



### Short Tandem Repeat Population Statistic Calculation Change

Effective June 9, 2015, the St. Charles County Police Department Criminalistics Laboratory (SCCPDCL) has updated the short tandem repeat (STR) allele frequency data used in calculating the rarity of a genetic profile. The SCCPDCL was notified that following a review of the original published STR data [*reference "Population data on the thirteen CODIS core short tandem repeat loci in African Americans, US Caucasians, Hispanics, Bahamians, Jamaicans and Trinidadians." Budowle, B., et al., J Forensic Sci 1999; 44: 1277-1286.*], discrepancies were observed and amended. The errors arose from clerical mistakes during transcription and limitations of older technology and software.

Empirical studies conducted by the FBI, as well as two additional laboratories, have shown that the difference in probabilities calculated with the original data and the revised data is negligible. Internal studies conducted by the SCCPDCL have also supported this fact. **Furthermore, changes to the population data have no bearing on the determination of inclusion/exclusion of an individual as the source of (contributor to) a genetic profile.**

The SCCPDCL has taken immediate steps to address the problems identified and the amended alleles were adopted as soon as we received notification of the issue. All changes have been reviewed and quality checked to ensure accurate incorporation into our calculation methods. Impact on laboratory case flow has been minimal.

Recalculation of statistical estimates performed prior to June 9, 2015 may be conducted upon request. Please bear in mind that changes may be reflected as an increase in probability of inclusion or a decrease in probability of inclusion depending on the racial group or the number of affected alleles. Not all previously issued statistical evaluations will be affected. The SCCPDCL reserves the right to issue amended statistics even where no request has been made to do so.

For any question regarding the notification received from the FBI, impact on any previous DNA cases issued, or the steps being taken by our laboratory, please contact DNA Technical Leader Daniel Fahnestock at (636) 949-7488 or [dfahnestock@sccmo.org](mailto:dfahnestock@sccmo.org)

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