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(54) Title: DNA MODIFYING ENZYMES AND ACTIVE FRAGMENTS AND VARIANTS THEREOF AND METHODS OF USE

(57) Abstract: Compositions and methods comprising novel deaminase polypeptides for targeted editing of nucleic acids are provided. Compositions comprise deaminase polypeptides. Also provided are fusion proteins comprising a DNA-binding polypeptide and a deaminase of the invention. The fusion proteins include RNA-guided nucleases fused to deaminases, optionally in complex with guide RNAs. Compositions also include nucleic acid molecules encoding the deaminases or the fusion proteins. Vectors and host cells comprising the nucleic acid molecules encoding the deaminases or the fusion proteins are also provided.



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