

NOVEL PHAGE CRISPR-CAS EFFECTORS AND USES THEREOF

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PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	20230028178	01/26/2023	2020-066
European Patent Office	Published Application	4081533 A0	11/02/2022	2020-066

BRIEF DESCRIPTION

UC Berkeley researchers have discovered a novel family of proteins denoted Cas12L within the Type V CRISPR Cas superfamily distantly related to CasX, CasY and other published type V sequences. These Cas12L proteins utilize a guide RNA to perform RNA-directed cleavage of DNA.

SUGGESTED USES

- » Targeted genome editing of bacterial, archaeal, and eukaryotic cells
- » Transcription repression of specific genes using inactivated Cas12L
- » Targeting of proteins bound to Cas12L to a specific locus of a genome
- » Diagnostic applications via trans-cleavage activity

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INVENTORS

- » Banfield, Jillian F.

OTHER INFORMATION

KEYWORDS

CRISPR, Cas12L

CATEGORIZED AS

- » **Biotechnology**
- » Genomics
- » **Environment**
- » Other
- » **Medical**
- » Gene Therapy

RELATED CASES

2020-066-0

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- [Use of Novel PyIRS—tRNA\(Pyl\) Pairs for Genetic Code Expansion](#)