Merck's 50+ CRISPR Patents Leading the way in genome-editing technology

Merck

CRISPR Integration:

CRISPR/Cas9 System for insertion in eukaryotic cells

Compositions and use of CRISPR/Cas9 to integrate a new sequence of DNA after cutting genomic DNA

 $2017 \bigcirc 2018 \land 2019 \bigcirc 2020$

Patents Received

🔶 2021 ★ 2022

CRISPR-chrom:

Improves access to the genome so that CRISPR-driven edits can be done more efficiently

Fuses chromatin-modulating peptides to the CRISPR/Cas9 protein (the DNA scissors of CRISPR), thereby increasing access to the genome

2022

Patents Received

• 2021

proxy-CRISPR:

New genome-editing technique that makes CRISPR more efficient, flexible and specific

Opens up the genome for modification of DNA, providing more experimental options, faster results

Patents Received



U.S.

BRAZIL



U.K.

2020

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The Life Science business of Merck operates as MilliporeSigma in the U.S. and Canada.

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SOUTH KOREA

JAPAN

CHINA

SINGAPORE

INDIA OT

Novel Genome Modification Systems:

Other Genome Modification Systems incl. alternative Cas9 proteins, fusion proteins, and compositions for genome editing

Patents Received

2020 \diamond 2021 \star 2022



Cleavage of Chromosomal Sequences using Dual Nickases

Compositions and use of two Cas9 nickases to cut genomic DNA, optionally followed by integration of new DNA sequence

 Patents Received

 ○ 2018
 ▲ 2019