Popular Science Lecture

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Department of Botany and Centre for Research
St. Teresa's College (Autonomous), Ernakulam, Kochi

Lecture on

Gene Editing: The Last Ten Years

Dr. Chitra Seetharam Misra

Scientist, Applied Genomics Section, BARC, Mumbai

Date and Time

Saturday, 24th September, 2022, 10.30 AM

Dr. Chitra Seetharam Misra

ABSTRACT

Ten years back in 2012, Jennifer Doudna and Emmanuelle Charpentier published their finding that CRISPR-Cas9 could be programmed with RNA to edit genomic DNA. Genome/Gene editing is the precise modification of the chromosome, in the form of deletions, insertions, or replacement in a living organism. Before discovery of the CRISPR technology, there were various technologies that had been developed to bring about genome editing in organisms, such as meganucleases, zinc finger nucleases and transcription activator-like effector-based nucleases (TALEN), but none of these were as easy to use as the CRISPR-Cas technology. The CRISPR -Cas systems are easy to engineer and apply and therefore have taken the world by storm leading to several advancements in therapy and biotechnology. How far have we come in using the CRISPR technology to fulfil the dream of precise genome editing that can be a panacea for human health? An attempt will be made to answer this question.

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https://meet.google.com/dvz-dirk-cnw

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