

DEPARTMENT OF GENETIC MEDICINE

Constituted in 1999, the McKusick-Nathans Institute of Genetic Medicine became the Department of Genetic Medicine (DGM) in 2019. The DGM is the focal point for patient care; basic, translational, and clinical research; and education in human genetics and genomics at Johns Hopkins. The DGM is a national and international leader in genetic medicine - the integration of our rapidly expanding knowledge of genetics and genomics into the practice of medicine. The goal of genetic medicine is to individualize prevention, diagnosis, and treatment in a manner appropriate for each patient. In pursuit of the goal of individualized medicine, the DGM catalyzes interactions between physicians and scientists with diverse and complementary expertise to promote the application of genetic discoveries to human disease and genetics education to the public. Many DGM faculty members have a secondary appointment in other departments in the School of Medicine which serve to introduce and integrate genetics throughout the School and the University. Moreover, our faculty members have considerable strengths and expertise in the areas of genomics, developmental genetics, biochemical genetics, population genetics, computational biology, and the genetics of complex disease. We aim to maintain Hopkins Medicine's leadership role in the medicine of the 21st century, a medicine that is increasingly individualized and focused on prevention.

Graduate Program

Students are accepted for graduate work leading to the degree of Doctor of Philosophy (see Graduate Programs in Human Genetics)

Residency Program

The Johns Hopkins medical genetics residency programs provide ACGME-accredited clinical residency and comprehensive research training in medical genetics. We offer a categorical training track and four combined training tracks with pediatrics, internal medicine, maternal fetal medicine, and reproductive endocrinology. With successful program completion, trainees are qualified and eligible to sit for the exam leading to board certification by the American Board of Medical Genetics and Genomics (ABMGG). Residents and fellows in combined programs are also eligible and qualify to sit for the exam leading to board certification offered by their prospective specialty (i.e., pediatrics, internal medicine, maternal fetal medicine, and reproductive endocrinology).

Medical Genetics Residency Program is a two-year program designed to train physicians to provide comprehensive diagnostic, management, and counseling services for inherited diseases and the genetic factors pertinent to all diseases. The training experience also emphasizes the role of research in Medical Genetics so that trainees can pursue investigator-initiated research upon completion of the program. Trainees are highly encouraged to complete additional mentored research training in medical genetics.

Combined Pediatrics & Medical Genetics Residency: This 4-year curriculum meets the requirements of the American Board of Pediatrics (ABP) & ABMGG. Trainees are highly encouraged to complete additional mentored research training in medical genetics.

Combined Internal Medicine & Medical Genetics Residency: This 4-year curriculum is structured according to the requirements of American Board of Internal Medicine (ABIM) & ABMGG. Trainees are highly

encouraged to complete additional mentored research training in medical genetics.

Combined Maternal Fetal Medicine Fellowship & Medical Genetics Residency: This 4-year curriculum is unique for physicians who have completed an accredited residency in Obstetrics and Gynecology and wish to integrate their Maternal and Fetal Medicine (MFM) fellowship with Medical Genetics residency training.

Combined Reproductive Endocrinology and Infertility Fellowship & Medical Genetics Residency: This 4-year curriculum is unique for physicians who have completed an accredited residency in Obstetrics and Gynecology and wish to integrate their Reproductive Endocrinology and Infertility (REI) fellowship with Medical Genetics residency training.

Fellowship Training Programs

Medical Genetics Clinical and Research Fellowship: This 1-year curriculum is available to physicians who wish to explore comprehensive research training on a wide variety of topics in medical genetics.

Medical Biochemical Genetics Fellowship: This 1-year curriculum is unique for physicians who have completed an accredited residency in Medical Genetics and wish to further develop their expertise in the evaluation and treatment of patients with biochemical genetic disorders, defined as inborn errors of metabolism at any age of onset.

Clinical Biochemical Genetics Fellowship: This 2-year curriculum is structured to provide MD and/or PhD level candidates the skills required to direct and interpret biochemical analyses relevant to the diagnosis and management of human genetic diseases, and to act as a consultant regarding laboratory diagnosis of a broad range of biochemical genetic disorders.

Laboratory Genetics and Genomics (LGG) Fellowship: This 2-year curriculum is structured to provide MD and/or PhD level candidates the skills required to direct and interpret both clinical cytogenetic and molecular genetic analyses relevant to the diagnosis and management of human genetic disease. These individuals will act as consultants in laboratory diagnoses for a broad range of molecular and chromosomal-based disorders, including both inherited and acquired conditions.