Recent patent applications in CRISPR-Cas systems

Patent number	Description	Assignee	Inventor	Priority application date	Publication date
WO2013188037A2	A method of processing a target RNA comprising contacting the products of an RNA ligase–mediated ligation reaction with a CRISPR-associated (Cas)6 protein, where the RNA ligase–mediated ligation reaction comprises a target RNA, an RNA ligase, and first and second adaptors that can ligate with each other to produce an adaptor dimer that contains a CRISPR stem loop; the Cas6 protein recognizes the CRISPR stem loop, thus preventing the adaptor dimer from being reverse transcribed.	Agilent Technologies (Santa Clara, CA, USA)	Zeiner G, Bruhn L	6/11/2012	12/19/2013
US20130288251A1	A nucleic acid comprising a Lactococcus CRISPR region, Lactococcus CRISPR spacer region and/or Lactococcus Cas gene.	DuPont Nutrition Biosciences (Copenhagen), Horvath P, Romero D, Millen AM	Horvath P, Romero D, Millen AM	10/20/2010	10/31/2013
US8546553B2	A method of inactivating a target polynucleotide in a microbe comprising introducing into the microbe a plasmid DNA expressing small interfering RNA (psiRNA) comprising a 5′ region and a 3′ region, where the 5′ region is a psiRNA-tag of between 5 and 10 nucleotides chosen from a repeat from a CRISPR locus immediately upstream of a spacer, where the 3′ region comprises 18–75 nucleotides, and where the 3′ region is substantially complementary to a portion of the target polynucleotide, where the target polynucleotide is inactivated.	University of Georgia Research Foundation (Athens, GA, USA), Terns R, Terns M, Hale C	Terns R, Terns M, Hale C	7/25/2008	10/1/2013
NZ597299A	One or more Cas genes or proteins; useful for modulating resistance in a cell against a target nucleic acid or its transcription product.	DuPont Nutrition Biosciences (Copenhagen)	–	8/26/2005	3/28/2013
RU2011122776A	An isolated nucleic acid comprising a sequence of a bifidobacteria CRISPR locus selected from a specific nucleotide.	Danisco (Copenhagen)	Barrangou R, Horvath P, Romero DA, Traeger LL	11/7/2008	12/20/2012
US20120088676A1	A method of typing or subtyping *Salmonella* bacteria, comprising amplifying a nucleic acid fragment comprising the CRISPR1 and/or CRISPR2 locus using a set of primers comprising no more than 50 nucleotides, determining the variable sequence composition of the amplified fragment, and comparing the composition with a reference comprising variable sequence compositions listed in the specification.	Institut Pasteur (Paris)	Weill FX, Fabre L, Véronique G, Laure D, Sylvain B	12/28/2007	4/12/2012
CN102264895A	CRISPR locus from *Streptococcus thermophilus* containing a nucleotide sequence chosen from a sequence having a 894-bp sequence and its derivatives.	Danisco (Copenhagen)	Manoury E, Horvath P, Fremaux C, Fourcassie P	12/12/2008	11/30/2011
US20110223638A1	A method of generating nucleic acid fragments of substantially uniform length, involving contacting a DNA substrate with a CRISPR-Cas1 polypeptide to generate nucleic acid fragments of substantially uniform length.	Wiedenheft B, Zhou K, Doudna JA	Wiedenheft B, Zhou K, Doudna JA	3/10/2010	9/15/2011
US20110217739A1	A polynucleotide comprising: a nucleotide sequence (a1) encoding a polypeptide having Cas6 endoribonuclease activity, where the amino acid sequence of the polypeptide has at least 80% sequence identity to a defined amino acid sequence, or the full complement of (a1); and a heterologous polynucleotide.	University of Georgia Research Foundation (Athens, GA, USA)	Terns R, Terns MP, Carte J	11/6/2008	9/8/2011
US20100076057A1	A method of inhibiting the function and/or presence of a target DNA sequence in a eukaryotic cell, comprising administering CRISPR RNA (crRNA) and one or more CRISPR-Cas proteins, or nucleic acid sequences encoding the Cas proteins, to a eukaryotic cell comprising a target DNA sequence, where the crRNA hybridizes with the target DNA sequence, thus interfering with the function and/or presence of the target DNA sequence.	Northwestern University (Evanston, IL, USA)	Sontheimer EJ, Marraffini LA	9/23/2008	3/25/2010

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