UTSouthwestern Medical Center

# Medical Genetics Residency Training Program

**Goal:** To provide excellent training in both clinical and research in Medical Genetics.

**Eligibility Requirements:**
We seek to excellent physicians of diverse backgrounds and experience interested in pursuing careers in medical genetics. The program is open to physicians who have completed at least two years of residency training in an accredited U.S. residency training program (most often Pediatrics, Internal Medicine, Family Practice or Obstetrics and Gynecology; however, other disciplines will be considered on a case by case basis). Residents must be eligible to work in Texas

**General Overview:**
Our two year program is accredited by the ACGME Residency Review Committee in Medical Genetics and prepares our graduates to sit for the Clinical Genetics Board Examination administered by the American Board of Medical Genetics (ABMG). We are able to accept 1-2 residents per year.

- Training will include rotations at the following Institutions that are affiliated with UT Southwestern Medical Center:

  **Parkland Health and Hospital System** (Parkland Hospital) – Parkland is the only public hospital in Dallas County and is operated by the Dallas County Hospital District. It has served the north Texas community since 1894 and today remains one of the busiest public hospitals in the nation, with more than 1 million patient visits each year. Parkland is the major teaching hospital for UT Southwestern's clinical programs (except Pediatrics). In June 2014, Parkland Hospital will move from its 1950's era facility across the street to a new state of the art facility. The new facility includes 862 single patient room beds, a Regional Burn Center, outpatient clinics, and a Comprehensive Regional Level I Trauma Center.

  **Children's Health** – Founded in 1913, Children's Health is a private not-for-profit hospital that deals exclusively with the diseases and disorders of children from birth to age 18, and serves as the primary pediatric teaching facility for UT Southwestern. Half of the hospital's staff are full-time faculty members of UT Southwestern; the other half are private pediatricians. The facility includes more than 50 specialty outpatient clinics, and 322 beds including a 52-bed pediatric intensive care.

  **Texas Scottish Rite Hospital For Children** (TSRH) – Founded in 1921, this private not-for-profit hospital deals in a wide range of pediatric orthopedic conditions and learning differences, related neurological disorders and learning disabilities. It provides ongoing treatment without charge for more than 13,000 patients annually. All of the full-time physicians are members of the UT Southwestern faculty. Facilities include 100 beds, 600 employees and an annual budget of $70 million.

  **William P. Clements Jr. University Hospital** (CUH) – UT Southwestern' s new private, not-for-profit hospital opened in December 2014 and is specially designed and equipped around the needs of patients and their families. The hospital has been designed to advance our core missions of patient care, research, and education that have been hallmarks during UT Southwestern Medical Center's seven-decade history. This state of the art facility of 1.3 million sq. includes: 12 floors, 460 room patient centered hospital rooms, 40 emergency rooms, 24 surgical suites, 72 adult ICU rooms, 30 neonatal ICU rooms and 16 labor and delivery rooms that utilize innovative design, advanced technology, and best practices to provide compassionate patient care.

  **UT Southwestern Adult Genetics Clinic** -

**Structure of the Clinical Training Program**

## Clinical Genetics

This two year program involves either 24 months devoted to rotations in the areas of clinical and laboratory genetics or 18 months devoted to clinical genetics rotations followed by six months of clinical or laboratory research. On completion of the program, the resident should be qualified to sit for the American Board of Medical Genetics (ABMG) examination for Clinical Genetics.

The residency is organized in one-month rotation blocks.

- **Year 1 - All Residents**

  Seven months will be spent on the basic **Clinical Genetics** rotation. This rotation includes outpatient work in the Pediatric Genetics/Dysmorphology Clinic, the Pediatric Metabolic Disease Clinic and the Down Syndrome Clinic which operate each week at Children's Medical Center of Dallas. The rotation also includes the Adult Genetics Referral Clinic (UT Southwestern Aston Center), the Lipid Clinic (UT Southwestern Aston Center) and the Metabolic Bone Disease Clinic (Texas Scottish Rite Hospital), which operates once or twice each month. The resident will participate in inpatient consultations for Clinical Genetics and Metabolism at Children's Medical Center of Dallas and Parkland Hospital. The resident will be responsible (along with the pediatric residents) for the care of inpatients at Children's Medical Center on the Metabolic Disease service.

