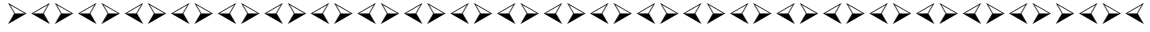


EMERGING TRENDS IN FORENSIC MOLECULAR GENETICS

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PCR-based DNA analyses have evolved to become an indispensable and routine part of modern forensic science and legal medicine. In forensic casework extremely sensitive PCR-based techniques are employed to analyze minute amounts of biological material. In cases of mass disasters such as air-crashes, where physical identification may be impossible, victims can be identified unambiguously within days.

The state-of-the-art techniques and markers in the field of forensic molecular genetics, e.g., autosomal and Y-chromosomal short tandem repeat (STR) as well as mitochondrial polymorphisms, are introduced.

Recent trends in forensic molecular genetics from introduction of novel markers, e.g. X-STRs, autosomal, gonosomal and mitochondrial SNPs, to novel typing methodologies, e.g. DNA chips, and application of non-human DNA analysis are discussed.

Finally, the topic of DNA databases and ethical issues are covered.