The Section of Genetics works closely with the state of Oklahoma when caring for people from newborn screening through adulthood. State and Federal public health programs require screening for every child within the first week of life. A small blood sample collected from the baby’s heel is put on a special filter paper and sent to the Oklahoma State Department of Health (OSDH) for initial newborn screening. The OSDH Newborn Screening Program tests the blood samples for 51 disorders, including phenylketonuria (PKU), galactosemia, hypothyroidism, sickle cell disease, cystic fibrosis, congenital adrenal hyperplasia, and medium-chain acyl-coenzyme A dehydrogenase deficiency (MCAD). If a disorder is detected, and based on the type of disorder detected, presumptive abnormal samples are sent to either our Cytogenetics/Molecular Genetics Laboratory, directed by Dr. Shibo Li, or our Biochemical Genetics Laboratory, directed by Dr. Andrea Wierenga, for confirmation of an abnormal result.

Once a disorder is confirmed, the baby is referred to a pediatric genetics specialist for clinical care and genetic counseling, and the parents are referred for enrollment in Newborn Screening Long-Term Follow-Up services.

“Newborn screening saves the lives of children in Oklahoma.”

—Mary Monks, RN

Our specialist providers for metabolic disorders are Dr. Klaas Wierenga and Dr. Susan Palmer and Physician Associate, Ashley Taylor. Our metabolic nutritionist, Ashley Ethridge, LD/RD, provides dietary information and support specific to the child’s diagnosis.

Mary Monks, RN, our metabolic nurse, provides follow-up services to the family and coordinates appointments with the providers, dietitian, and our clinical genetic counseling team. Monks is a strong advocate for newborn screening and, speaking for our entire team, states that “it saves the lives of children in Oklahoma.”

One of our clinical genetic counselors will provide a counseling session to the family of a newly-diagnosed child. This initial counseling session is provided free of charge to the family, through a contract with the OSDH. If additional follow-up counseling is needed, it usually occurs annually.
As the need for clinical genetics continues to grow, the Section of Genetics has added a new genetic counseling outreach clinic in association with the Muscular Dystrophy Association (MDA) and Integris Southwest Medical Center. The OKC MDA clinic is under the direction of Dr. Brent Beson and is one of forty-four clinical neuromuscular centers in the United States sponsored by the MDA.

The OUHSC team of licensed and certified clinical genetic counselors, Dr. Susan Hassed, Erin Youngs, Jiani Chen, Liz Fanning, Melissa Hall, or Alex Wadley, will offer expert counseling, testing and other relevant services to patients and families who have been diagnosed with inherited neuromuscular disorders. Initially, this new clinical service will be offered for a half-day, every other week.

Many neuromuscular diseases are inherited and individuals and families require specialized genetic counseling and testing services. Some of these conditions include Duchenne and Becker muscular dystrophies, spinal muscular atrophy, facioscapulohumeral dystrophy, Friedreich ataxia, myotonic dystrophy, and genetic forms of ALS.

The Section of Genetics is frequently asked to provide outreach services and this new clinic is no exception. The service contract with the MDA clinic is the 5th such contracted outreach clinic, joining the clinical genetics services provided at the OU Stephenson Cancer Center, the Dean McGee Eye Institute, Breast Institute of Oklahoma, and the Cancer Centers of Southwest Oklahoma.

For more information about the Genetics Section visit: www.ouhsc.edu/genetics
For more information about the Genetics Section visit: www.ouhsc.edu/genetics
Section of Genetics Highlighted in Video

In September, a film crew with ASHG TV spent a day filming and capturing the essence of the services the Section of Genetics provides across campus. The crew interviewed Dr. Sanjay Bidichandani, Dr. Terrence Stull, Dr. Klaas Wierenga, Dr. Susan Hassed and Dr. John Mulvihill. Children’s Hospital Foundation Board member, Elizabeth McLaughlin was also interviewed.

The crew filmed the Core Genetics Laboratory, Genetics clinic and interior/exterior of the OU Children’s Physician’s Building.

The final video was shown to attendees of the 2015 American Society of Human Genetics meeting in Baltimore. It is also linked to the Genetics homepage.

View the video:

For more information about the Genetics Section visit: www.ouhsc.edu/genetics
Recent Publications:


For more information about the Genetics Section visit: [www.ouhsc.edu/genetics](http://www.ouhsc.edu/genetics)
Sanjay Bidichandani, MBBS, PhD: presented a seminar entitled “The Epigenetic Defect in Friedreich Ataxia” in the Frontiers in Pediatric Research seminar series at the University of Iowa Children’s Hospital, Iowa City, October 26, 2015.

Susan Hassed, PhD, LCGC: was appointed as a member of the Infant & Children’s Advisory Council (2016-2017) to advise the Oklahoma State Board of Health and the Oklahoma State Department of Health.

John Mulvihill, MD: attended the Steering Committee meeting of the Undiagnosed Diseases Network and presented updates of the Economics Working Group on November 9-10, in Washington DC.

Sanjay Bidichandani, MBBS, PhD: served as a judge for the Charles Epstein Predoctoral Trainee Research Awards (platform presentations) at the American Society of Human Genetics, Baltimore, October 2015.

Dharambir Sanghera, PhD, FAHA: was an invited speaker at the World Gene Conference held at Qingdao, China from November 13 to 15, 2015. Dr. Sanghera gave a presentation titled “Genome-wide association study identifies a novel locus affecting 25(OH) Vitamin D concentrations in Punjabi Sikhs from India.”

John Mulvihill, MD and Klaas Wierenga, MD, were selected as members of the Best Doctors List of physicians for 2015.

Sanjay Bidichandani, MBBS, PhD: served as mentor for the “Academic Research Track” in the Career Paths in Genetics forum at the American Society of Human Genetics, Baltimore, October 2015.

Erin Youngs, LCGC, Assistant Director MSGC: was interviewed by FOX25 regarding breast cancer genetics, which aired in November, 2015

Sanjay Bidichandani, MBBS, PhD: served on the panel to review development of biomarkers and mouse models for Friedreich ataxia at a FARAsponsored meeting attended by ~150 academic and industry researchers, and representatives from the FDA and NIH (Bethesda, MD; November 4-5, 2015).

Esther Lee, MD: passed the ABMGG Board Certification Examination in Clinical Genetics and Genomics.

Sanjay Bidichandani, MBBS, PhD and John Mulvihill, MD: served on the programmatic review and vision setting panel of the Congressionally Directed Medical Research Programs’ Neurofibromatosis Research Program (Herndon, VA; November 16-17, 2015) at the invitation of the US Army Medical Research and Materiel Command.

Fond Farewells!

Ruth Hopkins left the Sanghera lab to pursue other opportunities.

Dr. Marsha Pratt is joining the Cancer Genetics program at Mercy Hospital.

Sarah Hoss has joined the faculty at Rose State College.

SEEING DOUBLE?

Twins and PA-Cs, Ashley Taylor (l) and Haley Messer (r) both see patients in our Genetics Clinic.

For more information about the Genetics Section visit: www.ouhsc.edu/genetics