

Genetic Markers in Human Bone Tissue^a

REFERENCE: Gaensslen RE, Lee HC: Genetic markers in human bone tissue; *Forensic Sci Rev* 2:125–146; 1990.

ABSTRACT: The use of genetic markers in bone and tissues as a method of human identification is reviewed in detail. Methods for the identification of human remains and the case situations requiring them are described. Some of the previous work on tissue and bone ABO grouping from both anthropological and medicolegal perspectives is reviewed; and some results from our own studies that have produced a highly reliable bone grouping procedure are presented. Some of our work and that of others on the typing of other classical genetic marker systems in bone is included. Recent work on DNA polymorphism typing and some actual and potential forensic applications of bone (and tissue) deoxyribonucleic acid (DNA) typing are discussed.

KEY WORDS: ABO blood group system; deoxyribonucleic acid; DNA typing; human bone; human bone ABO typing; human bone genetic markers; human identification; human tissue ABO typing; human tissue genetic markers; identification of human remains; paleoserology; polymerase chain reaction; restriction fragment length polymorphism; sex determination; variable number of tandem repeats; X chromosome; Y chromosome.