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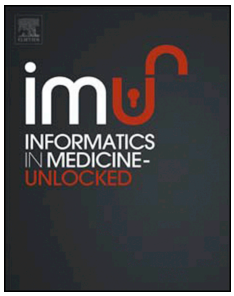

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COMPUTATIONAL DESIGN OF SMALL INTERFERING RNAs AND SMALL HAIRPIN RNAs TO SILENCE MUTATED P53 GENE EXPRESSIONS

(SIRNA and ShRNA Design for P53 Mutations)

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Abstract

RNA silencing is a novel gene regulatory mechanism that confines the transcript level by either preventing translation or by the initiation of particular RNA degradation. Small interfering RNAs are regularly represented as the exogenously made or viral inducers of RNAi. Such small RNAs have been used in biomedical research for particular repression of genes. A small hairpin RNA is an artificially synthesized RNA molecule with a hairpin or loop like structure, that is inserted into the designed siRNA to induce interferance. In this research work, computational techniques are used to design the siRNA and shRNA against the P53 gene. Approximately four target sites are identified in the p53 gene to which the siRNA and shRNA can bind, for each target site the