

Genetic Polymorphisms of Human Parotid Saliva and Their Application to Forensic Science

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ABSTRACT: Human saliva is one of the valuable resources for the identification of genetic markers. A number of polymorphisms are found in salivary proteins and enzymes. They could provide the important information for genetic studies and forensic science. Polymorphic proteins in saliva show very unique composition of amino acids, which are named proline-rich proteins (PRPs). Proline-rich proteins have some biochemical and immunological similarities and linkage has been shown to occur among them. Recent deoxyribonucleic acid (DNA) analysis suggests that PRP genes have to be reconsidered on the gene structure. This review includes the polymorphisms of salivary proteins and enzymes and their application for human genetics and forensic science. Recent DNA studies that suggest the reorganization of the loci controlling the production of PRPs are also discussed.

KEY WORDS: Genetic studies, personal identification, polymorphism, population study, saliva, salivary enzyme, salivary protein.
