

Dna testing and database in the uk

Technology



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Introduction

Each individual is marked by unique genetic sequences embedded in strands of DNA (deoxyribonucleic acid), except for identical twins. Surprisingly, DNA source can easily be obtained from single white blood cell, cheek epithelial cell contained in the saliva on cigarette butt or chewing gum, or even skin cell found on fingerprint or dandruff. These will then be amplified and the unique markers will be recorded as specific DNA profiles for the donors, along with their details. Mostly the profiles will be loaded into a data bank, such as UK National DNA Database .

DNA database and testing contribute the highest confidence and faster process in identification, especially in forensic and crime. The DNA sample will be recovered from a crime scene and then be profiled to find a match in the database just in 15 days!

UK is the most tolerant in DNA testing's protocol. Proud to say, it is the world's biggest store of DNA profiles. Besides, UK once aimed to sample one in every 15 people. It is not rare to see the whole citizens in a particular area are asked to have their DNA tested for murder investigation, as happened in Leicester and Bristol.

However, the eagerness is feared that it may assault the public's privacy. They afraid to be accused by crime they did not commit, just because their DNA has ' present' at the crime scene. Plus, the DNA sample can be collected from other location and placed at the crime scene, except for blood which is ' non-mobile'. Surprisingly, tremendous DNA samples of human are

kept secretly and collected actively which is possible to cause random sampling from the public.

DNA theft is referred as a process of examining and screening of someone's genetic material without his permission. A more comprehensive legislation has been proposed in UK to protect the genetic privacy and limit the access to DNA information. However, this so-called act does not apply to DNA testing by law-enforcement agencies and upon genetic material left in a crime scene.

Will DNA database be sentenced to ‘freeze’

Due to its success, DNA sampling is suggested to be done as early as at birth stage and used to modernise the registration of birth, death and marriage. However, the former idea has been criticised because contribution of DNA database in accuracy of crime justification can still be argued. Good example, Stephen Snowden was caught for stealing a bottle of whisky and had his genetic sample be taken. After that, a DNA testing had associated him with a rape case, causing him to be jailed innocently.

Another case was a Parkinson patient named Raymond Easton. He was accused in a burglary case just because of his DNA matched with the one obtained from the crime scene.

Nonetheless, his case can only happen once in 37 million chances. Thus, Britain's ForensicScienceService has upgraded the standard identification of 6 DNA sites to a more powerful 10 sites. This limits the possibility of finding two persons being matched randomly to one in a billion.

Guidelines have been proposed to protect the genetic privacy especially emphasis upon disposal of DNA samples after it has been analysed.

According to Britain's Data Protection Act, someone who has his DNA been taken for a research has the authority to ask the record to be destroyed after a given time length. This database is also urged to be put under provision of independent party, not the police or even the government, though it may be too costly for poor countries to establish an independent laboratory.

Even so, in reality, it has been revealed that mostly, once a DNA sample has entered the database, the donors are unable to stop the unlimited use of it and withdraw themselves from the research or investigation. Even, illegal use of it already occurred for discriminatory purposes by insurers or employers unintentionally revealed from sensitive medical information.

It has been reported by internal government in year 2000, that up to 80 000 genetic material that should be cleared, were not, illegally. Good news, early this month, the UK government has promised to clear the innocent DNA profiles, only after European law has declared it as unlawful, though the process will take time.

Unintentionally, the existence of DNA database warns the offenders to be more cautious in committing crime. A rapist was found to have all his body hair, including nostril hair shaved off and his nails trimmed.

In conclusion, the abuse of genetic information is not something new because science has also been misused for massive killing of people.

Basically, pros and cons of the database can only be measured in the future [14].

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