Why GRADUATE STUDIES in PATHOLOGY & MOLECULAR MEDICINE?

Graduate students and their work are an important part of an ongoing research process that provides the community with ways of understanding natural, cultural, imaginative, social and technological phenomena. Graduate students in Pathology and Molecular Medicine have opportunities to pursue comprehensive training in basic and translational biomedical research. They pursue advanced degrees under the supervision of an exceptional group of basic, clinical and translational researchers.

Queen's is a great setting to learn first-hand how the fast pace of molecular genetic research is changing clinical practice, leading to exciting new diagnostic and treatment approaches for cancer and other diseases.

Why QUEEN’S?

With a focus on cancer – 12 of our 20 investigators are cancer biologists – our department members deliver comprehensive diagnostic laboratory and clinical services to Southeastern Ontario through the Kingston General Hospital, offering great training for the next generation of biomedical research scientists and laboratory physicians.

Program STRUCTURE

MSc (2 years): Course work, research demonstrating experimental competence, and a thesis.

Research AREAS

- Cancer Research and Developmental Biology
- Human Genetics and Cytogenetics
- Hemostasis, Thrombosis Research, and Vascular Biology

Visit the Pathology and Molecular Medicine website to read faculty profiles and learn more about faculty members’ research areas. When you find a faculty member with similar research interests to yours, contact him/her and tell them about your interest in graduate work, area of research interest and related experience. Please include a current CV, contact information for 2-3 references who would be familiar with your academic performance and any research experience and an unofficial transcript.
**Pathology & Molecular Medicine MSc Map**

**GETTING STARTED**

**ACHIEVE YOUR ACADEMIC GOALS**
- Start with key priorities like developing your relationship with your supervisor, forming your committee, and doing your coursework.
- Consider how your course papers can contribute to your Master’s thesis.
- Find your way through the academic process with help from departmental and Expanding Horizons professional development workshops, the department Grad Chat and the SGS Habitat.

**MAXIMIZE RESEARCH IMPACT**
- Start to think about the audiences for your research.
- If you will be continuing graduate studies, apply for funding from sources such as CIHR, NSERC, OGS, the Heart & Stroke Foundation, CBIC, the Department of Defence and the American Cancer Society.

**BUILD SKILLS AND EXPERIENCE**
- Consider positions in student services, the SGS, or media outlets like the Queen’s Journal, CFRC, and the SGS Blog. Look in the AMS Clubs Directory for more ideas.
- Serve on departmental, faculty or university committees.
- Check out professional development workshops from Expanding Horizons and the Department of Pathology and Molecular Medicine.

**ENGAGE WITH YOUR COMMUNITY**
- Explore how you can connect with your community through experiential opportunities on- and off-campus.
- Consider volunteering with different community organizations, such as the Canadian Cancer Society, Kingston General Hospital and the Canadian Breast Cancer Foundation.

**LAUNCH YOUR CAREER**
- Finding a career that fits starts with knowing yourself. Get help by taking a Career Services workshop or meeting with a career counsellor. Check out books like So What Are You Going to do With That? or Planning a Scientific Career in Industry from the Career Resource Area for advice on various career options.
- Start reading publications like University Affairs and the Chronicle of Higher Education. Browse non-academic labour market websites. Stay on the lookout for special events like School of Graduate Studies Career Week to explore your career pathways.
- Check admission test deadlines if needed for further studies.

**INTERMEDIATE STAGE**

**GETTING STARTED**
- Complete your coursework, begin to research and write your thesis.
- Attend or present at a graduate conference such as Canadian Cancer Research Alliance (CRA).
- Start keeping an eportfolio of your skills, experiences and competencies.
- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
- Prepare for work or studies in a multi-cultural environment by taking the Expanding Horizons Intercultural Awareness Training workshop.

**MAXIMIZE RESEARCH IMPACT**
- Consider participating in the 3 Minute Thesis (3MT) competition.
- Expand your research audience through social media.
- For help with teaching, get support from the Centre for Teaching, and Learning. Enroll in SGS902 or the PUTL certificate for more professional development in teaching and learning.
- Consider publishing elements of your research. Learn from the Expanding Horizons Publishing workshop.
- Practice articulating the skills you have been developing in settings outside the university, such as casual conversation, networking, and interviews. Get help from a Career Services workshop.

**BUILD SKILLS AND EXPERIENCE**
- Do some targeted networking with people working in careers of interest, through Queen’s Connects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences. Get help from a Career Services workshop.
- Consider joining professional associations like the American Society of Hematology, the American Association for Cancer Research, the Canadian Cancer Society, or the Ontario Association of Pathologists.

