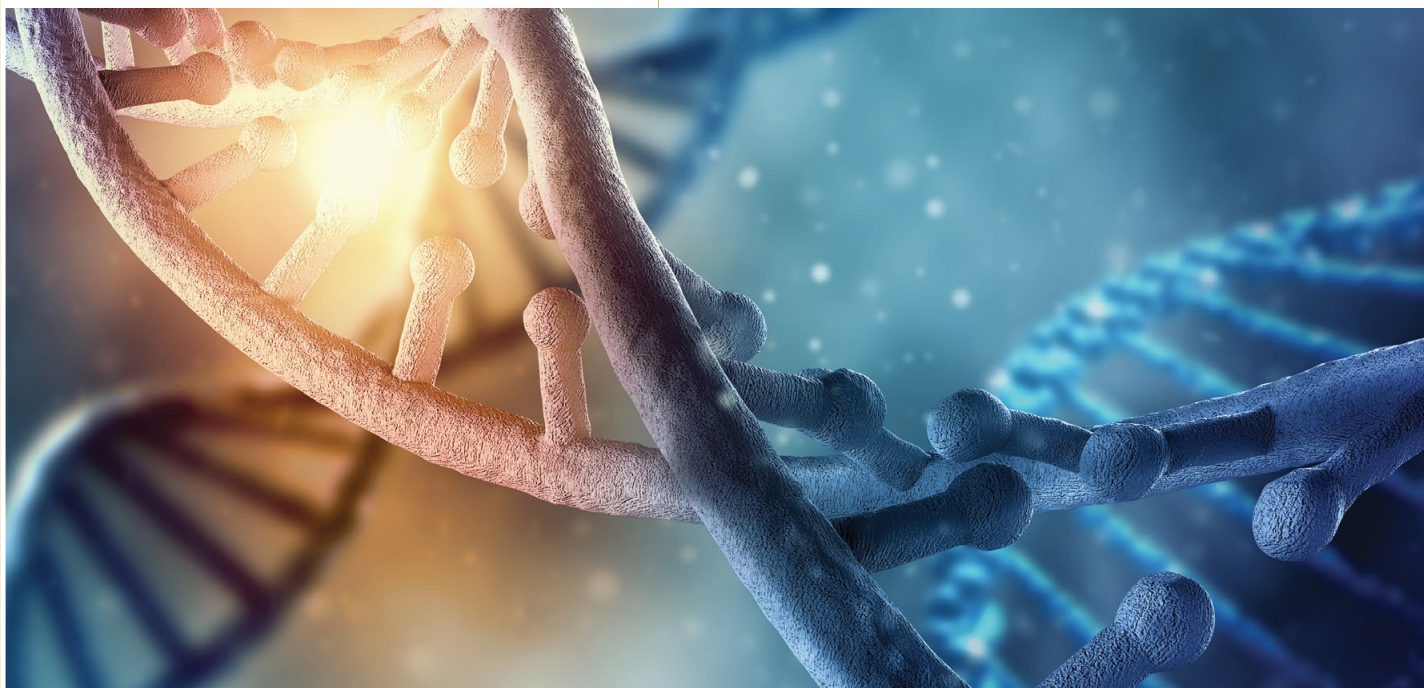


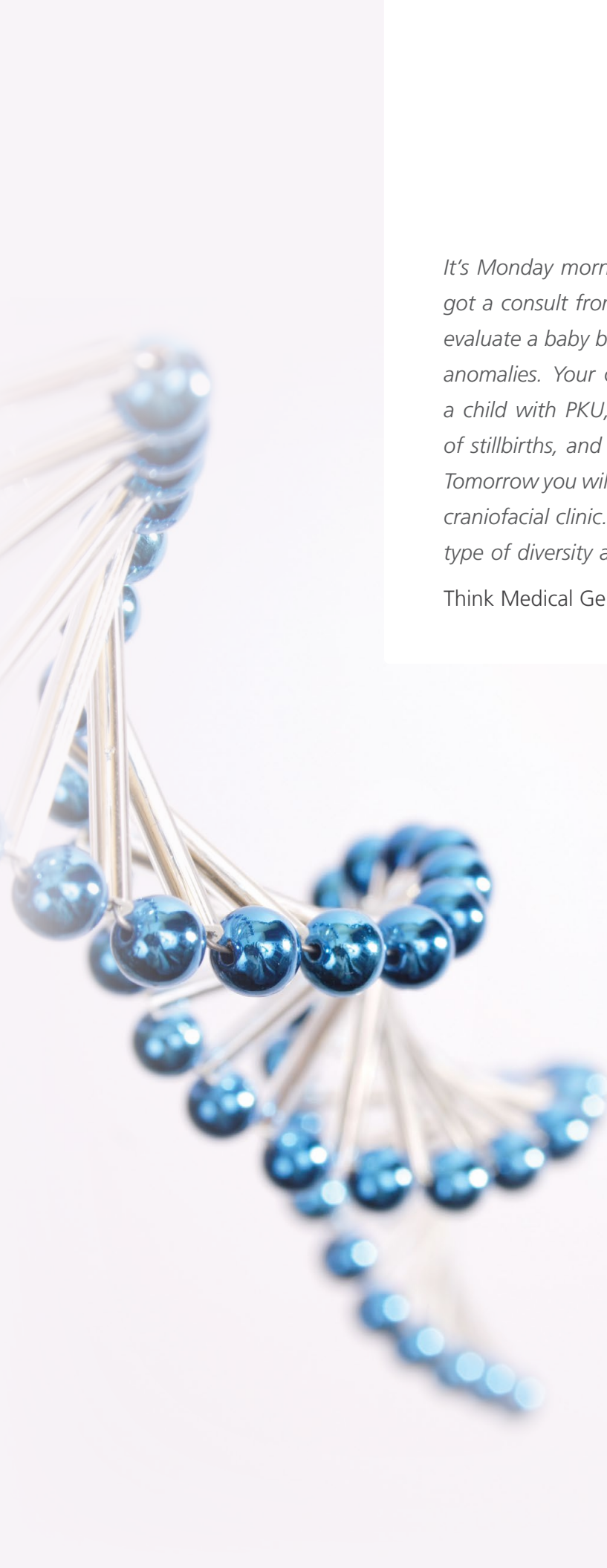
Graduate Medical Education in Medical Genetics and Genomics

American College of Medical Genetics and Genomics



Translating Genetic Discoveries Into Better Patient Care

www.acmg.net



It's Monday morning in your medical practice. You just got a consult from your neonatal intensive care unit to evaluate a baby born last night with multiple congenital anomalies. Your clinic today includes consultations for a child with PKU, a 38-year old mother with a history of stillbirths, and a 40-year old man with colon cancer. Tomorrow you will be part of the patient care team in the craniofacial clinic. What medical specialty gives you this type of diversity and challenge in your clinical practice?

Think Medical Genetics and Genomics.



Medical Genetics and Genomics: The Future is Now

What do Medical Geneticists Do?

- Genetics consultations, both in the inpatient and outpatient settings, with the goal to incorporate available family history information to make a diagnosis or provide a risk assessment.
- Genetic counseling for the patient and/or family, including the bidirectional flow of information that includes ethical, cultural, religious and other implications of such information to allow for decision-making by the patient and/or family.
- Treatment of genetic diseases, including knowledge of clinical trials and natural history studies leading to approval and use of new, orphan drugs, and drugs with specific molecular targets.
- Early detection and prevention of genetic diseases or their complications, through risk-appropriate surveillance and disease prevention recommendations.
