

CITATION REPORT

List of articles citing

DNA targeting specificity of RNA-guided Cas9 nucleases

DOI: 10.1038/nbt.2647

Nature Biotechnology, 2013, 31, 827-32.

Source: <https://exaly.com/paper-pdf/54803373/citation-report.pdf>

Version: 2024-04-19

This report has been generated based on the citations recorded by exaly.com for the above article. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

#	Paper	IF	Citations
2220	LETTERS OF THE REV. WILLIAM AYERST. 1706-1721 (Concluded). 1889 , IV, 539-540		
2219	One-step generation of mice carrying reporter and conditional alleles by CRISPR/Cas-mediated genome engineering. 2013 , 154, 1370-9		1194
2218	Double nicking by RNA-guided CRISPR Cas9 for enhanced genome editing specificity. 2013 , 154, 1380-9		2348
2217	Multiplexed activation of endogenous genes by CRISPR-on, an RNA-guided transcriptional activator system. 2013 , 23, 1163-71		546
2216	Targeted mutagenesis in rice using CRISPR-Cas system. 2013 , 23, 1233-6		584
2215	Genome engineering using the CRISPR-Cas9 system. 2013 , 8, 2281-2308		6243
2214	Generation of targeted mouse mutants by embryo microinjection of TALEN mRNA. 2013 , 8, 2355-79		50
2213	Exciting prospects for precise engineering of <i>Caenorhabditis elegans</i> genomes with CRISPR/Cas9. 2013 , 195, 635-42		52
2212	RNA-guided genome editing in plants using a CRISPR-Cas system. 2013 , 6, 1975-83		492
2211	RNA-dependent DNA endonuclease Cas9 of the CRISPR system: Holy Grail of genome editing?. 2013 , 21, 562-7		53
2210	Repurposing CRISPR/Cas9 for in situ functional assays. 2013 , 27, 2602-14		102
2209	RNA-guided nucleases: a new era for engineering the genomes of model and nonmodel organisms. 2013 , 195, 303-8		14
2208	A variant CRISPR-Cas9 system adds versatility to genome engineering. 2013 , 110, 15514-5		29
2207	Seamless genome editing in human pluripotent stem cells using custom endonuclease-based gene targeting and the piggyBac transposon. 2013 , 8, 2061-78		64
2206	Functional repair of CFTR by CRISPR/Cas9 in intestinal stem cell organoids of cystic fibrosis patients. 2013 , 13, 653-8		917
2205	Correction of a genetic disease in mouse via use of CRISPR-Cas9. 2013 , 13, 659-62		433
2204	Dynamic imaging of genomic loci in living human cells by an optimized CRISPR/Cas system. 2013 , 155, 1479-91		1306

2203	Advances in genetic circuit design: novel biochemistries, deep part mining, and precision gene expression. 2013 , 17, 878-92	103
2202	Plant genome editing made easy: targeted mutagenesis in model and crop plants using the CRISPR/Cas system. 2013 , 9, 39	431
2201	Staying on target with CRISPR-Cas. <i>Nature Biotechnology</i> , 2013 , 31, 807-9	44.5 50
2200	Cages from coils. <i>Nature Biotechnology</i> , 2013 , 31, 809-10	44.5 8
2199	Cas9 as a versatile tool for engineering biology. 2013 , 10, 957-63	897
2198	Highly improved gene targeting by germline-specific Cas9 expression in Drosophila. 2013 , 195, 715-21	359
2197	Optimized gene editing technology for Drosophila melanogaster using germ line-specific Cas9. 2013 , 110, 19012-7	258
2196	Moderate and high amounts of tamoxifen in MHC-MerCreMer mice induce a DNA damage response, leading to heart failure and death. 2013 , 6, 1459-69	87
2195	Generation of an ICF syndrome model by efficient genome editing of human induced pluripotent stem cells using the CRISPR system. 2013 , 14, 19774-81	84
2194	Newer gene editing technologies toward HIV gene therapy. 2013 , 5, 2748-66	63
2193	A CRISPR CASE for high-throughput silencing. 2013 , 4, 193	31
2192	Biallelic genome modification in F(0) <i>Xenopus tropicalis</i> embryos using the CRISPR/Cas system. 2013 , 51, 827-34	146
2191	CRISPR/Cas9-mediated genome engineering and the promise of designer flies on demand. 2013 , 7, 249-55	68
2190	CRISPR/Cas9 systems targeting β globin and CCR5 genes have substantial off-target activity. 2013 , 41, 9584-92	456
2189	Efficient generation of large-scale genome-modified mice using gRNA and CAS9 endonuclease. 2013 , 41, e187	175
2188	Crisper results for CRISPR. 2013 , 6, 950-950	
2187	Sculpting genomes with a hammer and chisel. 2013 , 10, 839-40	3
2186	Heritable multiplex genetic engineering in rats using CRISPR/Cas9. 2014 , 9, e89413	77

2185	sgRNAs9: a software package for designing CRISPR sgRNA and evaluating potential off-target cleavage sites. 2014 , 9, e100448	218
2184	Tumor imaging and targeting potential of an Hsp70-derived 14-mer peptide. 2014 , 9, e105344	22
2183	CRISPR/Cas9-mediated gene knock-down in post-mitotic neurons. 2014 , 9, e105584	75
2182	Optimization of genome engineering approaches with the CRISPR/Cas9 system. 2014 , 9, e105779	86
2181	CRISPRseek: a bioconductor package to identify target-specific guide RNAs for CRISPR-Cas9 genome-editing systems. 2014 , 9, e108424	123
2180	Protospacer adjacent motif (PAM)-distal sequences engage CRISPR Cas9 DNA target cleavage. 2014 , 9, e109213	73
2179	Improved genome editing in human cell lines using the CRISPR method. 2014 , 9, e109752	33
2178	Antibody-free magnetic cell sorting of genetically modified primary human CD4+ T cells by one-step streptavidin affinity purification. 2014 , 9, e111437	16
2177	High-throughput genome editing and phenotyping facilitated by high resolution melting curve analysis. 2014 , 9, e114632	87
2176	[Genome editing with programmable site-specific nucleases]. 2014 , 64, 75-82	1
2175	Enhanced homology-directed human genome engineering by controlled timing of CRISPR/Cas9 delivery. 2014 , 3, e04766	744
2174	Concerning RNA-guided gene drives for the alteration of wild populations. 2014 , 3,	525
2173	Inactivation of an integrated antibiotic resistance gene in mammalian cells to re-enable antibiotic selection. 2014 , 56, 198-201	2
2172	HIV Excision Utilizing CRISPR/Cas9 Technology: Attacking the Proviral Quasispecies in Reservoirs to Achieve a Cure. 2014 , 1,	32
2171	. 2014 ,	4
2170	Every silver lining has a cloud: the scientific and animal welfare issues surrounding a new approach to the production of transgenic animals. 2014 , 42, 137-45	6
2169	CasFinder: Flexible algorithm for identifying specific Cas9 targets in genomes. 2014 ,	41
2168	Landscape of target:guide homology effects on Cas9-mediated cleavage. 2014 , 42, 13778-87	57

2167	Ferret and Pig Models of Cystic Fibrosis: Prospects and Promise for Gene Therapy. 2014 , 150127063140004	
2166	Effective gene targeting in rabbits using RNA-guided Cas9 nucleases. 2014 , 6, 97-9	113
2165	Reprogramming homing endonuclease specificity through computational design and directed evolution. 2014 , 42, 2564-76	24
2164	Redesign of extensive protein-DNA interfaces of meganucleases using iterative cycles of in vitro compartmentalization. 2014 , 111, 4061-6	42
2163	MAGeCK enables robust identification of essential genes from genome-scale CRISPR/Cas9 knockout screens. 2014 , 15, 554	821
2162	A CRISPR/Cas9 toolkit for multiplex genome editing in plants. 2014 , 14, 327	669
2161	Allele-specific genome editing and correction of disease-associated phenotypes in rats using the CRISPR-Cas platform. 2014 , 5, 4240	140
2160	Targeting Hepatitis B Virus With CRISPR/Cas9. 2014 , 3, e216	198
2159	Synthetic Biology and Therapies for Infectious Diseases. 2014 , 109-180	
2158	COSMID: A Web-based Tool for Identifying and Validating CRISPR/Cas Off-target Sites. 2014 , 3, e214	219
2157	High-efficiency targeted editing of large viral genomes by RNA-guided nucleases. 2014 , 10, e1004090	105
2156	Genetic manipulation of the <i>Toxoplasma gondii</i> genome by fosmid recombineering. 2014 , 5, e02021	11
2155	High-efficiency genome editing via 2A-coupled co-expression of fluorescent proteins and zinc finger nucleases or CRISPR/Cas9 nickase pairs. 2014 , 42, e84	59
2154	Large chromosomal deletions and heritable small genetic changes induced by CRISPR/Cas9 in rice. 2014 , 42, 10903-14	413
2153	Performance of the Cas9 nickase system in <i>Drosophila melanogaster</i> . 2014 , 4, 1955-62	30
2152	CRISPR-Cas: an efficient tool for genome engineering of virulent bacteriophages. 2014 , 42, 9504-13	98
2151	CRISPR/Cas9 systems have off-target activity with insertions or deletions between target DNA and guide RNA sequences. 2014 , 42, 7473-85	428
2150	Highly specific and efficient CRISPR/Cas9-catalyzed homology-directed repair in <i>Drosophila</i> . 2014 , 196, 961-71	512

2149	Translating human genetics into mouse: the impact of ultra-rapid in vivo genome editing. 2014 , 56, 34-45	28
2148	Targeted mutagenesis using CRISPR/Cas system in medaka. 2014 , 3, 362-71	129
2147	Comparison of TALE designer transcription factors and the CRISPR/dCas9 in regulation of gene expression by targeting enhancers. 2014 , 42, e155	135
2146	Genome editing. The new frontier of genome engineering with CRISPR-Cas9. 2014 , 346, 1258096	3479
2145	Imaging genomic elements in living cells using CRISPR/Cas9. 2014 , 546, 337-54	26
2144	Creating cancer translocations in human cells using Cas9 DSBs and nCas9 paired nicks. 2014 , 546, 251-71	13
2143	Targeted and genome-wide sequencing reveal single nucleotide variations impacting specificity of Cas9 in human stem cells. 2014 , 5, 5507	106
2142	Nuclease-mediated genome editing: At the front-line of functional genomics technology. 2014 , 56, 2-13	48
2141	Cas9-based genome editing in Drosophila. 2014 , 546, 415-39	28
2140	Simple and rapid in vivo generation of chromosomal rearrangements using CRISPR/Cas9 technology. 2014 , 9, 1219-27	149
2139	Cas9-based genome editing in zebrafish. 2014 , 546, 377-413	36
2138	Enhanced specificity and efficiency of the CRISPR/Cas9 system with optimized sgRNA parameters in Drosophila. 2014 , 9, 1151-62	208
2137	Determining the specificities of TALENs, Cas9, and other genome-editing enzymes. 2014 , 546, 47-78	54
2136	Targeted genome editing in human cells using CRISPR/Cas nucleases and truncated guide RNAs. 2014 , 546, 21-45	33
2135	In vitro enzymology of Cas9. 2014 , 546, 1-20	66
2134	Adapting CRISPR/Cas9 for functional genomics screens. 2014 , 546, 193-213	16
2133	Transgene-free genome editing by germline injection of CRISPR/Cas RNA. 2014 , 546, 441-57	3
2132	Efficient chromosomal gene modification with CRISPR/cas9 and PCR-based homologous recombination donors in cultured Drosophila cells. 2014 , 42, e89	88

2131	Multi-input CRISPR/Cas genetic circuits that interface host regulatory networks. 2014 , 10, 763	166
2130	Can genome engineering be used to target cancer-associated enhancers?. 2014 , 6, 493-501	7
2129	RNA-guided genome editing in Drosophila with the purified Cas9 protein. 2014 , 4, 1291-5	36
2128	Massively parallel determination and modeling of endonuclease substrate specificity. 2014 , 42, 13839-52	9
2127	Functional genetics for all: engineered nucleases, CRISPR and the gene editing revolution. 2014 , 5, 43	69
2126	Analysis of an artificial zinc finger epigenetic modulator: widespread binding but limited regulation. 2014 , 42, 10856-68	50
2125	Fast and efficient Drosophila melanogaster gene knock-ins using MiMIC transposons. 2014 , 4, 2381-7	13
2124	Methods to Study and Distinguish Necroptosis. 2014 , 335-361	2
2123	Genome engineering using the CRISPR/Cas system. 2014 , 4, 69	7
2122	Generation of genomic deletions in mammalian cell lines via CRISPR/Cas9. 2015 , e52118	75
2121	CRISPR/Cas9-mediated phage resistance is not impeded by the DNA modifications of phage T4. 2014 , 9, e98811	22
2120	Advances in genome editing technology and its promising application in evolutionary and ecological studies. 2014 , 3, 24	32
2119	An online bioinformatics tool predicts zinc finger and TALE nuclease off-target cleavage. 2014 , 42, e42	100
2118	TALENs facilitate targeted genome editing in human cells with high specificity and low cytotoxicity. 2014 , 42, 6762-73	130
2117	Easy quantitative assessment of genome editing by sequence trace decomposition. 2014 , 42, e168	1102
2116	Functional genomic analysis of human mitochondrial RNA processing. 2014 , 7, 918-31	62
2115	Generation of knockout mice using engineered nucleases. 2014 , 69, 85-93	22
2114	TALEN-mediated Drosophila genome editing: protocols and applications. 2014 , 69, 22-31	9

