Abstract 50

THE USE OF "MINI" STR LOCI FOR RESOLVING DIFFICULT FAMILY RELATIONSHIP CASES

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The combination of PCR and short tandem repeats (STR's) is by far the most common technology used for parentage and relationship testing. The multi-locus Identifiler (ABI) and Powerplex 16 (Promega) STR kits are adequate for resolving the majority of cases, but a small proportion require additional testing for resolution. In addition to a set of a previously described secondary multiplexes used to resolve difficult cases (Peterson et al., 2005) we have developed a 4-locus multiplex made up of "mini-STRs" (Coble and Butler, 2005). These markers were initially designed to allow degraded DNA to be more readily typed due to their reduced amplicon size. This multiplex provides a robust set of markers (D1S1677, D2S441, D10S1248 and D22S1045) that can also be used to supplement our battery of test systems. We present examples whereby mini-STRs have proven useful in resolving complex kinship and parentage cases.