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Implications of CRISPR-Cas9 genome editing methods in atherosclerotic cardiovascular diseases

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Statement of the problem: Today, new methods have been developed to treat or modify the natural course of cardiovascular diseases, including atherosclerosis, by the CRISPR-Cas9 system. Genome-editing tools are CRISPR-related palindromic short iteration systems such as CRISPR-Cas9, a valuable technology for achieving somatic and germinal genomic manipulation in model cells and organisms for various applications, including the creation of deletion alleles. Mutations in genomic DNA and new genes' placement have emerged. Based on WHO fact sheets, 17.9 million people die from CVDs (cardiovascular diseases) each year, an estimated 32% of all deaths worldwide. 85% of all CVD deaths are due to acute coronary events and strokes.

Findings: This review discusses the applications of CRISPR-Cas9 technology throughout atherosclerotic disease research and the prospects for future in vivo genome editing therapies.

Conclusion: We also describe several limitations that must be considered to achieve the full scientific and therapeutic potential of cardiovascular genome editing in the treatment of atherosclerosis.

Biography

Mohammad Ali Sheikh Beig Goharrizi, A Doctor of Philosophy (Ph.D.) with a focus on Biotechnology and Medicine Biotechnology, and well-developed analytic skills, experienced Assistant professor in medical science university with a focus on the system Biology and Bioinformatics in cardiovascular diseases and Cancer with a demonstrated history of design Gene Panel for diseases diagnosis. He is skilled in Bioinformatics approaches, drug design, Cytogenetics, Molecular Biology, Genetics engineering, GMO production, and Genetics standard techniques. Moreover, He is interested in science, cancer research, and biomarker discovery.