2113	Efficient generation of genome-modified mice via offset-nicking by CRISPR/Cas system. 2014 , 445, 791-4	56
2112	Regulation of TET protein stability by calpains. 2014 , 6, 278-84	68
2111	Genome editing with Cas9 in adult mice corrects a disease mutation and phenotype. <i>Nature Biotechnology</i> , 2014 , 32, 551-3	44.5 694
2110	Crystal structure of Cas9 in complex with guide RNA and target DNA. 2014 , 156, 935-49	1131
2109	Genome engineering with targetable nucleases. 2014 , 83, 409-39	392
2108	Gene editing at CRISPR speed. <i>Nature Biotechnology</i> , 2014 , 32, 309-12	44.5 29
2107	Engineering the <i>Caenorhabditis elegans</i> genome with CRISPR/Cas9. 2014 , 68, 381-8	38
2106	Necrotic Cell Death. 2014 ,	4
2105	Isolation of single-base genome-edited human iPS cells without antibiotic selection. 2014 , 11, 291-3	175
2104	Precision genetic modifications: a new era in molecular biology and crop improvement. 2014 , 239, 921-39	41
2103	CRISPR-based technologies: prokaryotic defense weapons repurposed. 2014 , 30, 111-8	79
2102	CRISPR-Cas systems for editing, regulating and targeting genomes. <i>Nature Biotechnology</i> , 2014 , 32, 347-55	44.5 2182
2101	A guide to genome engineering with programmable nucleases. 2014 , 15, 321-34	853
2100	Nanomedicine: tiny particles and machines give huge gains. 2014 , 42, 243-59	21
2099	CRISPR/Cas9 for genome editing: progress, implications and challenges. 2014 , 23, R40-6	355
2098	CRISPR-Cas system: a powerful tool for genome engineering. 2014 , 85, 209-18	38
2097	From dead leaf, to new life: TAL effectors as tools for synthetic biology. 2014 , 78, 753-71	40
2096	Efficient genome modification by CRISPR-Cas9 nickase with minimal off-target effects. 2014 , 11, 399-402	575

2095	Cut site selection by the two nuclease domains of the Cas9 RNA-guided endonuclease. 2014 , 289, 13284-94	64
2094	Exploiting CRISPR/Cas systems for biotechnology. 2014 , 36, 34-8	48
2093	Genome-wide binding of the CRISPR endonuclease Cas9 in mammalian cells. <i>Nature Biotechnology</i> , 2014 , 32, 670-6	44.5 666
2092	Fusion of catalytically inactive Cas9 to FokI nuclease improves the specificity of genome modification. <i>Nature Biotechnology</i> , 2014 , 32, 577-582	44.5 624
2091	Dimeric CRISPR RNA-guided FokI nucleases for highly specific genome editing. <i>Nature Biotechnology</i> , 2014 , 32, 569-76	44.5 738
2090	Generation of improved humanized mouse models for human infectious diseases. 2014 , 410, 3-17	106
2089	Global microRNA depletion suppresses tumor angiogenesis. 2014 , 28, 1054-67	52
2088	Multigeneration analysis reveals the inheritance, specificity, and patterns of CRISPR/Cas-induced gene modifications in Arabidopsis. 2014 , 111, 4632-7	511
2087	Principles of genetic circuit design. 2014 , 11, 508-20	551
2086	Methods for targeted mutagenesis in zebrafish using TALENs. 2014 , 69, 76-84	21
2085	Genome-wide analysis reveals characteristics of off-target sites bound by the Cas9 endonuclease. <i>Nature Biotechnology</i> , 2014 , 32, 677-83	44.5 553
2084	Fine-mapping natural alleles: quantitative complementation to the rescue. 2014 , 23, 2377-82	28
2083	GT-Scan: identifying unique genomic targets. 2014 , 30, 2673-5	98
2082	Endonucleases: new tools to edit the mouse genome. 2014 , 1842, 1942-1950	48
2081	Programmable removal of bacterial strains by use of genome-targeting CRISPR-Cas systems. 2014 , 5, e00928-13	236
2080	Cas-OFFinder: a fast and versatile algorithm that searches for potential off-target sites of Cas9 RNA-guided endonucleases. 2014 , 30, 1473-5	1015
2079	CRISPR/Cas9-mediated targeted mutagenesis in the liverwort <i>Marchantia polymorpha</i> L. 2014 , 55, 475-81	179
2078	Accelerating genome editing in CHO cells using CRISPR Cas9 and CRISPy, a web-based target finding tool. 2014 , 111, 1604-16	137

2077	CRISPR-P: a web tool for synthetic single-guide RNA design of CRISPR-system in plants. 2014 , 7, 1494-1496	389
2076	Genome-scale CRISPR-Cas9 knockout screening in human cells. 2014 , 343, 84-87	3080
2075	Synthetic nucleases for genome engineering in plants: prospects for a bright future. 2014 , 78, 727-41	181
2074	Leveraging cross-species transcription factor binding site patterns: from diabetes risk loci to disease mechanisms. 2014 , 156, 343-58	96
2073	Efficient genome engineering by targeted homologous recombination in mouse embryos using transcription activator-like effector nucleases. 2014 , 5, 3045	34
2072	Targeted genome engineering techniques in <i>Drosophila</i> . 2014 , 68, 29-37	55
2071	Improving CRISPR-Cas nuclease specificity using truncated guide RNAs. <i>Nature Biotechnology</i> , 2014 , 32, 279-284	44.5 1371
2070	Genotyping with CRISPR-Cas-derived RNA-guided endonucleases. 2014 , 5, 3157	100
2069	DNA interrogation by the CRISPR RNA-guided endonuclease Cas9. 2014 , 507, 62-7	1171
2068	Generation of gene-modified cynomolgus monkey via Cas9/RNA-mediated gene targeting in one-cell embryos. 2014 , 156, 836-43	764
2067	Genome-wide prediction of highly specific guide RNA spacers for CRISPR-Cas9-mediated genome editing in model plants and major crops. 2014 , 7, 923-6	211
2066	Genetic screens in human cells using the CRISPR-Cas9 system. 2014 , 343, 80-4	1874
2065	CasOT: a genome-wide Cas9/gRNA off-target searching tool. 2014 , 30, 1180-1182	232
2064	Genome-wide recessive genetic screening in mammalian cells with a lentiviral CRISPR-guide RNA library. <i>Nature Biotechnology</i> , 2014 , 32, 267-73	44.5 734
2063	Efficient RNA/Cas9-mediated genome editing in <i>Xenopus tropicalis</i> . 2014 , 141, 707-14	125
2062	Highly efficient gene knockout in mice and zebrafish with RNA-guided endonucleases. 2014 , 24, 125-31	215
2061	Megabase-scale deletion using CRISPR/Cas9 to generate a fully haploid human cell line. 2014 , 24, 2059-65	173
2060	Resources for functional genomics studies in <i>Drosophila melanogaster</i> . 2014 , 197, 1-18	53

2059	Efficient ablation of genes in human hematopoietic stem and effector cells using CRISPR/Cas9. 2014 , 15, 643-52	324
2058	Microhomology-mediated end-joining-dependent integration of donor DNA in cells and animals using TALENs and CRISPR/Cas9. 2014 , 5, 5560	323
2057	Cas9-based genome editing in <i>Xenopus tropicalis</i> . 2014 , 546, 355-75	57
2056	Genome editing in human stem cells. 2014 , 546, 119-38	70
2055	Rapid modelling of cooperating genetic events in cancer through somatic genome editing. 2014 , 516, 428-31	278
2054	CRISPR in the liver. 2014 , 7, 447-447	
2053	Target specificity of the CRISPR-Cas9 system. 2014 , 2, 59-70	184
2052	Mutagenesis and homologous recombination in <i>Drosophila</i> cell lines using CRISPR/Cas9. 2014 , 3, 42-9	83
2051	Oncogene regulation. An oncogenic super-enhancer formed through somatic mutation of a noncoding intergenic element. 2014 , 346, 1373-7	484
2050	Genome editing using Cas9 nickases. 2014 , 546, 161-74	53
2049	Mouse Genome Editing Using the CRISPR/Cas System. 2014 , 83, 15.7.1-27	65
2048	Selection of chromosomal DNA libraries using a multiplex CRISPR system in <i>Saccharomyces cerevisiae</i> . 2014 ,	1
2047	Multiplex engineering of industrial yeast genomes using CRISPRm. 2014 , 546, 473-89	62
2046	The iCRISPR platform for rapid genome editing in human pluripotent stem cells. 2014 , 546, 215-50	52
2045	Protein engineering of Cas9 for enhanced function. 2014 , 546, 491-511	17
2044	CRISPR/Cas9-based genome editing in mice by single plasmid injection. 2014 , 546, 319-36	45
2043	Tissue-specific genome editing in <i>Ciona</i> embryos by CRISPR/Cas9. 2014 , 141, 4115-20	90
2042	Creating class I MHC-null pigs using guide RNA and the Cas9 endonuclease. 2014 , 193, 5751-7	103

2041	Characterization of genomic deletion efficiency mediated by clustered regularly interspaced short palindromic repeats (CRISPR)/Cas9 nuclease system in mammalian cells. 2014 , 289, 21312-24	236
2040	Genetic correction using engineered nucleases for gene therapy applications. 2014 , 56, 63-77	34
2039	Cellular reprogramming by transcription factor engineering. 2014 , 28, 1-9	6
2038	Highly efficient RNA-guided genome editing in human cells via delivery of purified Cas9 ribonucleoproteins. 2014 , 24, 1012-9	1085
2037	Specific and heritable gene editing in Arabidopsis. 2014 , 111, 4357-8	25
2036	Genome-Scale CRISPR-Mediated Control of Gene Repression and Activation. 2014 , 159, 647-61	1556
2035	m(6)A RNA modification controls cell fate transition in mammalian embryonic stem cells. 2014 , 15, 707-19	675
2034	Synthetic biology and therapeutic strategies for the degenerating brain: Synthetic biology approaches can transform classical cell and gene therapies, to provide new cures for neurodegenerative diseases. 2014 , 36, 979-90	16
2033	Efficient editing of malaria parasite genome using the CRISPR/Cas9 system. 2014 , 5, e01414-14	85
2032	Genome-wide identification of CRISPR/Cas9 off-targets in human genome. 2014 , 24, 1009-12	102
2031	Genome editing in rice and wheat using the CRISPR/Cas system. 2014 , 9, 2395-410	455
2030	The genome editing toolbox: a spectrum of approaches for targeted modification. 2014 , 30, 87-94	28
2029	Structural basis of PAM-dependent target DNA recognition by the Cas9 endonuclease. 2014 , 513, 569-73	783
2028	Improved vectors and genome-wide libraries for CRISPR screening. 2014 , 11, 783-784	2552
2027	RNA-directed gene editing specifically eradicates latent and prevents new HIV-1 infection. 2014 , 111, 11461-6	386
2026	iPipet: sample handling using a tablet. 2014 , 11, 784-5	11
2025	Seamless gene correction of β -thalassemia mutations in patient-specific iPSCs using CRISPR/Cas9 and piggyBac. 2014 , 24, 1526-33	302
2024	Controlling gene networks and cell fate with precision-targeted DNA-binding proteins and small-molecule-based genome readers. 2014 , 462, 397-413	16

