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“The devil’s in the detail”: Release of an expanded, enhanced and dynamically revised forensic STR Sequence Guide

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Highlights

- The sequence template file originally published with 2016 ISFG STR sequence minimal nomenclature requirements has been comprehensively revised
- The number of forensic STRs listed has been expanded to include loci less commonly used but requiring detailed sequence descriptions
- A wide range of sequence variation features in and around forensic STRs have been identified and the revised sequence guide provides new annotations of these variants
- The sequence guide is now available as an FTP download that allows dynamic revisions and inclusion of a date-stamped change log to detail future changes

Abstract

The STR sequence template file published in 2016 as part of the considerations from the DNA Commission of the International Society for Forensic Genetics on minimal STR sequence nomenclature requirements, has been comprehensively revised and audited using the latest GRCh38 genome assembly. The list of forensic STRs characterized was expanded by including supplementary autosomal, X- and Y-chromosome microsatellites in less common use for routine DNA profiling, but some likely to be adopted in future massively parallel sequencing (MPS) STR panels. We outline several aspects of sequence alignment and annotation that required care and

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