

Biology report - Abstract

Topic : **CRISPR/Cas9 gene editing tool in oncological research**

Summary of my topic idea:

CRISPR/Cas9 is a genome editing biological tool that expands as Clustered-Interspaced-Short-Palindromic-repeat/CRISPR-associated protein 9. CRISPR/Cas9 exists in an adaptive immune system with a programmable single strand guide RNA. The sg RNA with Cas9 endonuclease is used to cleave strands in a sequence specific manner and genetically modify targeted gene sequences which involve insertion and deletion of gene sequences. Though the same applications have been achieved with RNA interference in the past, its unpredicted non-target toxicity can cause off target effects. Despite CRISPR/Cas9 based tools being comparatively difficult to be inserted into mammalian cells, it shows less of target effects than the RNAi. Cancer has proven to be a versatile disease with many forms of expressions, complications and involves multi gene and path processes that has been a challenge to scientists. This system is used to study the prognosis and prevention of cancer and hopefully its cure in the future. The plan is to cover the key points of some of the research done in this field using CRISPR/Cas9.

References:

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