2023	Gene disruption by cell-penetrating peptide-mediated delivery of Cas9 protein and guide RNA. 2014 , 24, 1020-7	442
2022	Lung gene therapy-How to capture illumination from the light already present in the tunnel. 2014 , 1, 40-52	14
2021	CRISPR-mediated direct mutation of cancer genes in the mouse liver. 2014 , 514, 380-4	521
2020	Generating genetically modified mice using CRISPR/Cas-mediated genome engineering. 2014 , 9, 1956-68	352
2019	The new CRISPR-Cas system: RNA-guided genome engineering to efficiently produce any desired genetic alteration in animals. 2014 , 23, 707-16	51
2018	Expansion of the CRISPR-Cas9 genome targeting space through the use of H1 promoter-expressed guide RNAs. 2014 , 5, 4516	52
2017	Efficient CRISPR-Cas9-mediated genome editing in Plasmodium falciparum. 2014 , 11, 915-8	162
2016	Improving the specificity and efficacy of CRISPR/CAS9 and gRNA through target specific DNA reporter. 2014 , 189, 1-8	12
2015	Low incidence of off-target mutations in individual CRISPR-Cas9 and TALEN targeted human stem cell clones detected by whole-genome sequencing. 2014 , 15, 27-30	394
2014	Efficient homologous recombination-mediated genome engineering in zebrafish using TALE nucleases. 2014 , 141, 3807-18	93
2013	Genome modification by CRISPR/Cas9. 2014 , 281, 5186-93	86
2012	Adenoviral vector DNA for accurate genome editing with engineered nucleases. 2014 , 11, 1051-7	108
2011	Rational design of highly active sgRNAs for CRISPR-Cas9-mediated gene inactivation. <i>Nature Biotechnology</i> , 2014 , 32, 1262-7	44.5 1000
2010	CRISPR/Cas-mediated genome editing in the rat via direct injection of one-cell embryos. 2014 , 9, 2493-512	148
2009	Genomic editing tools to model human diseases with isogenic pluripotent stem cells. 2014 , 23, 2673-86	42
2008	Analysis of off-target effects of CRISPR/Cas-derived RNA-guided endonucleases and nickases. 2014 , 24, 132-41	966
2007	CRISPR-Cas9 knockin mice for genome editing and cancer modeling. 2014 , 159, 440-55	1089
2006	Saturation editing of genomic regions by multiplex homology-directed repair. 2014 , 513, 120-3	223

2005	A simplified and efficient germline-specific CRISPR/Cas9 system for Drosophila genomic engineering. 2014 , 8, 52-7	81
2004	Gene targeting using the Agrobacterium tumefaciens-mediated CRISPR-Cas system in rice. 2014 , 7, 5	153
2003	CRISPR/Cas9 and TALEN-mediated knock-in approaches in zebrafish. 2014 , 69, 142-50	130
2002	Engineering synthetic TALE and CRISPR/Cas9 transcription factors for regulating gene expression. 2014 , 69, 188-97	27
2001	Homologous recombination in human embryonic stem cells using CRISPR/Cas9 nickase and a long DNA donor template. 2014 , 5, 258-60	59
2000	Whole-genome sequencing analysis reveals high specificity of CRISPR/Cas9 and TALEN-based genome editing in human iPSCs. 2014 , 15, 12-3	274
1999	Genome engineering via TALENs and CRISPR/Cas9 systems: challenges and perspectives. 2014 , 12, 1006-14	86
1998	A CRISPR view of development. 2014 , 28, 1859-72	174
1997	A defined zebrafish line for high-throughput genetics and genomics: NHGRI-1. 2014 , 198, 167-70	65
1996	Surrogate reporter-based enrichment of cells containing RNA-guided Cas9 nuclease-induced mutations. 2014 , 5, 3378	92
1995	CHOPCHOP: a CRISPR/Cas9 and TALEN web tool for genome editing. 2014 , 42, W401-7	707
1994	Engineering human tumour-associated chromosomal translocations with the RNA-guided CRISPR-Cas9 system. 2014 , 5, 3964	167
1993	Applications of TALENs and CRISPR/Cas9 in human cells and their potentials for gene therapy. 2014 , 56, 681-8	33
1992	Highly efficient multiplex targeted mutagenesis and genomic structure variation in Bombyx mori cells using CRISPR/Cas9. 2014 , 49, 35-42	69
1991	Generation of targeted mouse mutants by embryo microinjection of TALENs. 2014 , 69, 94-101	14
1990	CRISPR/Cas9 mediated genome engineering in Drosophila. 2014 , 69, 128-36	88
1989	CRISPR/Cas9 and genome editing in Drosophila. 2014 , 41, 7-19	144
1988	Seamless modification of wild-type induced pluripotent stem cells to the natural CCR5B2 mutation confers resistance to HIV infection. 2014 , 111, 9591-6	241

1987	Precision genome editing: a small revolution for glycobiology. 2014 , 24, 663-80	45
1986	Stem cells on the brain: modeling neurodevelopmental and neurodegenerative diseases using human induced pluripotent stem cells. 2014 , 28, 5-29	43
1985	An iCRISPR platform for rapid, multiplexable, and inducible genome editing in human pluripotent stem cells. 2014 , 15, 215-226	331
1984	Development and applications of CRISPR-Cas9 for genome engineering. 2014 , 157, 1262-1278	3595
1983	A TAL effector repeat architecture for frameshift binding. 2014 , 5, 3447	35
1982	Generation of mouse models of myeloid malignancy with combinatorial genetic lesions using CRISPR-Cas9 genome editing. <i>Nature Biotechnology</i> , 2014 , 32, 941-6	44.5 342
1981	Rapid and efficient assembly of transcription activator-like effector genes by USER cloning. 2014 , 41, 339-47	5
1980	[Scientific review on novel genome editing techniques]. 2014 , 55, 231-46	
1979	Gene Inactivation Strategies: An Update. 2014 ,	
1978	Synthetic RNAs for Gene Regulation: Design Principles and Computational Tools. 2014 , 2, 65	23
1977	Precise gene deletion and replacement using the CRISPR/Cas9 system in human cells. 2014 , 57, 115-24	108
1976	Targeted genome editing tools for disease modeling and gene therapy. 2014 , 14, 2-9	42
1975	Expanding the genetic editing tool kit: ZFNs, TALENs, and CRISPR-Cas9. 2014 , 124, 4154-61	252
1974	Mouse genome engineering using designer nucleases. 2014 ,	10
1973	Selection of chromosomal DNA libraries using a multiplex CRISPR system. 2014 , 3,	224
1972	One-step generation of myostatin gene knockout sheep via the CRISPR/Cas9 system. 2014 , 1, 2	48
1971	New horizons in genome engineering of <i>Drosophila melanogaster</i> . 2014 , 89, 3-8	17
1970	Exploiting SNPs for biallelic CRISPR mutations in the outcrossing woody perennial <i>Populus</i> reveals 4-coumarate:CoA ligase specificity and redundancy. 2015 , 208, 298-301	190

1969	TALEN-mediated gene editing of the thrombospondin-1 locus in axolotl. 2015 , 2, 37-43	10
1968	CRISPR/Cas9-mediated genome engineering of CHO cell factories: Application and perspectives. 2015 , 10, 979-94	82
1967	NLRP3 inflammasome activation downstream of cytoplasmic LPS recognition by both caspase-4 and caspase-5. 2015 , 45, 2918-26	177
1966	Disruption of MeCP2 attenuates circadian rhythm in CRISPR/Cas9-based Rett syndrome model mouse. 2015 , 20, 992-1005	28
1965	Genome Editing in Human Cells Using CRISPR/Cas Nucleases. 2015 , 112, 31.3.1-31.3.18	10
1964	TALEN- and CRISPR/Cas9-Mediated Gene Editing in Human Pluripotent Stem Cells Using Lipid-Based Transfection. 2015 , 34, 5B.3.1-5B.3.25	21
1963	A marker-free system for highly efficient construction of vaccinia virus vectors using CRISPR Cas9. 2015 , 2, 15035	39
1962	The no-SCAR (Scarless Cas9 Assisted Recombineering) system for genome editing in Escherichia coli. 2015 , 5, 15096	130
1961	Large genomic fragment deletion and functional gene cassette knock-in via Cas9 protein mediated genome editing in one-cell rodent embryos. 2015 , 5, 17517	72
1960	Genome-editing technologies and their potential application in horticultural crop breeding. 2015 , 2, 15019	95
1959	Synthesis of an arrayed sgRNA library targeting the human genome. 2015 , 5, 14987	34
1958	Single-step generation of rabbits carrying a targeted allele of the tyrosinase gene using CRISPR/Cas9. 2015 , 64, 31-7	56
1957	The bimodally expressed microRNA miR-142 gates exit from pluripotency. 2015 , 11, 850	16
1956	Detailed phenotypic and molecular analyses of genetically modified mice generated by CRISPR-Cas9-mediated editing. 2015 , 10, e0116484	33
1955	Crystal Structure of Human Aldehyde Dehydrogenase, ALDH1a2. 2015 ,	
1954	Chromatin Architecture of the Pitx2 Locus Requires CTCF- and Pitx2-Dependent Asymmetry that Mirrors Embryonic Gut Laterality. 2015 , 13, 337-49	24
1953	CRISPR-Cas9 Genome Editing in Drosophila. 2015 , 111, 31.2.1-31.2.20	86
1952	New vectors for simple and streamlined CRISPR-Cas9 genome editing in Saccharomyces cerevisiae. 2015 , 32, 711-20	133

1951	Genome editing through large insertion leads to the skipping of targeted exon. 2015 , 16, 1082	15
1950	Making sense of GWAS: using epigenomics and genome engineering to understand the functional relevance of SNPs in non-coding regions of the human genome. 2015 , 8, 57	187
1949	Genome Editing Gene Therapy for Duchenne Muscular Dystrophy. 2015 , 2, 343-355	9
1948	Crystal Structure of Cas9. 2015 , 57, 96-103	
1947	Pluripotent stem cell applications for regenerative medicine. 2015 , 20, 663-70	39
1946	CRISPR/Cas9 Genome Editing System in Drosophila. 2015 , s1,	1
1945	The Use of Innovative Tools to Reproduce Human Cancer Translocations: Lessons from the CRISPR/Cas System. 2015 , 3, 273-278	
1944	Imaging of Hsp70-positive tumors with cmHsp70.1 antibody-conjugated gold nanoparticles. 2015 , 10, 5687-700	18
1943	Minimizing off-Target Mutagenesis Risks Caused by Programmable Nucleases. 2015 , 16, 24751-71	24
1942	From Gene Targeting to Genome Editing: Transgenic animals applications and beyond. 2015 , 87, 1323-48	32
1941	Applications of Engineered DNA-Binding Molecules Such as TAL Proteins and the CRISPR/Cas System in Biology Research. 2015 , 16, 23143-64	10
1940	Online High-throughput Mutagenesis Designer Using Scoring Matrix of Sequence-specific Endonucleases. 2015 , 12, 35-48	11
1939	Multiplexed CRISPR/Cas9 genome editing increases the efficacy of homologous-dependent repair of donor sequences in mammalian cells. 2015 , 111,	
1938	Application of genomics-assisted breeding for generation of climate resilient crops: progress and prospects. 2015 , 6, 563	161
1937	Genome Editing Using Mammalian Haploid Cells. 2015 , 16, 23604-14	11
1936	CRISPR-Cas9: A Revolutionary Tool for Cancer Modelling. 2015 , 16, 22151-68	17
1935	Large genomic fragment deletions and insertions in mouse using CRISPR/Cas9. 2015 , 10, e0120396	94
1934	CCTop: An Intuitive, Flexible and Reliable CRISPR/Cas9 Target Prediction Tool. 2015 , 10, e0124633	493

1933	A CRISPR-Cas9 System for Genetic Engineering of Filamentous Fungi. 2015 , 10, e0133085	350
1932	Phosphoproteomic Analysis of KSHV-Infected Cells Reveals Roles of ORF45-Activated RSK during Lytic Replication. 2015 , 11, e1004993	32
1931	Function genomics of abiotic stress tolerance in plants: a CRISPR approach. 2015 , 6, 375	66
1930	Targeting Non-Coding RNAs in Plants with the CRISPR-Cas Technology is a Challenge yet Worth Accepting. 2015 , 6, 1001	31
1929	Integrative Analysis of CRISPR/Cas9 Target Sites in the Human HBB Gene. 2015 , 2015, 514709	10
1928	CRISPR/Cas9 nuclease cleavage combined with Gibson assembly for seamless cloning. 2015 , 58, 161-70	48
1927	The CRISPR revolution and its impact on cancer research. 2015 , 145, w14230	10
1926	Genome-wide specificity of DNA binding, gene regulation, and chromatin remodeling by TALE- and CRISPR/Cas9-based transcriptional activators. 2015 , 25, 1158-69	99
1925	Type I phosphatidylinositol 4-phosphate 5-kinase homo- and heterodimerization determines its membrane localization and activity. 2015 , 29, 2371-85	12
1924	Site-specific integration in CHO cells mediated by CRISPR/Cas9 and homology-directed DNA repair pathway. 2015 , 5, 8572	127
1923	Applications of the CRISPR-Cas9 system in cancer biology. 2015 , 15, 387-95	260
1922	Expanding the Biologist's Toolkit with CRISPR-Cas9. 2015 , 58, 568-74	311
1921	Choosing the Right Tool for the Job: RNAi, TALEN, or CRISPR. 2015 , 58, 575-85	269
1920	CRISPR/Cas9 cleavage of viral DNA efficiently suppresses hepatitis B virus. 2015 , 5, 10833	205
1919	Advances in New Technology for Targeted Modification of Plant Genomes. 2015 ,	5
1918	Optimization of methods for the genetic modification of human T cells. 2015 , 93, 896-908	20
1917	Generation of B cell-deficient pigs by highly efficient CRISPR/Cas9-mediated gene targeting. 2015 , 42, 437-44	36
1916	Developing CRISPR Technology in Major Crop Plants. 2015 , 145-159	2