- Ordering genetic and genomic testing, interpreting such results in the clinical setting and providing these results to physicians and patients to facilitate diagnosis, management and treatment.

What Does A Medical Genetics and Genomics Residency Include?

Medical Genetics and Genomics is a primary specialty, not a subspecialty of another field. Prior to appointment in the program, residents must have successfully completed at least one year of a residency program accredited by the Accreditation Council for Graduate Medical Education (ACGME), or a program located in Canada and accredited by the Royal College of Physicians and Surgeons of Canada, including at least 12 months of direct patient care experience. The categorical residency is 2 years long. Clinical inpatient and outpatient responsibilities of medical genetics residents include providing patient care in dysmorphology and inborn errors of metabolism, reproductive genetics, adult genetic disorders and cancer genetics.

Combined medical genetics/genomics training programs exist with pediatrics, internal medicine, maternal-fetal medicine (MFM) and reproductive endocrinology and infertility (REI). These programs integrate core principles in each specialty to train residents to be fully competent in each specialty. Combined training programs in Pediatrics/Medical Genetics and Genomics (4 years total) and Internal Medicine/Medical Genetics and Genomics (5 years total) allow students to enter directly after completion of medical school while prior Obstetrics/Gynecology residency completion is required for combined training in medical genetics/genomics and MFM or REI (4 years total). Trainees completing combined programs are eligible for board certification in both specialties.



