DEPARTMENT OF GENETICS AND GENOME SCIENCES

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More Information: https://case.edu/medicine/genetics/

The **Department of Genetics & Genome Sciences** embraces a unified program devoted to outstanding research and teaching in all areas of genetics, with particular emphases on genomics, human genetics and animal models, development, and chromosome structure and function. Faculty conduct internationally recognized research programs in each of these areas. They also are committed to training the next generations of leading genetics researchers. The department has three special programs: the Center for Human Genetics, the Center for Computational Genomics and the Genomic Medicine Institute (descriptions appear later in this narrative).

Programs offered lead to the PhD, combined MD/PhD degree, Master of Science in Genetic Counseling, or a dual degree program with a MS in Genetic Counseling and MA in Bioethics and Medical Humanities. In addition to required and elective coursework, students participate in ongoing journal clubs, research seminars, and grand rounds. A program of departmental and interdepartmental seminars by outstanding visiting scientists provides regular exposure to a broad range of current research in genetics.

Applications to the PhD program in Genetics and Genome Sciences are through the Biomedical Sciences Training Program, which provides access to most of the biomedical science PhD programs at CWRU during the first semester. Students who wish to join Genetics and Genome Sciences directly should apply to the BSTP by selecting "Biomedical Sciences Training Program" as their Academic Program in the "Enrollment Information" section. Then, select Genetics and Genome Sciences as a Priority Program of Interest (PPI) in the Supplemental portion of the BSTP application form. Selecting the PPI option will identify you as a BSTP applicant who seeks admission only to the Genetics and Genome Sciences PhD program. Students interested in pursuing the combined MD/PhD program are admitted through the Medical Scientist Training Program (MSTP, please see separate listing in this publication). Those students interested in careers in genetic counseling apply directly to the Genetic Counseling Training Program, via the **common Graduate Studies application**.

The Center for Human Genetics is an integral part of the Department of Genetics and consists of both research and clinical laboratories involved in human and clinical genetics. This center supports research and clinical programs focusing on the molecular basis of inherited disease, human genetic disease mapping, and the genetic dissection of complex disease, as well as providing clinical care and training for postdoctoral fellows and genetic counseling students.

The Center for Computational Genomics is an interdisciplinary research and training program involving faculty in the Department of Population and Quantitative Health Sciences in the School of Medicine and in the Department of Electrical Engineering and Computer Science in the School of Engineering. The center provides opportunities to combine research in genetics, genomics, epidemiology, biostatistics, computer science, and systems biology.

The Genomic Medicine Institute is a joint program involving the Cleveland Clinic Foundation and Case Western Reserve University. Its emphasis involves translating discoveries in basic and clinical research to clinical practice. The mission is to exploit the discoveries in genomics, epidemiology, ethics, pharmacology, genetics, and physiology to revolutionize the practice of medicine.

Programs

- **Computational Genomic Medicine, MS**
- **Genetic Counseling, MS**
- **Genetics, PhD**

Dual Degree

- **Bioethics and Medical Humanities, MA/Genetic Counseling, MS**
- **Medical Scientist Training Program (MSTP), PhD/Medicine, MD**