1915	Engineered Nucleases Lead to Genome Editing Revolution in Rats. 2015 , 183-195	
1914	Measuring and Reducing Off-Target Activities of Programmable Nucleases Including CRISPR-Cas9. 2015 , 38, 475-81	144
1913	In Vitro Reconstitution and Crystallization of Cas9 Endonuclease Bound to a Guide RNA and a DNA Target. 2015 , 558, 515-537	19
1912	A Toolkit of CRISPR-Based Genome Editing Systems in Drosophila. 2015 , 42, 141-9	32
1911	The application of genome editing in studying hearing loss. 2015 , 327, 102-8	41
1910	Targeted mutagenesis in soybean using the CRISPR-Cas9 system. 2015 , 5, 10342	205
1909	High-Throughput Silencing Using the CRISPR-Cas9 System: A Review of the Benefits and Challenges. 2015 , 20, 1027-39	26
1908	CRISPR-Cas9-mediated genome editing and guide RNA design. 2015 , 26, 501-10	41
1907	Rapid and highly efficient mammalian cell engineering via Cas9 protein transfection. 2015 , 208, 44-53	433
1906	Sequence determinants of improved CRISPR sgRNA design. 2015 , 25, 1147-57	335
1905	Engineering Sequence-Specific DNA Binding Proteins for Antiviral Gene Editing. 2015 , 63-94	4
1904	Epigenome engineering in cancer: fairytale or a realistic path to the clinic?. 2015 , 5, 22	56
1903	A Perspective on the Future of High-Throughput RNAi Screening: Will CRISPR Cut Out the Competition or Can RNAi Help Guide the Way?. 2015 , 20, 1040-51	27
1902	Dimeric CRISPR RNA-Guided FokI-dCas9 Nucleases Directed by Truncated gRNAs for Highly Specific Genome Editing. 2015 , 26, 425-31	106
1901	CRISPR/Cas9-mediated reporter knock-in in mouse haploid embryonic stem cells. 2015 , 5, 10710	25
1900	Homology arms of targeting vectors for gene insertions and CRISPR/Cas9 technology: size does not matter; quality control of targeted clones does. 2015 , 20, 773-87	4
1899	Specific induction of endogenous viral restriction factors using CRISPR/Cas-derived transcriptional activators. 2015 , 112, E7249-56	33
1898	Dynamics of CRISPR-Cas9 genome interrogation in living cells. 2015 , 350, 823-6	241

1897	Covalent Modification of Bacteriophage T4 DNA Inhibits CRISPR-Cas9. 2015 , 6, e00648	58
1896	CCR5 Disruption in Induced Pluripotent Stem Cells Using CRISPR/Cas9 Provides Selective Resistance of Immune Cells to CCR5-tropic HIV-1 Virus. 2015 , 4, e268	94
1895	CRISPR interference and priming varies with individual spacer sequences. 2015 , 43, 10831-47	75
1894	WU-CRISPR: characteristics of functional guide RNAs for the CRISPR/Cas9 system. 2015 , 16, 218	182
1893	Resources for the design of CRISPR gene editing experiments. 2015 , 16, 260	78
1892	Optimizing sgRNA structure to improve CRISPR-Cas9 knockout efficiency. 2015 , 16, 280	202
1891	Towards a new era in medicine: therapeutic genome editing. 2015 , 16, 286	42
1890	Metabolism. Differential regulation of mTORC1 by leucine and glutamine. 2015 , 347, 194-8	442
1889	DNA repair. PAXX, a paralog of XRCC4 and XLF, interacts with Ku to promote DNA double-strand break repair. 2015 , 347, 185-188	202
1888	Fanconi anemia gene editing by the CRISPR/Cas9 system. 2015 , 26, 114-26	76
1887	Digenome-seq: genome-wide profiling of CRISPR-Cas9 off-target effects in human cells. 2015 , 12, 237-43, 1 p following 243	652
1886	Functional genomic screening approaches in mechanistic toxicology and potential future applications of CRISPR-Cas9. 2015 , 764, 31-42	14
1885	CRISPR-engineered mosaicism rapidly reveals that loss of Kcnj13 function in mice mimics human disease phenotypes. 2015 , 5, 8366	64
1884	Therapeutic genome editing: prospects and challenges. 2015 , 21, 121-31	809
1883	Suppression of pervasive noncoding transcription in embryonic stem cells by esBAF. 2015 , 29, 362-78	52
1882	Multiplex CRISPR/Cas9-based genome editing for correction of dystrophin mutations that cause Duchenne muscular dystrophy. 2015 , 6, 6244	307
1881	Gene targeting and editing in crop plants: a new era of precision opportunities. 2015 , 35, 1	47
1880	Multiplex metabolic pathway engineering using CRISPR/Cas9 in <i>Saccharomyces cerevisiae</i> . 2015 , 28, 213-222	292

1879	A split-Cas9 architecture for inducible genome editing and transcription modulation. <i>Nature Biotechnology</i> , 2015 , 33, 139-42	44.5	467
1878	Small molecules enhance CRISPR genome editing in pluripotent stem cells. 2015 , 16, 142-7		303
1877	Exogenous enzymes upgrade transgenesis and genetic engineering of farm animals. 2015 , 72, 1907-29		25
1876	CRISPR/Cas9: The Leading Edge of Genome Editing Technology. 2015 , 25-41		6
1875	Efficient generation of genetically distinct pigs in a single pregnancy using multiplexed single-guide RNA and carbohydrate selection. 2015 , 22, 20-31		105
1874	Genomic profiling of DNA methyltransferases reveals a role for DNMT3B in genic methylation. 2015 , 520, 243-7		421
1873	Mouse genome engineering via CRISPR-Cas9 for study of immune function. 2015 , 42, 18-27		60
1872	Targeted Genome Editing Using Site-Specific Nucleases. 2015 ,		6
1871	Quantifying on- and off-target genome editing. 2015 , 33, 132-40		102
1870	Efficient CRISPR-rAAV engineering of endogenous genes to study protein function by allele-specific RNAi. 2015 , 43, e45		23
1869	Identifying drug-target selectivity of small-molecule CRM1/XPO1 inhibitors by CRISPR/Cas9 genome editing. 2015 , 22, 107-16		87
1868	Unbiased detection of off-target cleavage by CRISPR-Cas9 and TALENs using integrase-defective lentiviral vectors. <i>Nature Biotechnology</i> , 2015 , 33, 175-8	44.5	321
1867	The CRISPR/Cas system inhibited the pro-oncogenic effects of alternatively spliced fibronectin extra domain A via editing the genome in salivary adenoid cystic carcinoma cells. 2015 , 21, 608-18		13
1866	Rational design of a split-Cas9 enzyme complex. 2015 , 112, 2984-9		211
1865	Genome editing strategies: potential tools for eradicating HIV-1/AIDS. 2015 , 21, 310-21		33
1864	High-throughput screens in mammalian cells using the CRISPR-Cas9 system. 2015 , 282, 2089-96		42
1863	The Potential of AAV-Mediated Gene Targeting for Gene and Cell Therapy Applications. 2015 , 1, 16-22		6
1862	Use of the CRISPR/Cas9 system as an intracellular defense against HIV-1 infection in human cells. 2015 , 6, 6413		234

1861	Bacterial CRISPR/Cas DNA endonucleases: A revolutionary technology that could dramatically impact viral research and treatment. 2015 , 479-480, 213-20	44
1860	Genetic screens and functional genomics using CRISPR/Cas9 technology. 2015 , 282, 1383-93	56
1859	CRISPR/Cas9 and TALE: beyond cut and paste. 2015 , 6, 157-159	5
1858	Genome-wide CRISPR screen in a mouse model of tumor growth and metastasis. 2015 , 160, 1246-60	544
1857	Genome Engineering for Therapeutic Applications. 2015 , 27-43	2
1856	A versatile reporter system for CRISPR-mediated chromosomal rearrangements. 2015 , 16, 111	45
1855	Photoactivatable CRISPR-Cas9 for optogenetic genome editing. <i>Nature Biotechnology</i> , 2015 , 33, 755-60	44.5 397
1854	Efficient generation of hiPSC neural lineage specific knockin reporters using the CRISPR/Cas9 and Cas9 double nickase system. 2015 , e52539	4
1853	A pre-screening FISH-based method to detect CRISPR/Cas9 off-targets in mouse embryonic stem cells. 2015 , 5, 12327	19
1852	Exploiting genome variation to improve next-generation sequencing data analysis and genome editing efficiency in <i>Populus tremula</i> lba 717-1B4. 2015 , 11, 1	22
1851	The application of CRISPR-Cas9 genome editing in <i>Caenorhabditis elegans</i> . 2015 , 42, 413-21	10
1850	High-throughput gene targeting and phenotyping in zebrafish using CRISPR/Cas9. 2015 , 25, 1030-42	309
1849	CRISPR-Cas9-Mediated Genetic Screening in Mice with Haploid Embryonic Stem Cells Carrying a Guide RNA Library. 2015 , 17, 221-32	70
1848	CRISPR/Cas9-mediated endogenous protein tagging for RESOLFT super-resolution microscopy of living human cells. 2015 , 5, 9592	108
1847	Generation of inheritable and "transgene clean" targeted genome-modified rice in later generations using the CRISPR/Cas9 system. 2015 , 5, 11491	155
1846	Precision cancer mouse models through genome editing with CRISPR-Cas9. 2015 , 7, 53	61
1845	A CRISPR/Cas-Mediated Selection-free Knockin Strategy in Human Embryonic Stem Cells. 2015 , 4, 1103-11	67
1844	Systematic analysis of CRISPR-Cas9 mismatch tolerance reveals low levels of off-target activity. 2015 , 211, 56-65	99

1843	CDKN2B Loss Promotes Progression from Benign Melanocytic Nevus to Melanoma. 2015 , 5, 1072-85	56
1842	Enzymatically Generated CRISPR Libraries for Genome Labeling and Screening. 2015 , 34, 373-8	24
1841	Functional Correction of Large Factor VIII Gene Chromosomal Inversions in Hemophilia A Patient-Derived iPSCs Using CRISPR-Cas9. 2015 , 17, 213-20	214
1840	CRISPR-Cas: New Tools for Genetic Manipulations from Bacterial Immunity Systems. 2015 , 69, 209-28	125
1839	Efficient CRISPR-mediated gene targeting and transgene replacement in the beetle <i>Tribolium castaneum</i> . 2015 , 142, 2832-9	112
1838	Generation of a conditional analog-sensitive kinase in human cells using CRISPR/Cas9-mediated genome engineering. 2015 , 129, 19-36	17
1837	Efficient generation of gene-modified pigs via injection of zygote with Cas9/sgRNA. 2015 , 5, 8256	92
1836	A genome-wide analysis of Cas9 binding specificity using CHIP-seq and targeted sequence capture. 2015 , 43, 3389-404	153
1835	Ferret and pig models of cystic fibrosis: prospects and promise for gene therapy. 2015 , 26, 38-49	42
1834	Somatic CRISPR/Cas9-mediated tumour suppressor disruption enables versatile brain tumour modelling. 2015 , 6, 7391	181
1833	Engineered CRISPR-Cas9 nucleases with altered PAM specificities. 2015 , 523, 481-5	1061
1832	Delivery and Specificity of CRISPR-Cas9 Genome Editing Technologies for Human Gene Therapy. 2015 , 26, 443-51	130
1831	Engineering Human Stem Cell Lines with Inducible Gene Knockout using CRISPR/Cas9. 2015 , 17, 233-44	116
1830	Flexible guide-RNA design for CRISPR applications using Protospacer Workbench. <i>Nature Biotechnology</i> , 2015 , 33, 805-6	44.5 67
1829	Cas9-chromatin binding information enables more accurate CRISPR off-target prediction. 2015 , 43, e118	141
1828	Trans-spliced Cas9 allows cleavage of HBB and CCR5 genes in human cells using compact expression cassettes. 2015 , 5, 10777	28
1827	Chemically modified guide RNAs enhance CRISPR-Cas genome editing in human primary cells. <i>Nature Biotechnology</i> , 2015 , 33, 985-989	44.5 626
1826	Targeted gene editing by transfection of in vitro reconstituted <i>Streptococcus thermophilus</i> Cas9 nuclease complex. 2015 , 12, 1-4	18