  One month will be spent in the **Prenatal Genetics** rotation. This rotation includes work in the Prenatal Counseling Clinic at Parkland Hospital, the Birth Defects Ultrasound Diagnosis Clinic at Parkland Hospital, the Alpha Fetoprotein Counseling Clinic at Parkland Hospital, and the Prenatal Procedures Clinic at Parkland Hospital. The resident will also attend the Congenital Anomalies Multidisciplinary Conference at Parkland Hospital.

  Three months will be spent in **Clinical Genetics Laboratory** rotations. These months include one month in the Cytogenetics Laboratory, one month in the Biochemical Genetics laboratory, and one month in the Molecular Diagnosis laboratory.

  One month will be spent in **Genetics Specialty** rotations. This includes one month in the Cancer Genetics Clinic at UT Southwestern.

- **Year 2 - Clinical Track**

  Five months are spent in the **Clinical Genetics** rotations described above.

  One month is spent in the **Prenatal Genetics** rotation described above.

  Two months will be spent in Clinical Genetics Laboratory rotations. One month is spent in the **Cytogenetics Laboratory**, and one month is spent in the **Biochemical Genetics Laboratory**.

  One month is spent in **Genetics Specialty** rotations, this includes one month in the Cancer Genetics Clinic at UT Southwestern.

  Three months in the second year are set aside for **Electives**. These may include additional time in any of the laboratories or clinics noted above, combinations of the Pediatric Specialty Clinics at Children's Medical Center of Dallas where patients with genetic disorders are followed (e.g. Cystic Fibrosis, Neurofibromatosis, Hemophilia, Hemoglobinopathy, Craniofacial, etc.), the Specialty Clinics at Texas Scottish Rite Hospital for Children or in additional specialty laboratories.

- **Year 2 - Research Track**

    - Three months are spent in the **Clinical Genetics** rotations described above.
    - One month is spent in the **Prenatal Genetics** rotations described above.
    - One month is spent in the **Cytogenetics Laboratory**.
    - One month is spent in **Genetics Specialty** rotation; this includes one month in the Cancer Genetics Clinic at UT Southwestern.

    Six months in the second year are set aside for **Research**. The resident will participate in a research project in one of the laboratories at UT Southwestern conducting suitable studies in genetics. The project may be extended for an additional year (or more) if support from a National Research Service Award or similar funding source is obtained.

- **Basic Science Genetics Course**

    Each resident is required to take two one semester graduate level courses in Genetics. A series of graduate courses has been designed to meet the needs for training medical genetics residents as well as graduate students in human genetics.

    Throughout the residency, residents attend:

    - **Clinical Genetics Conference** – Residents attend a biweekly, multidisciplinary clinical genetics conference.
    - **Research Genetics Conference** – Residents attend a monthly basic science genetics seminar held in the McDermott Center for Human Growth & Development during the school year.

    The following chart is an example of a typical resident's schedule for each track.

**Rotation Schedule Grid**

| | Research Schedule: | Clinical Schedule: |
|---|---|---|
| **YEAR 1** | | |
| July | Clinical Genetics 1 | Clinical Genetics 1 |
| August | Clinical Genetics 2 | Clinical Genetics 2 |
| September | Cytogenetics Laboratory 1 | Cytogenetics Laboratory 1 |
| October | Clinical Genetics 3 | Clinical Genetics 3 |
| November | Cancer Genetics | Cancer Genetics |
| December | Clinical Genetics 4 | Clinical Genetics 4 |
| January | Prenatal Genetics 1 | Prenatal Genetics 1 |
| February | Clinical Genetics 5 | Clinical Genetics 5 |
| March | Clinical Genetics 6 | Clinical Genetics 6 |
| April | Clinical Genetics 7 | Clinical Genetics 7 |
| May | Biochemical Genetics Lab | Biochemical Genetics Lab |
| June | Molecular Genetics Lab | Molecular Genetics Lab |
| | | |
| **YEAR 2** | | |
| July | Clinical Genetics 8 | Clinical Genetics 8 |
| August | Cancer Genetics 2 | Cancer Genetics 2 |
| September | Clinical Genetics 9 | Clinical Genetics 9 |
| October | Prenatal Genetics 2 | Prenatal Genetics 2 |
| November | Clinical Genetics 10 | Clinical Genetics 10 |
| December | Cytogenetics 2 | Cytogenetics 2 |
| January | Research 1 | Biochemical Genetics Lab 2 |
| February | Research 2 | Elective 1 |
| March | Research 3 | Clinical Genetics 11 |
| April | Research 4 | Elective 2 |
| May | Research 5 | Clinical Genetics 12 |
| June | Research 6 | Elective 3 |

