

University of Iowa Hospitals and Clinics Molecular Genetic Pathology Fellowship

Description of Program: Our program builds on the internationally recognized leadership of the University of Iowa in the field of human genetics and a state of the art Molecular Diagnostic Laboratory to provide a unique training experience in all areas of molecular pathology. The Molecular Pathology Laboratory serves as the primary site for molecular testing of genetic, infectious and neoplastic diseases from the University of Iowa Hospitals and Clinics as well as for regional, national and international clients. We have over 30 diagnostic tests utilizing various methods including qualitative/quantitative PCR and real-time PCR, DNA sequencing, denaturing High Pressure Liquid Chromatography, traditional and capillary electrophoresis and Southern Blotting. The MGP fellowship includes six months of hands-on training in the Molecular Pathology Laboratory divided into three blocks with special emphasis on molecular genetics, infectious disease and oncology, respectively. Another 4 months are spent predominantly in the Genetics Division of the Department of Pediatrics. This block includes 2 months of general genetics, a month of biochemical genetics and a month of cytogenetics training. The Cytogenetics Laboratory will provide exposure to traditional cytogenetics, FISH and Comparative Genomic Hybridization using microarray technology. During these rotations the fellow functions as a junior attending, with levels of responsibility and supervision appropriate for level of training and experience. The fellow is also exposed to administrative aspects of directing a modern molecular diagnostics laboratory.

The remaining two months are spent with independent test development in the Molecular Pathology Laboratory or on basic research projects in any one of numerous laboratories associated with the program. The fellows are encouraged to use this time to obtain preliminary data serving as the basis for applications for career development grants from federal and private agencies.

Program Website:

http://www.medicine.uiowa.edu/pathology/site/education/fellowships/mole_gene_fellow.html

Requirements: MD and residency training in Pathology or Human Genetics

Length of Program: 1 year. If there is mutual interest, further extension is possible in the form of postdoctoral training in one of the associated research laboratories.

Application Deadline: April 30

Visas Accepted: Dependent of Individual Situation

Faculty/Key Staff:

Molecular Pathology Laboratory:

Nagy, Peter L. MD, PhD	Program Director, Molecular Genetics
Bossler, Aaron MD, PhD	Director, Molecular Infectious Disease and Genetics
Heusel, Jonathan MD, PhD	Director, Molecular Oncology and Infectious Disease
Moore, Steven MD, PhD	Genetics of Neuromuscular Diseases

Divisions of Genetics:

Berberich, Stan PhD	Newborn Screening
Copeland, Sara MD	Director, Metabolic Genetics
Matthews, Katherine MD	Director, Neuromuscular Clinic
Murray, Jeffrey MD	Director, Craniofacial Clinic
Patil, Shivanand PhD	Director, Cytogenetics
Sheffield, Val MD, PhD	Director, Molecular Genetics
Smith, Richard MD	Director, Hearing Loss Clinic
Stone, Edwin MD, PhD	Director, Eye Disease Clinic
Willing, Marcia MD, PhD	Director, Connective Tissue Clinic
Yankowitz, Jerome MD	Director, Prenatal Genetics

Associated Research Laboratories:

Campbell, Kevin PhD	Neuromuscular disorders
Cohen, Michael MD	Pathogenesis of prostate cancer
Cook, Robert MD, PhD	Effects of alcohol on the immune system
Henry, Michael PhD	Biology of metastasis
Heusel, Jonathan MD, PhD	NK cells in infectious disease and cancer
Howe, James MD	Pathogenesis of colon cancer syndromes
Knudson, Michael MD, PhD	Role of Bax in apoptosis
Lentz, Steve MD, PhD	Molecular determinants of blood clotting
Mathews, Katherine MD	Genetics of neuromuscular disorders
Murray, Jeffrey MD	Genetics of craniofacial development
Nagy, Peter MD, PhD	Epigenetic regulation of transcription
O'Dorisio, Sue MD, PhD	Biology of neuroblastomas
Sheffield, Val MD	Genetics of obesity
Smith, Richard MD	Genetics of hearing defects
Stone, Edwin MD	Genetics of eye disease
Turek, Lubomir MD	Pathogenesis of cervical carcinoma
Waldschmidt, Thomas PhD	Immunology
Welsh, Michael MD	Cystic fibrosis pathogenesis