1825	Inhibition of hepatitis B virus by the CRISPR/Cas9 system via targeting the conserved regions of the viral genome. 2015 , 96, 2252-2261	108
1824	A Robust CRISPR/Cas9 System for Convenient, High-Efficiency Multiplex Genome Editing in Monocot and Dicot Plants. 2015 , 8, 1274-84	983
1823	Lentiviral vectors in cancer immunotherapy. 2015 , 7, 271-84	24
1822	CRISPR-Cas9 Based Genome Engineering: Opportunities in Agri-Food-Nutrition and Healthcare. 2015 , 19, 261-75	8
1821	A short splice form of Xin-actin binding repeat containing 2 (XIRP2) lacking the Xin repeats is required for maintenance of stereocilia morphology and hearing function. 2015 , 35, 1999-2014	32
1820	CRISPR/Cas9-mediated gene editing in human tripronuclear zygotes. 2015 , 6, 363-372	713
1819	Genome editing at the crossroads of delivery, specificity, and fidelity. 2015 , 33, 280-91	107
1818	CRISPR-Cas system enables fast and simple genome editing of industrial strains. 2015 , 2, 13-22	115
1817	Optical Control of CRISPR/Cas9 Gene Editing. 2015 , 137, 5642-5	176
1816	Engineering T Cells to Functionally Cure HIV-1 Infection. 2015 , 23, 1149-1159	40
1815	RNA-guided CRISPR-Cas technologies for genome-scale investigation of disease processes. 2015 , 8, 31	7
1814	Generation of zebrafish models by CRISPR /Cas9 genome editing. 2015 , 1254, 341-50	25
1813	CRISPR. 2015 ,	9
1812	Toward stem cell-based phenotypic screens for neurodegenerative diseases. 2015 , 11, 339-50	55
1811	Applications of CRISPR-Cas9 mediated genome engineering. 2015 , 2, 11	24
1810	Brains, genes, and primates. 2015 , 86, 617-31	183
1809	Editing CCR5: a novel approach to HIV gene therapy. 2015 , 848, 117-30	20
1808	Generation of a Knockout Mouse Embryonic Stem Cell Line Using a Paired CRISPR/Cas9 Genome Engineering Tool. 2016 , 1341, 321-43	17

1807	Improved specificity of TALE-based genome editing using an expanded RVD repertoire. 2015 , 12, 465-71	66
1806	TALE nickase-mediated SP110 knockin endows cattle with increased resistance to tuberculosis. 2015 , 112, E1530-9	113
1805	First efficient CRISPR-Cas9-mediated genome editing in Leishmania parasites. 2015 , 17, 1405-12	83
1804	Utilization of TALEN and CRISPR/Cas9 technologies for gene targeting and modification. 2015 , 240, 1065-70	17
1803	Discovery of cancer drug targets by CRISPR-Cas9 screening of protein domains. <i>Nature Biotechnology</i> , 2015 , 33, 661-7	44.5 464
1802	CRISPR multitargeter: a web tool to find common and unique CRISPR single guide RNA targets in a set of similar sequences. 2015 , 10, e0119372	89
1801	CRISPR-Cas targeted plasmid integration into mammalian cells via non-homologous end joining. 2015 , 112, 2154-62	39
1800	TRANSCRIPTION FACTOR Bmsage PLAYS A CRUCIAL ROLE IN SILK GLAND GENERATION IN SILKWORM, Bombyx mori. 2015 , 90, 59-69	16
1799	Efficient gene disruption in cultured primary human endothelial cells by CRISPR/Cas9. 2015 , 117, 121-8	47
1798	Efficient CRISPR-Cas9-mediated generation of knockin human pluripotent stem cells lacking undesired mutations at the targeted locus. 2015 , 11, 875-883	111
1797	Cloning-free CRISPR/Cas system facilitates functional cassette knock-in in mice. 2015 , 16, 87	197
1796	Disruptions of topological chromatin domains cause pathogenic rewiring of gene-enhancer interactions. 2015 , 161, 1012-1025	1207
1795	CRISPR/Cas9: a molecular Swiss army knife for simultaneous introduction of multiple genetic modifications in <i>Saccharomyces cerevisiae</i> . 2015 , 15,	264
1794	Advances in CRISPR-Cas9 genome engineering: lessons learned from RNA interference. 2015 , 43, 3407-19	104
1793	Application of CRISPR/Cas9 genome editing to the study and treatment of disease. 2015 , 89, 1023-34	38
1792	Gene Therapy for HIV and Chronic Infections. 2015 ,	
1791	In vivo genome editing using <i>Staphylococcus aureus</i> Cas9. 2015 , 520, 186-91	1700
1790	Inhibition of HIV-1 infection of primary CD4+ T-cells by gene editing of CCR5 using adenovirus-delivered CRISPR/Cas9. 2015 , 96, 2381-2393	133

1789	Efficient Multiplexed Integration of Synergistic Alleles and Metabolic Pathways in Yeasts via CRISPR-Cas. 2015 , 1, 88-96	205
1788	High-throughput functional genomics using CRISPR-Cas9. 2015 , 16, 299-311	748
1787	Small molecule-triggered Cas9 protein with improved genome-editing specificity. 2015 , 11, 316-8	286
1786	Rapid reverse genetic screening using CRISPR in zebrafish. 2015 , 12, 535-40	221
1785	One-step generation of triple knockout CHO cell lines using CRISPR/Cas9 and fluorescent enrichment. 2015 , 10, 1446-56	95
1784	Enabling functional genomics with genome engineering. 2015 , 25, 1442-55	67
1783	From Genomics to Gene Therapy: Induced Pluripotent Stem Cells Meet Genome Editing. 2015 , 49, 47-70	89
1782	Orthogonal gene knockout and activation with a catalytically active Cas9 nuclease. <i>Nature Biotechnology</i> , 2015 , 33, 1159-61	44.5 176
1781	Combined inhibition of BET family proteins and histone deacetylases as a potential epigenetics-based therapy for pancreatic ductal adenocarcinoma. 2015 , 21, 1163-71	275
1780	Precise Genome Editing of Drosophila with CRISPR RNA-Guided Cas9. 2015 , 1311, 335-48	31
1779	Structure and specificity of the RNA-guided endonuclease Cas9 during DNA interrogation, target binding and cleavage. 2015 , 43, 8924-41	72
1778	Targeted Mutagenesis in Zebrafish Using CRISPR RNA-Guided Nucleases. 2015 , 1311, 317-34	16
1777	Cpf1 is a single RNA-guided endonuclease of a class 2 CRISPR-Cas system. 2015 , 163, 759-71	2414
1776	Tracking and transforming neocortical progenitors by CRISPR/Cas9 gene targeting and piggyBac transposase lineage labeling. 2015 , 142, 3601-11	40
1775	Strategies for precision modulation of gene expression by epigenome editing: an overview. 2015 , 8, 34	40
1774	CRISPR/Cas9-mediated mutagenesis in the sea lamprey <i>Petromyzon marinus</i> : a powerful tool for understanding ancestral gene functions in vertebrates. 2015 , 142, 4180-7	45
1773	Combining CRISPR/Cas9 and rAAV Templates for Efficient Gene Editing. 2015 , 25, 287-96	19
1772	The Fanconi Anemia Pathway Maintains Genome Stability by Coordinating Replication and Transcription. 2015 , 60, 351-61	212

1771	Production of knockout mice by DNA microinjection of various CRISPR/Cas9 vectors into freeze-thawed fertilized oocytes. 2015 , 15, 33	39
1770	DNase H Activity of Neisseria meningitidis Cas9. 2015 , 60, 242-55	45
1769	Decoding Advances in Psychiatric Genetics: A Focus on Neural Circuits in Rodent Models. 2015 , 92, 75-106	1
1768	How specific is CRISPR/Cas9 really?. 2015 , 29, 72-8	83
1767	Rapid generation of endogenously driven transcriptional reporters in cells through CRISPR/Cas9. 2015 , 5, 9811	31
1766	Upregulating endogenous genes by an RNA-programmable artificial transactivator. 2015 , 43, 7850-64	8
1765	Genome-Wide Identification and Characterization of Novel Factors Conferring Resistance to Topoisomerase II Poisons in Cancer. 2015 , 75, 4176-87	52
1764	DNA-binding-domain fusions enhance the targeting range and precision of Cas9. 2015 , 12, 1150-6	87
1763	Using the GEMM-ESC strategy to study gene function in mouse models. 2015 , 10, 1755-85	32
1762	Reversion of FMR1 Methylation and Silencing by Editing the Triplet Repeats in Fragile X iPSC-Derived Neurons. 2015 , 13, 234-41	132
1761	Efficient gene-targeting in rat embryonic stem cells by CRISPR/Cas and generation of human kynurenine aminotransferase II (KAT II) knock-in rat. 2015 , 24, 991-1001	11
1760	Construction and applications of exon-trapping gene-targeting vectors with a novel strategy for negative selection. 2015 , 8, 278	2
1759	Identification of potential drug targets for tuberous sclerosis complex by synthetic screens combining CRISPR-based knockouts with RNAi. 2015 , 8, rs9	86
1758	FASTKD2 is an RNA-binding protein required for mitochondrial RNA processing and translation. 2015 , 21, 1873-84	64
1757	Genome engineering with CRISPR-Cas9 in the mosquito <i>Aedes aegypti</i> . 2015 , 11, 51-60	261
1756	A Scalable Genome-Editing-Based Approach for Mapping Multiprotein Complexes in Human Cells. 2015 , 13, 621-633	58
1755	TALEN-mediated functional correction of X-linked chronic granulomatous disease in patient-derived induced pluripotent stem cells. 2015 , 69, 191-200	62
1754	Overview of guide RNA design tools for CRISPR-Cas9 genome editing technology. 2015 , 10, 289-296	20

1753	Highly efficient editing of the actinorhodin polyketide chain length factor gene in <i>Streptomyces coelicolor</i> M145 using CRISPR/Cas9-CodA(sm) combined system. 2015 , 99, 10575-85	92
1752	CASFISH: CRISPR/Cas9-mediated in situ labeling of genomic loci in fixed cells. 2015 , 112, 11870-5	166
1751	Creating a monomeric endonuclease TALE-I-SceI with high specificity and low genotoxicity in human cells. 2015 , 43, 1112-22	20
1750	A CRISPR/Cas9 Toolbox for Multiplexed Plant Genome Editing and Transcriptional Regulation. 2015 , 169, 971-85	408
1749	Restriction of Nonpermissive RUNX3 Protein Expression in T Lymphocytes by the Kozak Sequence. 2015 , 195, 1517-23	11
1748	Sequence-specific DNA nicking endonucleases. 2015 , 6, 253-67	16
1747	Crystal Structure of <i>Staphylococcus aureus</i> Cas9. 2015 , 162, 1113-26	257
1746	CETCh-seq: CRISPR epitope tagging ChIP-seq of DNA-binding proteins. 2015 , 25, 1581-9	84
1745	BCL11A enhancer dissection by Cas9-mediated in situ saturating mutagenesis. 2015 , 527, 192-7	528
1744	The New State of the Art: Cas9 for Gene Activation and Repression. 2015 , 35, 3800-9	150
1743	Proven and novel strategies for efficient editing of the human genome. 2015 , 24, 105-12	17
1742	Cas9-Assisted Targeting of CHromosome segments CATCH enables one-step targeted cloning of large gene clusters. 2015 , 6, 8101	145
1741	Cas-Designer: a web-based tool for choice of CRISPR-Cas9 target sites. 2015 , 31, 4014-6	149
1740	<i>Drosophila melanogaster</i> Oogenesis: An Overview. 2015 , 1328, 1-20	48
1739	CRISPR/Cas9-mediated genome editing and gene replacement in plants: Transitioning from lab to field. 2015 , 240, 130-42	106
1738	Efficient CRISPR/Cas9-mediated multiplex genome editing in CHO cells via high-level sgRNA-Cas9 complex. 2015 , 20, 825-833	12
1737	Off-target Effects in CRISPR/Cas9-mediated Genome Engineering. 2015 , 4, e264	549
1736	A genome-wide CRISPR library for high-throughput genetic screening in <i>Drosophila</i> cells. 2015 , 42, 301-9	47