Training Programs		Total Length of Training (Years)	Total Length of Medical Genetics and Genomics Training (Years)	Comments
Categorical	Medical Genetics and Genomics	3 or more	2	Enter after at least 1-year of an ACGME-accredited residency or Canadian equivalent
	Internal Medicine	5	2	Enter training directly from medical school
Combined with Medical Genetics	Pediatrics	4	2	Enter training directly from medical school
	Maternal-Fetal Medicine	4	2	After completion of OB/GYN residency
	Reproductive Endocrinology & Infertility	4	2	After completion of OB/GYN residency

How Are Medical Geneticists Trained?

Clinical genetics and genomic training is acquired through ACGME-accredited residency programs in Medical Genetics and Genomics. Laboratory genetics and genomics training is acquired through American Board of Medical Genetics and Genomics-accredited fellowship programs. Medical Genetics and Genomics subspecialty training in Medical Biochemical Genetics is available with an additional year of training following completion of a Medical Genetics and Genomics Residency. In addition, those who have completed a residency in Medical Genetics or Genomics Pathology are eligible for a one-year fellowship in Molecular Genetic and Pathology, which focuses on the molecular diagnosis of diseases. Programs offering Medical Genetics and Genomics residencies participate in the Electronic Residency Application Service and the National Residency Matching Program (ERAS/NRMP).



Board Certification

Upon completion of a residency in Medical Genetics and Genomics, trainees are eligible for board certification in Clinical Genetics by the American Board of Medical Genetics and Genomics (ABMGG), which is one of the 24 member boards of the American Board of Medical Specialties.

Where Do Medical Geneticists Work?

Many medical geneticists work in academic settings and are actively involved in teaching as well as the diagnosis, treatment, management, and research of genetically-influenced disorders. With the growing recognition of the importance of genetics and genomics in disease, roles outside of direct patient care, including public health administration, health professional education, industry and research are also becoming more common. The Clinical Geneticist is uniquely qualified and trained to assume overall responsibility for the genetic healthcare of the patient and sometimes, other family members.

Is Medical Genetics and Genomics The Right Specialty For You?

If you like the uniqueness of specialty knowledge, but long to apply your knowledge across broad areas of medical practice with unprecedented scientific advances, medical genetics and genomics could be the specialty for you. Likewise, if you like to be on the forefront of the medical genetics and genomics revolution, and enjoy great career flexibility, think Medical Genetics and Genomics. Medical Genetics and Genomics is a rewarding specialty for smart, inquisitive, patient care centered physicians who are ready to meet the challenges of genetic and genomic medicine in the 21st Century!



Where Can You Go For More Information?

More than 50 training programs around the United States offer Medical Genetics and Genomics residencies or Medical Biochemical Genetics fellowships. For more information log on to:

The Accreditation Council for Graduate Medical Education: <https://apps.acgme.org/ads/Public/>

The American Board of Medical Genetics and Genomics: http://abmegg.org/pages/training_accredprog.shtml

The American College of Medical Genetics and Genomics: www.acmg.net



The American Medical Association: <http://www.ama-assn.org/ama/pub/education-careers/graduate-medical-education/freida-online.page>

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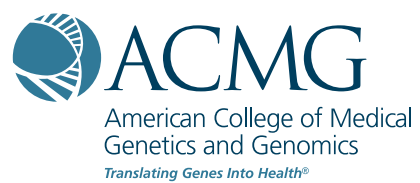
About the ACMG and ACMG Foundation

Founded in 1991, ACMG is the only nationally recognized medical society dedicated to improving health through the clinical practice of medical genetics and genomics. The American College of Medical Genetics and Genomics provides education, resources and a voice for nearly 1900 biochemical, clinical, cytogenetic, medical and molecular geneticists, genetic counselors and other healthcare professionals, nearly 80% of whom are board certified in the medical genetics specialties. The College's mission is to develop and sustain genetic initiatives in clinical and laboratory practice, education and advocacy. Three guiding pillars underpin ACMG's work: 1) Clinical and Laboratory Practice: Establish the paradigm of genomic medicine by issuing statements and evidence-based or expert clinical and laboratory practice guidelines and through descriptions of best practices for the delivery of genomic medicine. 2) Education: Provide education and tools for medical geneticists, other health professionals and the public and grow the genetics workforce. 3) Advocacy: Work with policymakers and payers to support the responsible application of genomics in medical practice. Genetics in Medicine, published monthly, is the official ACMG peer-reviewed journal. [ACMG's website](#) offers a variety of resources including Policy Statements, Practice Guidelines, Educational Resources, and a Find a Geneticist tool. The educational and public health programs of the American College of Medical Genetics are dependent upon charitable gifts from corporations, foundations, and individuals through the [ACMG Foundation for Genetic and Genomic Medicine](#).

With major support from:

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