

THE COMPREHENSIVE APPLICATION OF NATIONAL DNA DATABASE IN CRIMINAL CASE INVESTIGATION

Cui Jie, Li Sheng

Institute of Forensic Science, Ministry of Public Security, P.R.C.

In the past decade or so, China National DNA Database has been improved continuously. At present, it has become the professional information system with the highest individual recognition rate and the best application effect in forensic science and technology. In the case investigation, the traditional detection methods of single comparison and local case-to-case consolidation have been unable to meet the diversity and complexity of the current crime situation. To give full play to the role of the National DNA database in combating crimes, it is necessary to develop innovative new methods of personal identification.

In the years of practice, DNA technicians have innovated and perfected a series of strategies and methods. The method of comprehensive application of multiple kinship comparisons, is used to determine the suspect whose identity is bleached, as well as unknown corpses. The method of material evidence consolidation through the DNA database comparison, is to achieve the case joint investigation, so that we can associate the cases with different time, different region and different nature to assist investigators in analyzing Key information of the criminal suspect, such as origin source, modus operandi, habits, and hooligan trajectory. The method of Y-STR investigation, using the genetic characteristics of the male Y chromosome paternal system, is to investigate the population within a certain area, and sometimes it can play a key role in the investigation of hard cases with insufficient clues, unclear suspects. The method of comprehensive applications of DNA, fingerprints, footprints and other forensic science systems, jointly provide information services for case investigations, such as locking key suspects, analyzing activity trajectories, discovering crime characteristics, mining case details.

It has been proved that the comprehensive application method of the National DNA database in criminal investigation is effective, and can be used as a supplementary means for direct comparison of DNA database. It maximizes the application efficiency of DNA database, and meet the new situation for combating crimes.