1735	NLK phosphorylates Raptor to mediate stress-induced mTORC1 inhibition. 2015 , 29, 2362-76		29
1734	Synthetic CRISPR RNA-Cas9-guided genome editing in human cells. 2015 , 112, E7110-7		120
1733	Biological Networks Governing the Acquisition, Maintenance, and Dissolution of Pluripotency: Insights from Functional Genomics Approaches. 2015 , 80, 189-98		2
1732	Cargo-selective apical exocytosis in epithelial cells is conducted by Myo5B, Slp4a, Vamp7, and Syntaxin 3. 2015 , 211, 587-604		60
1731	Engineering high-affinity PD-1 variants for optimized immunotherapy and immuno-PET imaging. 2015 , 112, E6506-14		205
1730	Editing plant genomes with CRISPR/Cas9. 2015 , 32, 76-84		364
1729	The CRISPR/Cas9 system for plant genome editing and beyond. 2015 , 33, 41-52		772
1728	A mouse geneticist's practical guide to CRISPR applications. 2015 , 199, 1-15		248
1727	Neuronal Cell Death. 2015 ,		2
1726	Genome-wide detection of DNA double-stranded breaks induced by engineered nucleases. <i>Nature Biotechnology</i> , 2015 , 33, 179-86	44.5	467
1725	GUIDE-seq enables genome-wide profiling of off-target cleavage by CRISPR-Cas nucleases. <i>Nature Biotechnology</i> , 2015 , 33, 187-197	44.5	1275
1724	Multigene knockout utilizing off-target mutations of the CRISPR/Cas9 system in rice. 2015 , 56, 41-7		155
1723	CRISPRdirect: software for designing CRISPR/Cas guide RNA with reduced off-target sites. 2015 , 31, 1120-3		593
1722	Creation of targeted genomic deletions using TALEN or CRISPR/Cas nuclease pairs in one-cell mouse embryos. 2015 , 5, 26-35		36
1721	CRISPR-based self-cleaving mechanism for controllable gene delivery in human cells. 2015 , 43, 1297-303		36
1720	Genome-scale transcriptional activation by an engineered CRISPR-Cas9 complex. 2015 , 517, 583-8		1628
1719	Patient-specific induced pluripotent stem cells (iPSCs) for the study and treatment of retinal degenerative diseases. 2015 , 44, 15-35		90
1718	Multi-kilobase homozygous targeted gene replacement in human induced pluripotent stem cells. 2015 , 43, e21		111

1717	Targeting CDK11 in osteosarcoma cells using the CRISPR-Cas9 system. 2015 , 33, 199-207	50
1716	Correction of a genetic disease by CRISPR-Cas9-mediated gene editing in mouse spermatogonial stem cells. 2015 , 25, 67-79	163
1715	Precise correction of the dystrophin gene in duchenne muscular dystrophy patient induced pluripotent stem cells by TALEN and CRISPR-Cas9. 2015 , 4, 143-154	388
1714	An efficient genotyping method for genome-modified animals and human cells generated with CRISPR/Cas9 system. 2014 , 4, 6420	175
1713	Genome editing by targeted chromosomal mutagenesis. 2015 , 1239, 1-13	7
1712	Chromosomal Mutagenesis. 2015 ,	2
1711	Efficient and allele-specific genome editing of disease loci in human iPSCs. 2015 , 23, 570-7	135
1710	Genome editing in human pluripotent stem cells using site-specific nucleases. 2015 , 1239, 267-80	15
1709	Rapid generation of mouse models with defined point mutations by the CRISPR/Cas9 system. 2014 , 4, 5396	149
1708	Multiplex genome engineering in human cells using all-in-one CRISPR/Cas9 vector system. 2014 , 4, 5400	253
1707	Comparison of non-canonical PAMs for CRISPR/Cas9-mediated DNA cleavage in human cells. 2014 , 4, 5405	143
1706	The CRISPR-Cas system for plant genome editing: advances and opportunities. 2015 , 66, 47-57	130
1705	Off-target assessment of CRISPR-Cas9 guiding RNAs in human iPS and mouse ES cells. 2015 , 53, 225-36	45
1704	Genome editing with engineered nucleases in plants. 2015 , 56, 389-400	154
1703	Genome engineering using CRISPR-Cas9 system. 2015 , 1239, 197-217	156
1702	CRISPR/Cas9-mediated targeted mutagenesis in <i>Nicotiana tabacum</i> . 2015 , 87, 99-110	219
1701	Generation of CRISPR/Cas9-mediated gene-targeted pigs via somatic cell nuclear transfer. 2015 , 72, 1175-84	167
1700	Repurposing endogenous type I CRISPR-Cas systems for programmable gene repression. 2015 , 43, 674-81	153

1699	In vivo interrogation of gene function in the mammalian brain using CRISPR-Cas9. <i>Nature Biotechnology</i> , 2015 , 33, 102-6	44.5	555
1698	CRISPR Primer Designer: Design primers for knockout and chromosome imaging CRISPR-Cas system. 2015 , 57, 613-7		25
1697	Efficient genome engineering in eukaryotes using Cas9 from <i>Streptococcus thermophilus</i> . 2015 , 72, 383-99		51
1696	Adenoviral vector delivery of RNA-guided CRISPR/Cas9 nuclease complexes induces targeted mutagenesis in a diverse array of human cells. 2014 , 4, 5105		99
1695	CRISPR/Cas9 Systems: The Next Generation Gene Targeted Editing Tool. 2015 , 85, 377-387		0
1694	Gene Correction Technology and Its Impact on Viral Research and Therapy. 2016 ,		
1693	Generating Mouse Models Using CRISPR-Cas9-Mediated Genome Editing. 2016 , 6, 39-66		22
1692	Cell-Based Assay Design for High-Content Screening of Drug Candidates. 2016 , 26, 213-25		52
1691	Ethical Issues in Genome Editing using Crispr/Cas9 System. 2016 , 07,		13
1690	CRISPR-Cas9: from Genome Editing to Cancer Research. 2016 , 12, 1427-1436		24
1689	GMO Acceptance in the World and Issues for the Overcoming of Restrictions: Cisgenesis, RNA Transfer, Rootstock to Shoot Delivery, Novel Methods of Transformation. 2016 , 309-341		
1688	Translesion synthesis of O4-alkylthymidine lesions in human cells. 2016 , 44, 9256-9265		29
1687	Brain tumor modeling using the CRISPR/Cas9 system: state of the art and view to the future. 2016 , 7, 33461-71		13
1686	Targeted Inhibition of the miR-199a/214 Cluster by CRISPR Interference Augments the Tumor Tropism of Human Induced Pluripotent Stem Cell-Derived Neural Stem Cells under Hypoxic Condition. 2016 , 2016, 3598542		19
1685	The Power of CRISPR-Cas9-Induced Genome Editing to Speed Up Plant Breeding. 2016 , 2016, 5078796		34
1684	Multi-OMICs and Genome Editing Perspectives on Liver Cancer Signaling Networks. 2016 , 2016, 6186281		6
1683	The Rise of CRISPR/Cas for Genome Editing in Stem Cells. 2016 , 2016, 8140168		18
1682	Sex steroids regulate skin pigmentation through nonclassical membrane-bound receptors. 2016 , 5,		58

1681	Strategies to Correct Nonsense Mutations. 2016 , 107-165	1
1680	CRISPR-Cas9 as a Powerful Tool for Efficient Creation of Oncolytic Viruses. 2016 , 8, 72	27
1679	Functional CRISPR screening identifies the ufmylation pathway as a regulator of SQSTM1/p62. 2016 , 5,	93
1678	Y-box protein 1 is required to sort microRNAs into exosomes in cells and in a cell-free reaction. 2016 , 5,	345
1677	An epigenetic switch ensures transposon repression upon dynamic loss of DNA methylation in embryonic stem cells. 2016 , 5,	149
1676	Genome Engineering with TALE and CRISPR Systems in Neuroscience. 2016 , 7, 47	21
1675	CRISPR/Cas9: Implications for Modeling and Therapy of Neurodegenerative Diseases. 2016 , 9, 30	34
1674	Defects of the Glycinergic Synapse in Zebrafish. 2016 , 9, 50	6
1673	Mitotic Diversity in Homeostatic Human Interfollicular Epidermis. 2016 , 17,	9
1672	Biased and Unbiased Methods for the Detection of Off-Target Cleavage by CRISPR/Cas9: An Overview. 2016 , 17,	48
1671	Current status of genome editing in vector mosquitoes: A review. 2017 , 10, 424-432	19
1670	Homology Directed Knockin of Point Mutations in the Zebrafish <i>tardbp</i> and <i>fus</i> Genes in ALS Using the CRISPR/Cas9 System. 2016 , 11, e0150188	79
1669	Quantification of designer nuclease induced mutation rates: a direct comparison of different methods. 2016 , 3, 16047	6
1668	Generation of an Oocyte-Specific Cas9 Transgenic Mouse for Genome Editing. 2016 , 11, e0154364	8
1667	Infantile Pain Episodes Associated with Novel Nav1.9 Mutations in Familial Episodic Pain Syndrome in Japanese Families. 2016 , 11, e0154827	27
1666	CRISPR/Cas9: A Tool to Circumscribe Cotton Leaf Curl Disease. 2016 , 7, 475	66
1665	Recent Advances in Genome Editing Using CRISPR/Cas9. 2016 , 7, 703	75
1664	Recent Developments in Systems Biology and Metabolic Engineering of Plant-Microbe Interactions. 2016 , 7, 1421	54

1663	CRISPR-Cas9: Tool for Qualitative and Quantitative Plant Genome Editing. 2016 , 7, 1740	49
1662	DNA-Free Genetically Edited Grapevine and Apple Protoplast Using CRISPR/Cas9 Ribonucleoproteins. 2016 , 7, 1904	351
1661	An Effective Molecular Target Site in Hepatitis B Virus S Gene for Cas9 Cleavage and Mutational Inactivation. 2016 , 12, 1104-13	26
1660	Genomic Disruption of VEGF-A Expression in Human Retinal Pigment Epithelial Cells Using CRISPR-Cas9 Endonuclease. 2016 , 57, 5490-5497	26
1659	Current and future study of genome editing tools. 2016 , 44, 23-34	
1658	Analyzing CRISPR genome-editing experiments with CRISPResso. <i>Nature Biotechnology</i> , 2016 , 34, 695-7 44.5	286
1657	Genome Editing by CRISPR/Cas9: A Game Change in the Genetic Manipulation of Protists. 2016 , 63, 679-90	42
1656	Next stop for the CRISPR revolution: RNA-guided epigenetic regulators. 2016 , 283, 3181-93	52
1655	CRISPR-DO for genome-wide CRISPR design and optimization. 2016 , 32, 3336-3338	35
1654	CRISPR/Cas9: a breakthrough in generating mouse models for endocrinologists. 2016 , 57, R81-92	8
1653	A comprehensive overview of computational resources to aid in precision genome editing with engineered nucleases. 2017 , 18, 698-711	11
1652	Engineering of CRISPR/Cas9-mediated potyvirus resistance in transgene-free Arabidopsis plants. 2016 , 17, 1276-88	232
1651	A Powerful CRISPR/Cas9-Based Method for Targeted Transcriptional Activation. 2016 , 128, 6562-6566	2
1650	Single-Cell-State Culture of Human Pluripotent Stem Cells Increases Transfection Efficiency. 2016 , 5, 127-36	6
1649	Efficient CRISPR/Cas9-Based Genome Engineering in Human Pluripotent Stem Cells. 2016 , 88, 21.4.1-21.4.23	12
1648	A Powerful CRISPR/Cas9-Based Method for Targeted Transcriptional Activation. 2016 , 55, 6452-6	11
1647	Evaluation of off-target and on-target scoring algorithms and integration into the guide RNA selection tool CRISPOR. 2016 , 17, 148	877
1646	Comparison of CRISPR/Cas9 and TALENs on editing an integrated EGFP gene in the genome of HEK293FT cells. 2016 , 5, 814	16

1645	Anti-HIV-1 potency of the CRISPR/Cas9 system insufficient to fully inhibit viral replication. 2016 , 60, 483-96	46
1644	Versatility of chemically synthesized guide RNAs for CRISPR-Cas9 genome editing. 2016 , 233, 74-83	52
1643	Applying CRISPR-Cas9 tools to identify and characterize transcriptional enhancers. 2016 , 17, 597-604	42
1642	OUP accepted manuscript. 2016 ,	2
1641	Utilization of the CRISPR/Cas9 system for the efficient production of mutant mice using crRNA/tracrRNA with Cas9 nickase and FokI-dCas9. 2016 , 65, 275-83	7
1640	Improved bi-allelic modification of a transcriptionally silent locus in patient-derived iPSC by Cas9 nickase. 2016 , 6, 38198	22
1639	Direct identification of antibiotic resistance genes on single plasmid molecules using CRISPR/Cas9 in combination with optical DNA mapping. 2016 , 6, 37938	42
1638	CRISPR/Cas9-AAV Mediated Knock-in at NRL Locus in Human Embryonic Stem Cells. 2016 , 5, e393	7
1637	CRISPR-Cas9(D10A) nickase-based genotypic and phenotypic screening to enhance genome editing. 2016 , 6, 24356	62
1636	Utilising polymorphisms to achieve allele-specific genome editing in zebrafish. 2017 , 6, 125-131	12
1635	Efficient Generation of Orthologous Point Mutations in Pigs via CRISPR-assisted ssODN-mediated Homology-directed Repair. 2016 , 5, e396	27
1634	Sequence features associated with the cleavage efficiency of CRISPR/Cas9 system. 2016 , 6, 19675	88
1633	Advances in the Development of Gene-Targeting Vectors to Increase the Efficiency of Genetic Modification. 2016 , 39, 25-32	5
1632	Naturally Occurring Off-Switches for CRISPR-Cas9. 2016 , 167, 1829-1838.e9	260
1631	Deletion of the Polycomb-Group Protein EZH2 Leads to Compromised Self-Renewal and Differentiation Defects in Human Embryonic Stem Cells. 2016 , 17, 2700-2714	73
1630	A Retroviral CRISPR-Cas9 System for Cellular Autism-Associated Phenotype Discovery in Developing Neurons. 2016 , 6, 25611	28
1629	Efficient liver repopulation of transplanted hepatocyte prevents cirrhosis in a rat model of hereditary tyrosinemia type I. 2016 , 6, 31460	25
1628	CRISPR-Mediated VHL Knockout Generates an Improved Model for Metastatic Renal Cell Carcinoma. 2016 , 6, 29032	32

