Genomic Destructive CRISPR Guide RNAs

Tech ID: 34426 / UC Case 2024-134-0

TECHNOLOGY DESCRIPTION

Disease/Indication: Glioblastoma

Unmet Need: Glioblastoma is the most common and aggressive brain cancer in adults, with poor survival outcomes due to therapy resistance and recurrence, often accompanied by hypermutation in the tumor genome.

Product: UCSF scientists have developed an innovative therapeutic approach called CRISPR-mediated "Cancer Shredding," which targets hypermutated glioblastoma (GBM) cells by leveraging CRISPR-Cas9 technology to disrupt repetitive tumor-specific DNA sequences.

Stage: This approach, which is currently in the proof-of-concept stage, uses CRISPR to fragment cancer cell genomes and induce DNA damage-driven cell death, focusing on mutations in the non-coding genome generated by chemotherapy-induced mutational signatures.

Competitive Advantage: Unlike traditional therapies, Cancer Shredding uniquely exploits the vast non-coding genome and tumor-specific mutations, offering a groundbreaking strategy for selectively eliminating recurrent GBM cells and potentially other hypermutated cancers.

PATENT STATUS

Patent Pending

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OTHER INFORMATION

KEYWORDS

Glioblastoma, CRIPR, gRNA

CATEGORIZED AS

- Medical
  - Disease: Cancer
  - Gene Therapy
  - Therapeutics

RELATED CASES

2024-134-0

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