Thesis Title	DNA FINGERPRINTS IN MAN
Name	Mr. Chainarong Wongteerasupaya.
Degree	Master of Science (Biochemistry)
Thesis Supervisory	Comittee
	Vichai Boonsaeng
	Sakol Panyim
	Prapon Wilairat
	Ancharee Tassanakajon
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Abstract

The term 'DNA fingerprints' has been used to describe the extensive restriction fragment length polymorphism (RFLPs) associated with hypervariable minisatellite present in the human genome. M13 hybridization probe consists of 2 clusters of 15-bp repeats within the protein III gene detect many hypervariable minisatellites region in human DNA. The resulting DNA fingerprints produce by Southern blot hybridization in the absence of salmon sperm DNA are comprised of multiple hypervariable DNA bands. Individual specific DNA fingerprint analysis with M13 probe proved to be useful for individual identification, paternity testing and forensic studies.

It was found that the probability that all the resolved DNA bands in the range of 4-20 kb in an individual A are also present in an unrelated individual B is 2.0×10^{-10}. The pattern of bands from identical twins were similar.

Since bands in DNA fingerprints are transmitted from generation to generation, it was found that the child recieved about half of DNA bands from mother and all remaining bands from father. It also found that the DNA fingerprints of blood and semen of the same man showed the similarity in pattern. The data obtained also demonstrated a potential role of M13 DNA application as a probe for DNA fingerprints of differential taxonomic group including animals,plants, and microorganisms.