1627	RNA activation of haploinsufficient Foxg1 gene in murine neocortex. 2016 , 6, 39311	9
1626	A Combinatorial CRISPR-Cas9 Attack on HIV-1 DNA Extinguishes All Infectious Provirus in Infected T Cell Cultures. 2016 , 17, 2819-2826	85
1625	CT-Finder: A Web Service for CRISPR Optimal Target Prediction and Visualization. 2016 , 6, 25516	28
1624	T cell-specific inactivation of mouse CD2 by CRISPR/Cas9. 2016 , 6, 21377	8
1623	Achieving Plant CRISPR Targeting that Limits Off-Target Effects. 2016 , 9, plantgenome2016.05.0047	54
1622	Genetic chimerism of CRISPR/Cas9-mediated rice mutants. 2016 , 10, 425-435	11
1621	BATCH-GE: Batch analysis of Next-Generation Sequencing data for genome editing assessment. 2016 , 6, 30330	53
1620	Rapid Screening for CRISPR-Directed Editing of the Drosophila Genome Using white Coconversion. 2016 , 6, 3197-3206	27
1619	CRISPR/Cas9-mediated gene knockout in the mouse brain using in utero electroporation. 2016 , 6, 20611	61
1618	Allele-specific locus binding and genome editing by CRISPR at the p16INK4a locus. 2016 , 6, 30485	19
1617	Mathematical and computational analysis of CRISPR Cas9 sgRNA off-target homologies. 2016 ,	1
1616	Efficient Generation of Gene-Modified Pigs Harboring Precise Orthologous Human Mutation via CRISPR/Cas9-Induced Homology-Directed Repair in Zygotes. 2016 , 37, 110-8	54
1615	Designed nucleases for targeted genome editing. 2016 , 14, 448-62	39
1614	A morphospace for synthetic organs and organoids: the possible and the actual. 2016 , 8, 485-503	34
1613	CRISPy-web: An online resource to design sgRNAs for CRISPR applications. 2016 , 1, 118-121	80
1612	Genome Editing in Human Pluripotent Stem Cells. 2016 , 2016, pdb.top086819	4
1611	CRISPR/Cas9 for Human Genome Engineering and Disease Research. 2016 , 17, 131-54	65
1610	Targeted Mutagenesis of Guinea Pig Cytomegalovirus Using CRISPR/Cas9-Mediated Gene Editing. 2016 , 90, 6989-6998	23

1609	Generation of a Double KO Mouse by Simultaneous Targeting of the Neighboring Genes Tmem176a and Tmem176b Using CRISPR/Cas9: Key Steps from Design to Genotyping. 2016 , 43, 329-40	6
1608	Genome engineering in ophthalmology: Application of CRISPR/Cas to the treatment of eye disease. 2016 , 53, 1-20	36
1607	Synthetic biology approaches in cancer immunotherapy, genetic network engineering, and genome editing. 2016 , 8, 504-17	6
1606	Immunoblot screening of CRISPR/Cas9-mediated gene knockouts without selection. 2016 , 17, 9	6
1605	Introducing precise genetic modifications into human 3PN embryos by CRISPR/Cas-mediated genome editing. 2016 , 33, 581-588	182
1604	CRISPR-on system for the activation of the endogenous human INS gene. 2016 , 23, 543-7	30
1603	An insight into the protospacer adjacent motif of Streptococcus pyogenes Cas9 with artificially stimulated RNA-guided-Cas9 DNA cleavage flexibility. 2016 , 6, 33514-33522	9
1602	CRISPR/Cas9 Based Genome Editing of Penicillium chrysogenum. 2016 , 5, 754-64	189
1601	A distant trophoblast-specific enhancer controls HLA-G expression at the maternal-fetal interface. 2016 , 113, 5364-9	55
1600	Novel approaches: Tissue engineering and stem cells--In vitro modelling of the gut. 2016 , 30, 281-93	14
1599	Defining and improving the genome-wide specificities of CRISPR-Cas9 nucleases. 2016 , 17, 300-12	305
1598	Minireview: Genome Editing of Human Pluripotent Stem Cells for Modeling Metabolic Disease. 2016 , 30, 575-86	5
1597	The crystal structure of Cpf1 in complex with CRISPR RNA. 2016 , 532, 522-6	196
1596	DNA-free genome editing methods for targeted crop improvement. 2016 , 35, 1469-74	41
1595	Targeted isolation and cloning of 100-kb microbial genomic sequences by Cas9-assisted targeting of chromosome segments. 2016 , 11, 960-75	43
1594	A CRISPR Path to Engineering New Genetic Mouse Models for Cardiovascular Research. 2016 , 36, 1058-75	33
1593	Genome engineering - Matching supply with demand. 2016 , 15, 1395-6	
1592	Simple, Efficient CRISPR-Cas9-Mediated Gene Editing in Mice: Strategies and Methods. 2016 , 1438, 19-53	24

1591	Highly Efficient Mouse Genome Editing by CRISPR Ribonucleoprotein Electroporation of Zygotes. 2016 , 291, 14457-67	179
1590	Fine-Tuning Next-Generation Genome Editing Tools. 2016 , 34, 562-574	43
1589	Imaging Specific Genomic DNA in Living Cells. 2016 , 45, 1-23	52
1588	Multiplexed Targeted Genome Engineering Using a Universal Nuclease-Assisted Vector Integration System. 2016 , 5, 582-8	15
1587	Genome Editing with CRISPR-Cas9: Can It Get Any Better?. 2016 , 43, 239-50	38
1586	Profiling of engineering hotspots identifies an allosteric CRISPR-Cas9 switch. <i>Nature Biotechnology</i> , 2016 , 34, 646-51	44.5 139
1585	TPC2 controls pigmentation by regulating melanosome pH and size. 2016 , 113, 5622-7	68
1584	Secretory cargo sorting by Ca ²⁺ -dependent Cab45 oligomerization at the trans-Golgi network. 2016 , 213, 305-14	30
1583	Site-specific genome editing for correction of induced pluripotent stem cells derived from dominant dystrophic epidermolysis bullosa. 2016 , 113, 5676-81	78
1582	Characterization of Cas9-Guide RNA Orthologs. 2016 , 2016,	10
1581	The expanding footprint of CRISPR/Cas9 in the plant sciences. 2016 , 35, 1451-68	25
1580	Induced Pluripotent Stem Cells Meet Genome Editing. 2016 , 18, 573-86	304
1579	Discovery of a Coregulatory Interaction between Kaposi's Sarcoma-Associated Herpesvirus ORF45 and the Viral Protein Kinase ORF36. 2016 , 90, 5953-5964	16
1578	CRISPR/Cas9 for plant genome editing: accomplishments, problems and prospects. 2016 , 35, 1417-27	52
1577	Crystal Structure of Cpf1 in Complex with Guide RNA and Target DNA. 2016 , 165, 949-62	362
1576	CRISPR/Cas9 Platforms for Genome Editing in Plants: Developments and Applications. 2016 , 9, 961-74	271
1575	CRISPR/Cas9 in Genome Editing and Beyond. 2016 , 85, 227-64	644
1574	TFEB and TF3 cooperate in the regulation of the innate immune response in activated macrophages. 2016 , 12, 1240-58	150

1573	Alpharetroviral self-inactivating vectors produced by a superinfection-resistant stable packaging cell line allow genetic modification of primary human T lymphocytes. 2016 , 97, 97-109	11
1572	Increasing the efficiency of CRISPR/Cas9-mediated precise genome editing in rats by inhibiting NHEJ and using Cas9 protein. 2016 , 13, 605-12	47
1571	Approaches to Inactivate Genes in Zebrafish. 2016 , 916, 61-86	4
1570	Breaking-Cas-interactive design of guide RNAs for CRISPR-Cas experiments for ENSEMBL genomes. 2016 , 44, W267-71	88
1569	Cas9-Mediated Genome Engineering in <i>Drosophila melanogaster</i> . 2016 , 2016,	16
1568	Wnt-signalling pathways and microRNAs network in carcinogenesis: experimental and bioinformatics approaches. 2016 , 15, 56	45
1567	A multifunctional AAV-CRISPR-Cas9 and its host response. 2016 , 13, 868-74	359
1566	Efficient CRISPR/Cas9-Mediated Versatile, Predictable, and Donor-Free Gene Knockout in Human Pluripotent Stem Cells. 2016 , 7, 496-507	32
1565	Identification and functional study of type III-A CRISPR-Cas systems in clinical isolates of <i>Staphylococcus aureus</i> . 2016 , 306, 686-696	36
1564	Co-incident insertion enables high efficiency genome engineering in mouse embryonic stem cells. 2016 , 44, 7997-8010	24
1563	Applications of CRISPR Genome Engineering in Cell Biology. 2016 , 26, 875-888	58
1562	Patterns of CRISPR/Cas9 activity in plants, animals and microbes. 2016 , 14, 2203-2216	85
1561	Efficient production of biallelic GGTA1 knockout pigs by cytoplasmic microinjection of CRISPR/Cas9 into zygotes. 2016 , 23, 338-46	74
1560	Guide RNA engineering for versatile Cas9 functionality. 2016 , 44, 9555-9564	44
1559	Genome Editing of Monogenic Neuromuscular Diseases: A Systematic Review. 2016 , 73, 1349-1355	27
1558	Systematic mapping of functional enhancer-promoter connections with CRISPR interference. 2016 , 354, 769-773	314
1557	CRISPR/Cas9 system and its applications in human hematopoietic cells. 2016 , 62, 6-12	9
1556	Efficient CRISPR-mediated mutagenesis in primary immune cells using CrispRGold and a C57BL/6 Cas9 transgenic mouse line. 2016 , 113, 12514-12519	65

1555	The zebrafish genome editing toolkit. 2016 , 135, 149-70	19
1554	Genetic Engineering of Plants Using Zn Fingers, TALENs, and CRISPRs. 2016 , 187-201	2
1553	Genome-Editing Technologies: Principles and Applications. 2016 , 8,	120
1552	Deciphering Combinatorial Genetics. 2016 , 50, 515-538	8
1551	Efficient genome engineering approaches for the short-lived African turquoise killifish. 2016 , 11, 2010-2028	36
1550	CRISPR-Cas9 gene editing: Delivery aspects and therapeutic potential. 2016 , 244, 139-148	37
1549	Methods for Optimizing CRISPR-Cas9 Genome Editing Specificity. 2016 , 63, 355-70	190
1548	Prospects for application of breakthrough technologies in breeding: The CRISPR/Cas9 system for plant genome editing. 2016 , 52, 676-687	16
1547	Working with Stem Cells. 2016 ,	1
1546	Zygote-mediated generation of genome-modified mice using Streptococcus thermophilus 1-derived CRISPR/Cas system. 2016 , 477, 473-6	18
1545	A Cas9 Variant for Efficient Generation of Indel-Free Knockin or Gene-Corrected Human Pluripotent Stem Cells. 2016 , 7, 508-517	67
1544	In Vitro Evaluation of CRISPR/Cas9 Function by an Electrochemiluminescent Assay. 2016 , 88, 8369-74	25
1543	Genome Editing. 2016 ,	3
1542	Genome Editing in Stem Cells. 2016 , 287-309	
1541	CRISPR/Cas9 genome editing in human pluripotent stem cells: Harnessing human genetics in a dish. 2016 , 245, 788-806	14
1540	The application of somatic CRISPR-Cas9 to conditional genome editing in Caenorhabditis elegans. 2016 , 54, 170-81	7
1539	Concise Review: Patient-Derived Stem Cell Research for Monogenic Disorders. 2016 , 34, 44-54	11
1538	Homology-Independent Integration of Plasmid DNA into the Zebrafish Genome. 2016 , 1451, 31-51	3

