

ABSTRACT

THE ODYSSEY OF FORENSIC GENETICS

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Forensic Genetics is a long journey that began by the description of blood groups in 1900. The identification of biological samples was achieved via the study of a number of polymorphic enzymes and proteins together with the human leukocyte antigens besides blood groups and subgroups until the 80's. Although the studies carried out with these genetic markings gave successful results, various restrictions were the subject of discussion. While there were problems encountered especially when working with dried body stains, there were sometimes difficulties in evaluation. DNA technology, which was developed for diagnostic and therapeutic purposes at the beginning of 90's, has also been applied in forensic sciences and became indispensable. But the extraordinary exclusion power of the DNA technique and the precision of its application do not bring with it the fact that it is error-free. Today, there are various points that need to be taken into consideration when using DNA, which is defined as a magic. In addition, it is necessary for the judiciary system to be aware of the strengths and weaknesses of DNA data when used in the court.

Keywords: Forensic genetics; blood group antigens; polymorphic enzymes; HLA; STR; DNA; individualization