



UNT Center for Human Identification

CODIS: How it Works

The Federal Bureau of Investigation's CODIS "protocol" works like this: A person goes missing; if he or she is not found within 30 days, a family reference sample is obtained. The sample can take either of two forms—a DNA sample from a close relative (obtained by a simple, noninvasive cheek swab) or from a personal item belonging to the missing person (such as hair from a comb or saliva from a toothbrush). The sample is then sent to the UNTCHI-LMI, and the DNA is analyzed. The results or "profiles" are then loaded into the database.

Simultaneously, human remains found throughout the country are being sent to UNTCHI's LMI for analysis and uploading into the database. DNA profiles from missing persons or their families are compared with unidentified human remains in the CODIS database. If the family reference sample is in the system, it will show a match.

But the database will help solve cases only if profiles from DNA samples and recovered human remains are submitted for analysis and uploaded into the system. If families don't send reference or biological samples—which at this stage must be collected by a law enforcement official—human remains cannot be identified.

To facilitate this process, NIJ has funded UNTCHI's development of two DNA sample collection kits: one for family reference samples and the other for collecting and transporting human remains. Both kits are available free of charge to any police department, medical examiner, or coroner in the United States. Importantly, the lab is in the final stages of being able to use robots, which will allow the number of DNA analyses to skyrocket: one robot, for example, will be able to analyze 17,800 DNA samples per year.

For more information about the UNT Center for Human Identification's DNA lab at the UNT Health Science Center at Fort Worth, contact the media office at 817-735-2446.

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University of North Texas Health Science Center

The University of North Texas Health Science Center comprises the Texas College of Osteopathic Medicine, the Graduate School of Biomedical Sciences, the School of Public Health, and the School of Health Professions. Key research areas include aging and Alzheimer's disease, cancer and physical medicine. This year, the Texas College of Osteopathic Medicine was named a top 50 medical school in primary care by *U.S. News & World Report* for the seventh consecutive year. "Fort Worth's medical school and more" contributes \$500 million to the Tarrant County and Texas economies annually. For more information, go to <http://www.hsc.unt.edu/>