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(54) Title: METHODS FOR ASSAYING MC1R VARIANTS AND MITOCHONDRIAL MARKERS IN SKIN SAMPLES

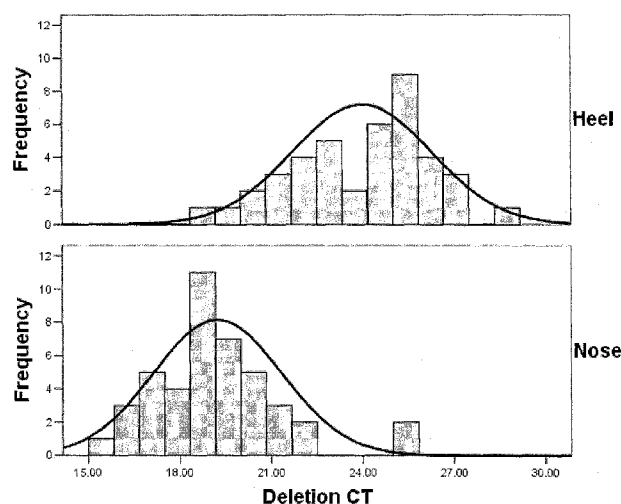


FIGURE 1

(57) **Abstract:** The present invention relates to methods for predicting, diagnosing and monitoring skin states and skin diseases. The methods combine the use of non-invasive skin collecting techniques with one or more assays for determining mitochondrial DNA (mtDNA) aberrations and Melanocortin 1 Receptor (MC1R) variants, thereby providing a comprehensive tool for identifying, predicting and/or monitoring photoageing, ultraviolet radiation (UVR) damage or skin disease. The methods of the invention may also be effective in screening for new therapeutic agents, skin care products and treatment regimes, and may also be useful for monitoring the response of a subject to a preventative or therapeutic treatment.

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