhD, Ken A. Harris, MD, FRCSC, Tanya Horsley, PhD, Alexandra Kuzyk, Lorelei Lingard, PhD, Wendy V. Norman, MD, CCFP, MHSc, Norman D. Rosenblum, MD, FRCPC, Tina Saryeddine, PhD, MHA, CHE, and Xin Wang

Abstract

Physician–scientists are individuals who actively participate in patient care, have undergone additional research training, and devote the majority of their time to research. Physician–scientists are traditionally the primary catalysts in bridging the translational gap—that is, the failure to link fundamental new knowledge in the pathobiology of disease with advances in health care and health policy in a timely manner. However, there has been a shift away from training physician–scientists, and financial support for the physician–scientist is diminishing globally, causing the translational gap to grow. Given its socialized health care system and cultural and geographic diversity, Canada can serve as a unique case study in understanding how to address this phenomenon as a national priority. To this end, a Canadian national consensus conference was convened to develop recommendations for training programs and early-career supports for physician–scientists. Five recommendations were generated: (1) Establish an independent, national council whose mandate is to provide pan-Canadian oversight of physician–scientist training programs; (2) develop capacity for funding and mentorship support for physician–scientists; (3) develop coherent networks across a broad range of clinician–scientists, including physician–scientists, to reflect the unique cultural and geographic diversity of Canada and to reflect the interdisciplinarity of health research; (4) ensure that medical school curricula integrate, as a core curriculum feature, an understanding of the scientific basis of health care, including research methodologies; and (5) ensure that the funding of the physician–scientist trainee is viewed as portable and distinct from the operational funding provided to the training program itself.
Key points from the consensus meeting

Physician–scientists are traditionally the primary catalysts in bridging the translational gap—that is, the failure to link fundamental new knowledge in the pathobiology of disease with advances in health care and health policy in a timely manner.

Ensure that medical school curricula integrate, as a core curriculum feature, an understanding of the scientific basis of health care, including research methodologies.
Characteristics and outcomes of Canadian MD/PhD program graduates: a cross-sectional survey

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Key points from the alumni survey

- Of the 186 eligible alumni of MD/PhD programs, 139 (74.7%) completed the survey.

- Most (58 [83%]) of the 70 respondents who had completed all training were appointed as faculty at academic institutions.

- Among the 58 respondents appointed at academic institutions, 44/57 (77%) dedicated at least 20% of their time to research, and 25/57 (44%) dedicated at least 50% to research.

- 133/136 (97.8%) matched with their first choice of specialty.

- The median length of physician-scientist training was 13.5 years.
HOW will you know?

- Already discovered a passion for research (through undergraduate or graduate level experiences)
- Discover through future opportunities (STIR program or summer project); diverse opportunities in FoMD (lab based, patient centered, or population based/epidemiology/trials) and beyond
- Understanding career paths/opportunities (not one size fits all; diverse range of Physician-Scientists you can speak to)
- Talk to me
- Talk to current MD/PhD candidates
Paths to the Physician-Scientist

- The MD/PhD program; supported by the FoMD and UME; graduate degree is overseen by Faculty of Graduate Studies and Research; health related

- Clinical Investigator Program; carried out in residency; supported by the Royal College of Physicians and Surgeons of Canada; MSc and PhD

- MSc level degrees, including Masters in Public Health (MPH)

- Research fellowships that do not lead to degrees
University of Alberta MD/PhD program

- Over 30 students have graduated since 2002; majority of graduates in Canada will secure academic positions as Clinician-Scientists (with varying % research)

- Currently, 13 MD/PhD candidates at the UofA; 2 affiliates studying abroad (Cambridge and Caltech)

- Admit approximately 2 students per year

- 4 years on average to complete the PhD

- Funding available from national vouchers (until 2021), competitive studentships (provincial & national), research grants, and philanthropy
MD/PhD program structure

1. MEDICINE Years I and II → PhD training (4-6 years) → MEDICINE Years III and IV
   - PhD training (2-3 years)
   - MD admission
2. MEDICINE Years I to IV
   - PhD training (2-3 years)
   - MD admission
3. MEDICINE Years I to IV
   - PhD by year III

- Three paths to the MD/PhD: all require separate admission to MD
- Path 1: notify of intent to seek MD/PhD by October 15 of year II; apply Nov. 15 of year II
- Paths 2 and 3: admitted to medical school from graduate program
- PhD at UofA (some exceptions); need not be in FoMD, but medically related
- Meet all PhD requirements of Faculty of Graduate Studies & Research
Other considerations

- Be proactive
- Given some thought to where you want to be and how best to get there
- Consider using an Individual development plan to set career objectives
- Understand the residency matching process and what research competencies may be required (some specialty programs require a graduate degree)
Contact information

- Visit the FoMD MD/PhD program website: https://www.ualberta.ca/medicine/programs/md-phd
- Contact me: alan.underhill@ualberta.ca or phone 780-432-8903 (Cross Cancer Institute)
- Contact Graduate Programs Advisor: fmdgrd@ualberta.ca or phone 780-492-9721