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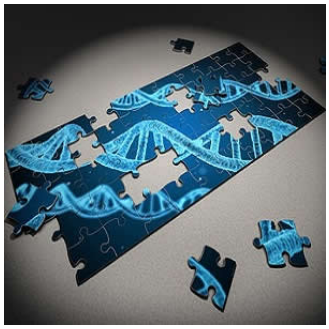
NIH to launch Genome Editing programme



Genome therapy research will be given a boost with the launch of "Somatic Cell Genome Editing" programme by the National Institutes of Health (NIH), an agency attached to the U.S. Department of Health and Human Services. The programme is aimed at developing tools for safe and effective genome editing in humans.

“Genome editing technologies such as CRISPR/Cas9 are revolutionising biomedical research,” said NIH Director Francis S. Collins, MD, PhD. “The focus of the Somatic Cell Genome Editing programme is to dramatically accelerate the translation of these technologies to the clinic for treatment of as many genetic diseases as possible.”

Starting this year, NIH will award an estimated $190 million to researchers over six years, pending the availability of funds. The programme is funded by NIH's Common Fund.

The researchers would be expected to collaborate to improve the delivery mechanisms for targeting gene editing tools in patients, develop new and improved genome editors, and develop assays for testing the safety and efficacy of the genome editing tools in animal and human cells. Their work also entails creation of a genome editing toolkit containing the resulting knowledge, methods, and tools to be shared with the scientific community, the NIH said.

Many rare diseases, as well as some common disorders, are caused by changes in a person's DNA, either through changes inherited from parents or those that occur during a person's lifetime, the NIH explained.

Thanks to advances in genome editing technology, scientists are now able to precisely change the DNA code inside living cells. CRISPR gene therapy, for example, offers a "less expensive" method of altering a patient's DNA.

Somatic cells are any of the non-reproductive cells of the body, those that do not pass DNA down to the next generation. By focusing on somatic cells, any changes to the DNA introduced by the genome editing therapeutics would not be inherited.

The new NIH programme is part of the government's concerted efforts to increase adoption of genome editing for treating patients. Funding opportunity announcements for the programme are expected to be issued within a month.

Despite widespread interest and investment in the field, many challenges remain in preventing broad adoption of this technology in the clinic. One of the key challenges is reimbursement. In November, the American Medical Association said it wanted clarity from policymakers for how insurance covers genomic tests and other precision medicine treatment.

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