

PRELIMINARY STUDY OF HIGHLY POLYMORPHIC STR LOCUS IN CANNABIS SATIVA

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Short tandem repeat (STR) markers are the DNA marker of choice in forensic analysis of human DNA. Here we apply the STR techniques to determine the provenance of seized cannabis drug samples.

Sixty-two individual cannabis plants, representing four varieties of yunan cannabis were profiled with STR markers. Our findings demonstrate the promise of cannabis STR markers to provide information on the geographical origin of drug seizures. The Nei's genetic distance was calculated using software GenAlEx6 the dendrograms is based on Nei's genetic distance between four varieties. Because the samples we selected are from the same province, yunma1 and yunma8 are clustered closely together, then yunma2 are clustered, yunma132 are clustered at last.

We found rare genes in STR locus--CS1 among four accession, so this locus is promised to be used as specific markers of cannabis. With additional STR loci we expect to identify cannabis samples with STR genotype database and dendrograms. Shorted of time and the number of samples, we make preliminary study of two STR loci. Our work is continued to create STR genotype database of cannabis of China.