

MEMORANDUM

STATE OF ALASKA

Department of Public Safety

FBI Short Tandem Repeat Allele Table Amendments

The Federal Bureau of Investigation (FBI) Laboratory has recently issued a bulletin to National DNA Index System (NDIS) participating laboratories advising them that it had identified errors in the FBI Short Tandem Repeat (STR) population database published in 1999 and 2001, and has subsequently provided amended data correcting these errors. The allele frequencies cited in these publications have been used by many forensic laboratories throughout the country for calculating DNA match statistics since 1999. The Scientific Crime Detection Laboratory (SCDL) is one of the many laboratories that had utilized the published data for reporting DNA match estimation statistics since beginning STR DNA typing in 2001. The original data was published in the peer reviewed Journal of Forensic Sciences 1999; 44(6):1277-1286. See FBI announcement at <https://www.fbi.gov/about-us/lab/biometric-analysis/codis/amended-fbi-str-final-6-16-15.pdf>

The FBI has recently expanded the number of CODIS core loci from 13 to 24. In order to establish allele distributions for these additional loci, the samples from the original population study were reanalyzed by the FBI using the new STR typing kits that are commercially available to forensic laboratories. The errors were discovered during a concordance check of the new versus originally published data. The errors were determined to be due to clerical mistakes during transcription and to limitations of the older technology and software. Empirical studies conducted by the FBI, as well as at least two additional laboratories, have shown that the difference in probabilities calculated with the original data compared to that of the amended data is nominal. An erratum notice will be published as a Letter to the Editor in the July 2015 issue of the Journal of Forensic Sciences which will contain the data showing the minimal effect of these errors.

The SCDL has taken immediate steps to address the problems identified. The original FBI allele frequencies are no longer being utilized by SCDL for the calculation of DNA statistics. The amended FBI tables are now in use for all cases as of June 29, 2015. Any cases with upcoming court dates will be provided with a supplemental report as needed to re-calculate DNA statistics using the amended FBI tables. For any questions regarding the notification received from the FBI, impact on previous DNA cases worked by the SCDL, or the steps being taken by our laboratory, please contact DNA Technical Manager Cheryl Duda at (907) 269-5687 or cheryl.duda@alaska.gov

Dated this 30th day of June 2015,

Orin Dym, Forensic Laboratory Manager

