

Recent patents in gene editing

Patent number	Description	Assignee	Inventor	Date
US 9,322,005	Polypeptides, polynucleotides encoding cells and organisms comprising novel DNA-binding domains, including TALE DNA-binding domains, and methods of using these novel DNA-binding domains for modulation of gene expression and/or genomic editing of endogenous cellular sequences.	Sangamo BioSciences (Richmond, CA, USA)	Gregory PD, Miller JC, Paschon D, Rebar EJ, Tan S, Urnov F, Zhang L	4/26/2016
US 9,286,439	A system and method for planning, manipulating, processing and editing DNA molecules utilizing a core operation on a given input DNA molecule to produce a targeted DNA molecule.	Yeda Research and Development Co. Ltd. (Rehovot, Israel)	Shapiro EY, Kaplan S, Linshiz G, Ben-Yehzekel T, Shabi U	3/15/2016
US 9,238,814	A hammerhead ribozyme–target RNA construct and an editing recognition site of the hammerhead ribozyme that cleaves the modification site by forming a base pair with the target RNA modification site. The cleavage of the modification site is expected to be applicable to the research and development of new drugs that can be used to prevent or treat diseases caused by the edited target RNA.	Fukuoka University (Fukuoka, Japan)	Fukuda M, Deshimaru M, Kurihara K	1/19/2016
US 9,187,758	Zinc fingers comprising CCHC zinc coordinating residues, zinc finger proteins and fusion proteins comprising these CCHC zinc fingers, polynucleotides encoding these proteins and methods of using these proteins for gene editing and gene regulation.	Sangamo BioSciences (Richmond, CA, USA), Dow AgroSciences (Indianapolis)	Cai QC, Shukla VK, Petolino JF, Baker LW, Garrison RJ, Blue RC, Mitchell JC, Arnold NL, Worden SE, Miller J, Urnov F	11/17/2015
US 9,206,404	Methods and compositions for genome editing of one or more loci in a rat, using fusion proteins comprising a zinc-finger protein and a cleavage domain or cleavage half-domain. Also, polynucleotides encoding said fusion proteins and cells comprising said polynucleotides and fusion proteins.	Sangamo BioSciences (Richmond, CA, USA), Sigma-Aldrich (St. Louis)	Cui X, Geurts AM, Urnov F	8/8/2015
US 9,068,179	Strategies, systems, reagents, methods, and kits that are useful for the targeted editing of nucleic acids, including editing a nucleic acid encoding a mutant Presenilin1 protein to correct a point mutation associated with a disease or disorder, e.g., with familial Alzheimer's disease.	President and Fellows of Harvard College (Cambridge, MA, USA)	Liu DR, Komor AC	6/30/2015
US 8,771,953	<i>In vitro</i> methods for the determination of the potential toxicity of test compounds. Also, <i>in vitro</i> methods for the selection of therapeutic compounds useful for the treatment of pathology related to an alteration of the mechanism of the mRNA editing of ADAR dependent A to I mRNA editing of the serotonin 2C receptor (5HTR2C), and kits and tools for the implementation of these methods.	Biocortech (Paris)	Weissmann D, Pujol J-F, Vincent L, Cavarec L	7/8/2014
US 8,771,985	Methods and compositions for genome editing of a Rosa locus, using fusion proteins comprising a zinc-finger protein and a cleavage domain or cleavage half-domain. Also, polynucleotides encoding said fusion proteins and cells comprising said polynucleotides and fusion proteins.	Sangamo BioSciences (Richmond, CA, USA), Sigma-Aldrich (St. Louis)	Cui X, Davis G, Gregory PD, Holmes MC, Weinstein EJ	7/8/2014
US 8,383,344	Ribonucleic acids, probes, and methods for detection, quantification, as well as monitoring the expression of mature microRNAs and small interfering RNAs (siRNAs). Also, methods for monitoring the expression of other non-coding RNAs, mRNA splice variants, as well as detecting and quantifying RNA editing, allelic variants of single transcripts, mutations, deletions, or duplications of particular exons in transcripts, e.g., alterations associated with human disease such as cancer.	Exiqon (Vedbaek, Denmark)	Jacobsen N, Kongsbak L, Kauppinen S, Echwald SM, Mouritzen P, Nielsen PS, Norholm M	2/26/2013

Source: US Patent and Trademark Office (<http://www.uspto.gov>); European Patent Office (<http://www.epo.org>).