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Mutation detection via CRISPRCas9 micro-fluid chip:

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In biology mutation is a change in the nucleotide sequences of the DNA of an organism. Mainly there are three types of mutation: point mutation, deletion and insertions. Once the mutation has been defined allele specific oligonucleotide hybridization, amplification, heteroduplex formation method referred to as a diagnostic method. Some advanced technique like CRISPR cas9 system is used for selected mutagenesis. Using microfluid and CRISPR cas9 system we can detect a mutation. Let's say you have a DNA sample with fluorescent labeled from patient and you want to make sure that gene you are interested in is healthy gene. We can design a CRISPR to scan through DNA or find specific gene or mutation. The CRISPR scans the DNA. If the CRISPR does not find targeted gene it does not bind to it. It means that no fluorescence color appears under UV-light but it scans and finds its target and this binding creates a fluorescence signal. It means that mutation can occur in gene.

Biography

Umair Masood is a student at Comcast University; Abbottabad presented two research papers at the International Conference on Molecular Biology and Biochemistry in Australia and the 13th International Conference on Tissue and Regenerative Medicine in the United States. Masood said that he won the award with 336 voters.

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