# Identification of Xenotypic Transplantations by Arbitrary Oligonucleotide Primers

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Authenticity of species of tissues, organ tissue grafts may be determined to establish quality of packed food and tissue grafts. Determination of species of the source tissue/contamination are often conducted in forensic laboratories.

We have standardized RAPD protocols for analysis of such contaminants/grafts in human by using six sets of arbitrary, short sequenced primers. These primers (10 mer) have different GC content. A single primer set has been identified to be the most effective in identification of pig tissue contamination in humans. The minimum amount of DNA and primer concentration to be used in where the recovered DNA obtained from tissues is partially degraded was also determined. The results were employed in the different cases received by the laboratory. In one important case the vital organs, heart, lungs, kidneys, and liver of pig were claimed to be transplanted in human was successfully tested by the standardized RAPD method. The DNA was isolated from the tissues and tested for their non-human origin by hybridization with human specific probe DYZ21. The samples were then analyzed for the species of origin using six sets of Random Amplified Polymorphic DNA (RAPD) primers, including the primer predicted to give maximum difference in the polymorphism between human and pig DNA. The source of organs found outside the body was established by typing the alleles of the loci of HLA DQA1, LDLR, GYPA, HBGG, D7S8, Gc using commercially available kits.