



Are you interested in using your physics, math/stats, computer science, chemistry or engineering background to study **biology**?

Introducing the Computational Biology in Molecular Genetics (CBMG) PhD track

A graduate track offered by the Department of Molecular Genetics for students trained in quantitative disciplines or who want to specialize in computational biology.

Research in molecular genetics is increasingly driven by data and technology. Students trained in quantitative disciplines are having a major impact on biology and are increasingly in demand. Computational Biologists apply scientific techniques with origins in math or computer science to address biological research questions. Examples include mathematical modeling of a biological process or using computational and machine learning techniques to analyze and interpret genomics data.

Preparing you for success in the biological sciences

The CBMG PhD curriculum will include the existing Molecular Genetics framework in terms of seminars, didactic topics, and the structure of committees and exams.

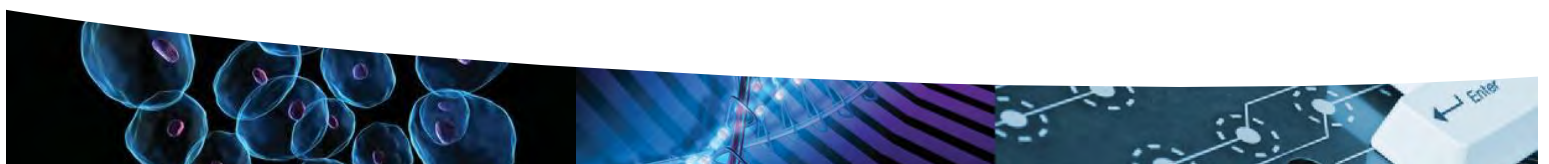
- **Accelerated Biology Course** - We recognize that translating quantitative training into biology can be challenging. Therefore, the program also includes an accelerated course in Molecular Genetics for all students in the first semester. This provides background with a variety of techniques in the broad field of molecular genetics and biology.
- **Advanced courses in computational biology** - All CBMG PhD students take our advanced computational biology courses to learn a range of topics from generative modeling of protein structures to graph and network analysis of genomics data.

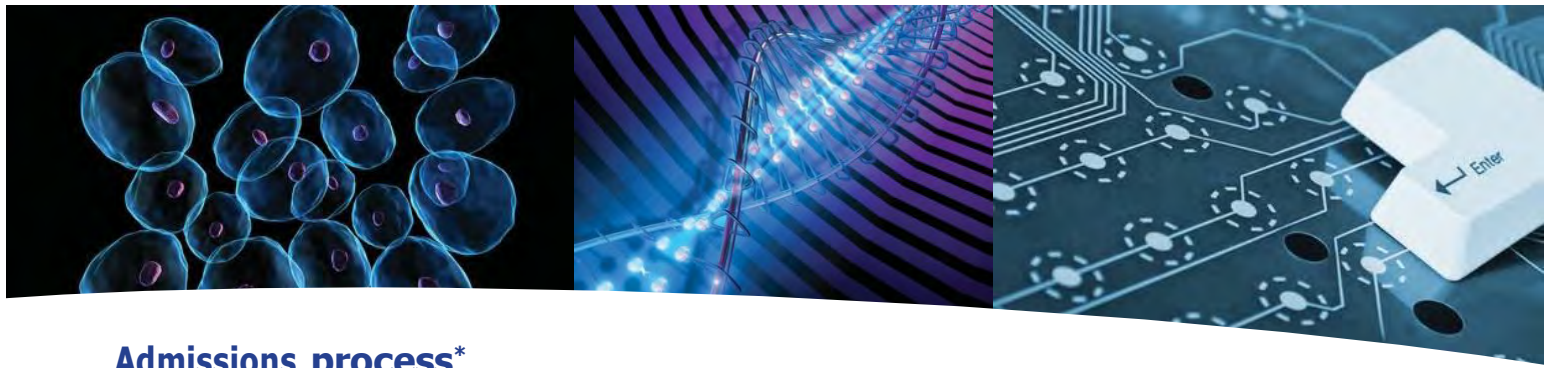
Mentorship from world-class faculty

Within the Department of Molecular Genetics, you will find expert faculty who focus on developing and applying the latest quantitative approaches to advance genetic research. These faculty have guided numerous PhD thesis projects where students created and applied computational, bioinformatic and other complex algorithms to solve some of the most challenging problems in biology.



Molecular Genetics
UNIVERSITY OF TORONTO





Admissions process*

All successful CBMG applicants will be admitted directly into the PhD program. Admission requires:

- A Bachelor's degree in a quantitative science
- An undergraduate average of A- or higher (or equivalent)
- Completion of the online application form, indicating 'CBMG' in the application form
- Research experience - wet or dry, biological or non-biological
- At least two letters of reference
- A letter of intent - be sure to explain your interest in the CBMG PhD program, why you want to study biology and which faculty you would be interested in working with
- A successful interview

*International applicants may need to submit additional materials in their application package. See www.moleculargenetics.utoronto.ca for more details.

Note: If you are primarily a biology student who has an interest in computational biology and knows how to program well, then the CBMG program also supports you and we encourage you to apply. You will benefit from the advanced computational biology courses.

We provide a welcoming environment for students with diverse backgrounds and support them with the tools and mentorship needed to succeed in high-pace, cutting-edge interdisciplinary fields.

To learn more about our faculty members, application deadlines and how to become a PhD student in our department, please visit: www.moleculargenetics.utoronto.ca

Questions specific to the CBMG program:

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