**Subspecialty Genetics Training**

**The American Board of Medical Genetics (ABMG):**

Allows subspecialty certification in Clinical Cytogenetics, Clinical Biochemical Genetics and Clinical Molecular Genetics and Genomics. Such training for Genetics Residents occurs following their basic residency in Clinical Genetics. Each subspecialty requires one additional year of training. UT Southwestern is currently certified to offer training in Clinical Cytogenetics. We plan to apply for certification to train fellows in Biochemical and Molecular Genetics in the future.

Individuals with Ph.D.'s interested in directing genetics laboratories can take a two-year fellowship in the subspecialty areas and be eligible to take the American Board of Medical Genetics examination in that

**Core Program Faculty and Interests**

- Jodi S. Dashe, M.D., – Prenatal Genetics
- Judy Dill, M.S., CGC – Adult Genetics
- Mary E. Carlin, M.D. – Clinical Genetics, Developmental Pediatrics
- Ralph DeBerardinis, M.D. – Inborn Errors of Metabolism
- Christine Eng, M.D. – Molecular Genetics / DNA diagnostics (Baylor College of Medicine)
- Garrett K. Gotway, M.D., Ph.D. – Clinical Genetics, Pediatric & Adult Genetics
- Helen H. Hobbs, M.D. – Genetics of lipid metabolism, Adult Genetics Clinic
- Susan Iannaccone, M.D. – Pediatric Neurogenetics
- Prasad Koduru, Ph.D. – Cytogenetics
- Juan M. Pascual, M.D., Ph.D. – Neurogenetics
- Linda Robinson, M.S., CGC – Cancer Genetics
- Angela Scheuerle, M.D. – Pediatric Genetics
- Lawrence Sweetman, Ph.D. – Biochemical Genetics
- Luis Umana, M.D. – Pediatric Genetics
- Kathleen S. Wilson, M.D. – Cytogenetics
- Andrew R. Zinn, M.D., Ph.D. – Basic Science Genetics Course; Genetics of sex chromosome disorders and other disorders of growth and development.

The UT Southwestern Medical Center Medical Genetics Program is accredited by the Accreditation Council of Graduate Medical Education (ACGME) and the American Board of Medical Genetics (ABMG). It is a two year or more program providing eligibility for the American Board of Medical Genetics examinations, including the Biochemical Genetics, Molecular Genetics, Clinical Genetics, Cytogenetics, and Ph.D. Genetics subspecialties.

Entrance to the program is through one of two routes:

Medical Genetics

1) Individuals may apply to the program directly via the electronic application process through ERAS. All applications are reviewed by the Medical Genetics Education Selection Committee. Select applicants will be interviewed by members of the Medical Genetics Education Selection Committee. They may choose a laboratory in which to do research after joining the program. Most residents will be chosen through this route.

Alternatively -

2) Individuals apply to another department residency program at UT Southwestern, and apply for entrance to the clinical portion of the Medical Genetics Program prior to arrival at UT Southwestern. Candidates choosing the second route will be required to interview with and obtain the approval of the members of the Medical Genetics Education Selection Committee.

Candidates with an M.D. degree must have completed at least two years of training in a clinically related field. Previous training is usually in, but not limited to, Pediatrics, Internal Medicine, Family Practice or Obstetrics and Gynecology. Candidates should apply directly to the program 12 to 18 months prior to the July 1 starting date.

**Electronic Application:** To apply for consideration to this program, complete the ERAS application.