



The Institute of Applied Genetics is the overarching entity for the practical genetics work at the UNT Health Science Center. The Institute is comprised of three centers: (1) Human Identification, (2) Computational Genomics, and (3) Biosafety and Biosecurity.

The Center for Human Identification is the largest and most established of the centers and is dedicated to applying genetics (i.e., forensic DNA typing) to assist in solving crimes, identifying missing persons, and combatting human trafficking. One emerging and already successful endeavor is the DNA Prokids program, an international program that utilizes genetic testing to combat human trafficking.

The Center for Biosafety and Biosecurity has a focus on health-related issues. The two main efforts are in infectious disease (either naturally encountered or through terrorism) and the genetic predisposition of individuals that impacts diagnostics and therapeutics. For example, predictive risk DNA testing is being developed for personalized medicine and molecular autopsies.

The Center for Computational Genomics exploits bioinformatics, statistics and the power of the computer to extract more data and provide greater insight to challenging genetic questions and database work. This provides support for the other two centers that generate the genetic data. A recent success is the development of software to facilitate familial searching (i.e., identifying potential suspects via their genetic similarity to an individual(s) in the national DNA database).

Unique Qualities of the Institute

- There is no other institute with all these features and capabilities anywhere else in the United States.
- A matchless concentration of world-renowned forensic scientists has been brought together to tackle difficult and challenging issues that confront our communities.
- The functional components support all aspects of practical science including service laboratories, research and development, and education.
- The Center for Human Identification has identified more human remains than any other entity in the U.S.
- Innovative educational programs have been developed to provide international training so other countries can develop their own DNA databases to combat crime.

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