**ENGAGE WITH YOUR COMMUNITY**
- Participate in your graduate and professional community through activities such as graduate student outreach programs, organizing conferences, and research groups.
- For help with teaching, get support from the Centre for Teaching, and Learning. Enroll in SGS902 or the PUTL certificate for more professional development in teaching and learning.
- Check out opportunities for extra training through CTL Expanding Horizons, Mitacs, or other sources to boost your skills.
- Investigate internships with Mitacs and other sources.

**LAUNCH YOUR CAREER**
- Explore different careers of interest by reading alumni profiles on the SGS website, and using Queen’s Connects on LinkedIn to connect with Queen’s alumni, or find alumni in various careers through Ask an Alumni.
- If you are considering a PhD, explore programs of interest reach out to faculty, and apply to PhD programs and external scholarships.

**WRAPPING UP**

**GETTING STARTED**
- Present your research to Pathology & Molecular Medicine graduate students and faculty.
- Complete and defend your Master’s research thesis.
- Consider putting an article in The Conversation.

**MAXIMIZE RESEARCH IMPACT**
- Attend a major conference in your field, such as the American Association for Cancer Research Annual Meeting, or the Canadian Association of Pathologists’ Annual Meeting.

**BUILD SKILLS AND EXPERIENCE**
- Do some targeted networking with people working in careers of interest, through Queen’s Connects on LinkedIn, the Queen’s Alumni Association, professional associations, and at conferences. Get help from a Career Services workshop.
- Consider joining professional associations like the American Society of Hematology, the American Association for Cancer Research, the Canadian Cancer Society, or the Ontario Association of Pathologists.

**ENGAGE WITH YOUR COMMUNITY**
- Participate in hiring committees and attend job talks. Start focusing on areas of interest. Research organizations of interest and start putting together your CV or resume for potential positions of interest. Get help from Career Services with job searching, resumes, or interviews.

**WHAT WILL I LEARN?**
- Knowledge and technical skills
- Effective communication skills in multiple forms for diverse audiences
- Information management: prioritize, organize and synthesize large amounts of information
- Time management: Meet deadlines and manage responsibilities despite competing demands
- Project management: develop ideas, gather information, analyze, critically appraise findings, draw and act on conclusions
- Creativity and Innovation
- Perseverance
- Independence and experience as a collaborative worker
- Awareness, an understanding of sound ethical practices, social responsibility, responsible research and cultural sensitivity
- Professionality in all aspects of work, research, and interactions
- Leadership: initiative and vision leading people and discussion

**WHERE CAN I GO?**
- A Master’s degree in Pathology & Molecular Medicine can take your career in many directions. Many of our MSc students choose to continue their academic inquiry with a PhD. Our Master’s students are equipped with a strong foundation for careers in:
  - Health Care (Hospital clinical labs)
  - Pharmaceutical companies
  - Academic labs
  - Scientific supply companies
  - Administration in academic, health care or government settings
  - Teaching positions in academic institutions or the private sector
  - Technical positions in academic institutions or the private sector
  - Marketing positions in private sector companies
  - Taking time to explore career options, build experience, and network can help you have a smooth transition to the world of work after graduation.

*This map is intended to provide suggestions for activities and careers, but everyone's abilities, experiences, and constraints are different. Build your own Grad Map using our online My Grad Map tool.*
Application FAQs

What do I need to know to APPLY?

ACADEMIC REQUIREMENTS

- Honours BSc or equivalent in life sciences, biochemistry, biology, or equivalent program with at least a B+ average. (Students with only a general degree can be admitted for a qualifying year.)
- We consider all of your grades, but pay particular attention to the last two years of science-related courses.

ADDITIONAL REQUIREMENTS

- If English is not a native language, prospective students must meet the English language proficiency requirements in writing, speaking, reading, and listening. The School of Graduate Studies requires the following minimum scores: TOEFL (paper-based): 550, (2) TOEFL iBT: Writing (24/30); Speaking (22/30); Reading (22/30); Listening (20/30), for a total of 88/120 (applicants must have the minimum score in each test as well as the minimum overall score), or (3) IELTS: 7.0 (academic module overall band score), or (4) PTE Academics: 65.

KEY DATES & DEADLINES

- Application due: February 1st to be considered for internal funding.
- Notification of acceptance: Quickly pending confirmation of a supervisor.

Before you start your application, please review the Graduate studies application process.

What about FUNDING?

We offer our Master’s students minimum funding of $22,000 annually. For internal, provincial and national competitive award winners, the funding package increases by 2.5%, 5% and 10% respectively.

Apply for external funding from OGS, CIHR/NSERC and other sources. Queen’s will automatically issue a one time $5,000 top-up to Master’s winners of federal government tri-council awards. See the School of Graduate Studies’ information on awards and scholarships.

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