



ISRAEL POLICE LAUNCHES NATIONAL DNA DATABANK

Superintendent Hanita Grant Division of Identification and Forensic Science Israel Police

A National DNA Databank was launched at the Israel Police Headquarters in February 2007 in a major impetus to combat crime. Profiles of over 14,000 suspects have so far been entered and plans are in place to collect DNA samples from several thousand convicted prisoners. The establishment of the Police DNA Database was made possible by the Israeli Knesset (Parliament) passing the Databank Law in September 2005 with the Databank Regulations coming into effect as of 1.2.2007.

Chief Superintendent Ashira Zamir, who is Head of the

DNA Databank Laboratory at the Division of Identification and Forensic Science, explains that “samples from suspects are collected by investigators and crime scene technicians at the police station using specially designed kits. The majority of these samples are in the form of buccal swabs, as opposed to hair and blood sampling. Inner cheek cells are removed using a specific foam swab which is then, in turn, smeared onto a Whatman FTA card”. To verify donor identification, inked index fingerprints are also deposited at the base of each card.

Recently, when Deputy Commissioner Shachar Ayalon’s car was broken into, a spot of blood found at the scene matched that of an offender’s profile, newly added to the database.

As well as the Criminal Index, the DNA Database contains a record of over 4,000 crime scene profiles, most of which were painstakingly uncovered by forensic experts in the neighbouring Forensic Biology Laboratory or at the country’s National Pathology Institute in Tel Aviv.

These DNA samples are often minute and some are

invisible to the naked eye. This, as yet unidentified DNA profile, originating from saliva, bloodstains, semen and other biological material was extracted from exhibits relating to murder, rape, indecent assault, armed robbery and other violent incidences, as well as from volume crime cases such as house break-ins and car thefts.

Comparisons are regularly made between the criminal databank and these scenes of crime profiles. To date, a total of 125 matches have been found using this crime-busting technology. As the databank grows, so too will the police's ability in crime prevention and detection and, just as important, in exonerating the innocent.

Case Reports

- Almost two years ago an elderly married couple was brutally attacked and robbed in their own home by several intruders wearing balaclavas. The victims were tied up with rope which was later examined by an expert in the Forensic Biology Lab. She applied a novel method, developed by the Forensic Biology Lab, for lifting cellular material from garments. After numerous samplings of the rope the expert managed to isolate a profile which did not belong to any of the victims. This profile was entered into the database and a match was

obtained with an offender profile a year and a half after the attack, when he provided a DNA sample for an unrelated incident.

- When a young woman was recently raped, three potential suspects were interrogated for the offence. None of them matched the DNA profile obtained from an examination of the victim. A search of the database revealed the real identity of the rapist.
- In a domestic burglary an intruder was surprised by the property owner who was himself a self-defence expert. The thief managed to escape, but not before being wounded by the owner. In a nearby lane a blood stained sock, which had been used as a glove, was retrieved for examination. Blood from both the sock and the owner's shirt matched a suspect who had a record of 10 previous burglaries.

Chief Superintendent Zamir has a staff of five scientific personnel, including a soldier from the Army Medical Corps fulfilling his national service. The lab uses SGM Plus kits supplied by Applied Biosystems to determine the 10 STR loci and one amelogenin gender marker. In December 2007 the database was upgraded with CODIS, the FBI's Combined DNA Index System, which is currently in use in 28 countries and throughout the USA, in federal, state and local crime laboratories.

CODIS will not only enable better co-operation between countries, it also promises to be easier to operate and includes more applications than the present internal operating system.

In the summer of 2006, during the Second Lebanon War, while Ashira's unit was in the midst of carrying out validation tests for the new database, they also became part of a concerted group of forensic DNA and fingerprint experts who assisted the IDF in identifying soldiers killed in battle.

Currently the Israel Police is involved in discussions with Interpol regarding an international exchange of DNA information between Interpol's member states.

As for future developments, further public debate and legislation is necessary in Israel before the databank can include both a Missing Person's Index and a Relative's Index. This will allow unidentified DNA samples isolated from human remains, such as bones and teeth, to be compared with a database compiled solely of genetic markers obtained voluntarily from the relatives of those missing persons.

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