HSA Re-tests DNA Cases As A Precautionary Measure

The Health Sciences Authority (HSA) has initiated the re-test of the DNA samples of 87 criminal cases as a precautionary measure in consultation with the Singapore Police Force (SPF), the Central Narcotics Bureau (CNB) and the Attorney-General's Chambers (AGC). This re-testing was initiated following HSA's discovery that a reagent of higher than usual concentration ("the Reagent") was prepared and used as part of the DNA testing process in its DNA Profiling Laboratory (DNAPL) from October 2010 to August 2011.

- 2 In August 2011, the DNAPL laboratory manager, who had prepared the batch of the Reagent, realised that its concentration was higher than usual and promptly highlighted this to the laboratory supervisors.
- The key scientific impact of the Reagent being used is a marginal reduction in the sensitivity of the DNA tests when low levels of DNA are being analysed. This will not cause any false positive results leading to wrongful identification of a person or inferring the presence of a person who was not there. In fact, the reagent had passed existing internal and external performance QC checks during the period that it was used. Re-testing of DNA samples was initiated as a precautionary measure.
- An inter-government agency effort consisting of the SPF, CNB, AGC and HSA was established to identify cases for re-testing, so as to minimise the impact on legal proceedings. The re-testing is expected to be completed in March 2012. HSA expects the impact to be minimal; re-testing is expected to yield additional DNA profiles in less than 5% of the samples. To date, the first set of re-test results showed that only 2 out of 850 samples indicated additional reportable information, i.e. in addition to the previously identified profile, a DNA profile of another person not previously detected was obtained.
- The marginal impact of the Reagent has been affirmed by external DNA experts, namely Professor Bruce Budowle, former Senior Scientist with the FBI and currently Professor at the University of North Texas Health Science Center, and Professor Angela van Daal, the forensic DNA scientist who introduced forensic DNA tests to courts in several states in Australia and is currently on the faculty of Bond University, Australia. Both experts confirmed that the Reagent would not result in any false positives. The re-testing protocol that the DNAPL adopted has also been validated by both experts.
- Both SPF and CNB do not rely on DNA alone when investigating cases. Deputy Director of the Criminal Investigation Department, Deputy Assistant Commissioner of Police (DAC) Teo Chun Ching elaborates, "The Police do not rely on DNA alone when conducting investigations. Our investigators will collect all evidence that can help to establish what happened in each case. Every case is unique. If DNA samples are available, it will be considered in conjunction with other

evidence such as CCTV footage, reconstruction of crime scenes and witness accounts to establish a case. The AGC will then assess all the available evidence in order to determine whether there is sufficient evidence in a particular case to prefer any charges."

- 7 DNAPL has stringent reviews and audits in place and is also accredited by the international accreditation agency, the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB). The Laboratory will continue to strengthen its processes according to international best practice. HSA has taken the following actions:
 - On discovery, management immediately conducted an investigation into the case:
 - initiated corrective procedural actions;
 - concurrently informed the relevant stakeholders, namely SPF, CNB and AGC;
 - HSA's Board of Directors is setting up a Committee to review HSA's processes, systems and follow-up related to the incident.
- A/Prof John Lim, CEO HSA said, "We deeply regret that this incident took place. The DNA Profiling Laboratory adheres to international best practice and standards for testing, but as this incident has shown, we can and should do better. Re-testing is being carried out as a precautionary measure. Our aim is to be transparent about what has happened and how we intend to address the issue. HSA's management will work with the Board-appointed Committee to review and strengthen the systems and processes across our organisation to ensure that such incidents do not recur."

MINISTRY OF HEALTH

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3 JANUARY 2012