1537	Generation of Targeted Genomic Deletions Through CRISPR/Cas System in Zebrafish. 2016 , 1451, 65-79	5
1536	Using CRISPR-Cas9 Genome Editing to Enhance Cell Based Therapies for the Treatment of Diabetes Mellitus. 2016 , 127-147	1
1535	Genetic Engineering in Stem Cell Biomanufacturing. 2016 , 1-25	
1534	Targeted DNA demethylation in vivo using dCas9-peptide repeat and scFv-TET1 catalytic domain fusions. <i>Nature Biotechnology</i> , 2016 , 34, 1060-1065	44.5 278
1533	Genome editing with CRISPR/Cas9 in postnatal mice corrects PRKAG2 cardiac syndrome. 2016 , 26, 1099-1111	67
1532	CRISPR/Cas9 Targeted Gene Editing and Cellular Engineering in Fanconi Anemia. 2016 , 25, 1591-1603	16
1531	Tissue-specific gene targeting using CRISPR/Cas9. 2016 , 135, 189-202	17
1530	CRISPR-Cas9 nuclear dynamics and target recognition in living cells. 2016 , 214, 529-37	98
1529	CRISPR-Cas9 mediated genetic engineering for the purification of the endogenous integrator complex from mammalian cells. 2016 , 128, 101-8	9
1528	CRISPR technologies for bacterial systems: Current achievements and future directions. 2016 , 34, 1180-1209	104
1527	Tools and applications in synthetic biology. 2016 , 105, 20-34	35
1526	Genome Editing with Targetable Nucleases. 2016 , 1-29	
1525	Application of NanoLuc to monitor the intrinsic promoter activity of GRP78 using the CRISPR/Cas9 system. 2016 , 21, 1137-1143	5
1524	Comprehensive Protocols for CRISPR/Cas9-based Gene Editing in Human Pluripotent Stem Cells. 2016 , 38, 5B.6.1-5B.6.60	23
1523	Biosensing <i>Vibrio cholerae</i> with Genetically Engineered <i>Escherichia coli</i> . 2016 , 5, 1275-1283	29
1522	CRISPR-Cas9 mediated genome editing in rice, advancements and future possibilities. 2016 , 21, 437-445	5
1521	Mammalian cells lacking either the cotranslational or posttranslocational oligosaccharyltransferase complex display substrate-dependent defects in asparagine linked glycosylation. 2016 , 6, 20946	58
1520	Host Double Strand Break Repair Generates HIV-1 Strains Resistant to CRISPR/Cas9. 2016 , 6, 29530	68

1519	In vivo genome editing via CRISPR/Cas9 mediated homology-independent targeted integration. 2016 , 540, 144-149	645
1518	CORALINA: a universal method for the generation of gRNA libraries for CRISPR-based screening. 2016 , 17, 917	10
1517	Easy regulation of metabolic flux in Escherichia coli using an endogenous type I-E CRISPR-Cas system. 2016 , 15, 195	22
1516	TFEB and TFE3 are novel components of the integrated stress response. 2016 , 35, 479-95	151
1515	CRISPR-Cas9 technology and its application in haematological disorders. 2016 , 175, 208-225	15
1514	Permanent inactivation of Huntington's disease mutation by personalized allele-specific CRISPR/Cas9. 2016 , 25, 4566-4576	150
1513	Inheritable Silencing of Endogenous Genes by Hit-and-Run Targeted Epigenetic Editing. 2016 , 167, 219-232.e1457	157
1512	Meis/UNC-62 isoform dependent regulation of CoupTF-II/UNC-55 and GABAergic motor neuron subtype differentiation. 2016 , 419, 250-261	1
1511	Zebrafish. 2016 ,	1
1510	An easy and efficient inducible CRISPR/Cas9 platform with improved specificity for multiple gene targeting. 2016 , 44, e149	122
1509	Methods of Genome Engineering: a New Era of Molecular Biology. 2016 , 81, 662-77	5
1508	Practical Considerations for Using Pooled Lentiviral CRISPR Libraries. 2016 , 115, 31.5.1-31.5.13	11
1507	CRISPR/Cas9 activity in the rice OsBE11b gene does not induce off-target effects in the closely related paralog OsBE11a. 2016 , 36, 1	34
1506	The genome editing revolution: A CRISPR-Cas TALE off-target story. 2016 , 38 Suppl 1, S4-S13	45
1505	The genome editing revolution: A CRISPR-Cas TALE off-target story. 2016 , 1, 7-16	
1504	Success of transgenic cotton (<i>Gossypium hirsutum</i> L.): Fiction or reality?. 2016 , 2,	3
1503	Desktop Genetics. 2016 , 13, 517-521	13
1502	CRISPR/Cas9 in locusts: Successful establishment of an olfactory deficiency line by targeting the mutagenesis of an odorant receptor co-receptor (Orco). 2016 , 79, 27-35	77

1501	Genome editing: the road of CRISPR/Cas9 from bench to clinic. 2016 , 48, e265	55
1500	Sendai virus, an RNA virus with no risk of genomic integration, delivers CRISPR/Cas9 for efficient gene editing. 2016 , 3, 16057	23
1499	Genome editing in maize directed by CRISPR-Cas9 ribonucleoprotein complexes. 2016 , 7, 13274	446
1498	Gene and cell-based therapies for inherited retinal disorders: An update. 2016 , 172, 349-366	50
1497	Delivery methods for site-specific nucleases: Achieving the full potential of therapeutic gene editing. 2016 , 244, 83-97	16
1496	Efficient Generation of Myostatin Gene Mutated Rabbit by CRISPR/Cas9. 2016 , 6, 25029	76
1495	Fluorescent protein tagging of endogenous protein in brain neurons using CRISPR/Cas9-mediated knock-in and in utero electroporation techniques. 2016 , 6, 35861	35
1494	The clustered regularly interspaced short palindromic repeats/associated proteins system for the induction of gene mutations and phenotypic changes in <i>Bombyx mori</i> . 2016 , 48, 1112-1119	2
1493	Possible involvement of iNOS and TNF- α in nutritional intervention against nicotine-induced pancreatic islet cell damage. 2016 , 84, 1727-1738	10
1492	Systematic quantification of HDR and NHEJ reveals effects of locus, nuclease, and cell type on genome-editing. 2016 , 6, 23549	126
1491	Investigation of the functional role of human Interleukin-8 gene haplotypes by CRISPR/Cas9 mediated genome editing. 2016 , 6, 31180	22
1490	A Molecular Chipper technology for CRISPR sgRNA library generation and functional mapping of noncoding regions. 2016 , 7, 11178	12
1489	Mutations in SLC39A14 disrupt manganese homeostasis and cause childhood-onset parkinsonism-dystonia. 2016 , 7, 11601	160
1488	Re-visiting the Protamine-2 locus: deletion, but not haploinsufficiency, renders male mice infertile. 2016 , 6, 36764	26
1487	Selection-free genome editing of the sickle mutation in human adult hematopoietic stem/progenitor cells. 2016 , 8, 360ra134	286
1486	A Cas9 Ribonucleoprotein Platform for Functional Genetic Studies of HIV-Host Interactions in Primary Human T Cells. 2016 , 17, 1438-1452	110
1485	Telomeric RNAs are essential to maintain telomeres. 2016 , 7, 12534	65
1484	Local regulation of gene expression by lncRNA promoters, transcription and splicing. 2016 , 539, 452-455	721

1483	Selection of highly efficient sgRNAs for CRISPR/Cas9-based plant genome editing. 2016 , 6, 21451	106
1482	A CRISPR-based approach for targeted DNA demethylation. 2016 , 2, 16009	243
1481	Precision Modulation of Neurodegenerative Disease-Related Gene Expression in Human iPSC-Derived Neurons. 2016 , 6, 28420	47
1480	Zebrafish Genome Engineering Using the CRISPR-Cas9 System. 2016 , 32, 815-827	93
1479	Increasing the Efficiency of CRISPR/Cas9-mediated Precise Genome Editing of HSV-1 Virus in Human Cells. 2016 , 6, 34531	51
1478	Real-time observation of DNA recognition and rejection by the RNA-guided endonuclease Cas9. 2016 , 7, 12778	157
1477	Efficient and transgene-free genome editing in wheat through transient expression of CRISPR/Cas9 DNA or RNA. 2016 , 7, 12617	465
1476	Different Effects of sgRNA Length on CRISPR-mediated Gene Knockout Efficiency. 2016 , 6, 28566	51
1475	CRISPR/Cas9 Targets Chicken Embryonic Somatic Cells In Vitro and In Vivo and generates Phenotypic Abnormalities. 2016 , 6, 34524	18
1474	Simple and Efficient Targeting of Multiple Genes Through CRISPR-Cas9 in. 2016 , 6, 3647-3653	58
1473	Reprogramming metabolic pathways in vivo with CRISPR/Cas9 genome editing to treat hereditary tyrosinaemia. 2016 , 7, 12642	79
1472	Genome-scale deletion screening of human long non-coding RNAs using a paired-guide RNA CRISPR-Cas9 library. <i>Nature Biotechnology</i> , 2016 , 34, 1279-1286	44.5 269
1471	ge-CRISPR - An integrated pipeline for the prediction and analysis of sgRNAs genome editing efficiency for CRISPR/Cas system. 2016 , 6, 30870	25
1470	Exome sequencing in the knockin mice generated using the CRISPR/Cas system. 2016 , 6, 34703	29
1469	Writing of H3K4Me3 overcomes epigenetic silencing in a sustained but context-dependent manner. 2016 , 7, 12284	147
1468	cGMP production of patient-specific iPSCs and photoreceptor precursor cells to treat retinal degenerative blindness. 2016 , 6, 30742	76
1467	Nucleosomes Selectively Inhibit Cas9 Off-target Activity at a Site Located at the Nucleosome Edge. 2016 , 291, 24851-24856	15
1466	Empower multiplex cell and tissue-specific CRISPR-mediated gene manipulation with self-cleaving ribozymes and tRNA. 2017 , 45, e28	47

1465	A Simple and Efficient Approach to Construct Mutant Vaccinia Virus Vectors. 2016,	5
1464	Generating CRISPR/Cas9 Mediated Monoallelic Deletions to Study Enhancer Function in Mouse Embryonic Stem Cells. 2016, e53552	6
1463	High-Throughput Robotically Assisted Isolation of Temperature-sensitive Lethal Mutants in <i>Chlamydomonas reinhardtii</i> . 2016,	7
1462	Reactivating Fetal Hemoglobin Expression in Human Adult Erythroblasts Through BCL11A Knockdown Using Targeted Endonucleases. 2016, 5, e351	36
1461	Konditionale Kontrolle der CRISPR/Cas9-Funktion. 2016, 128, 5482-5487	5
1460	Detecting Single-Nucleotide Substitutions Induced by Genome Editing. 2016, 2016,	3
1459	Footprintless disruption of prosurvival genes in aneuploid cancer cells using CRISPR/Cas9 technology. 2016, 94, 289-96	7
1458	Gene correction in patient-specific iPSCs for therapy development and disease modeling. 2016, 135, 1041-58	30
1457	T-cell therapies for HIV: Preclinical successes and current clinical strategies. 2016, 18, 931-942	29
1456	YB-1 regulates tRNA-induced Stress Granule formation but not translational repression. 2016, 44, 6949-60	124
1455	Treating hemoglobinopathies using gene-correction approaches: promises and challenges. 2016, 135, 993-1010	12
1454	Editing Transgenic DNA Components by Inducible Gene Replacement in <i>Drosophila melanogaster</i> . 2016, 203, 1613-28	56
1453	Insert, remove or replace: A highly advanced genome editing system using CRISPR/Cas9. 2016, 1863, 2333-44	66
1452	Precise treatment of cystic fibrosis [urrent treatments and perspectives for using CRISPR. 2016, 1, 169-180	5
1451	Programming Native CRISPR Arrays for the Generation of Targeted Immunity. 2016, 7,	18
1450	Targeted genome editing in the rare actinomycete <i>Actinoplanes</i> sp. SE50/110 by using the CRISPR/Cas9 System. 2016, 231, 122-128	31
1449	Use of genome-editing tools to treat sickle cell disease. 2016, 135, 1011-28	18
1448	Novel Immunotherapeutic Approaches to the Treatment of Cancer. 2016,	1

1447	CRISPR/Cas9: From Genome Engineering to Cancer Drug Discovery. 2016 , 2, 313-324	32
1446	CHOPCHOP v2: a web tool for the next generation of CRISPR genome engineering. 2016 , 44, W272-6	527
1445	Repair of adjacent single-strand breaks is often accompanied by the formation of tandem sequence duplications in plant genomes. 2016 , 113, 7266-71	45
1444	Synthetic strategies for plant signalling studies: molecular toolbox and orthogonal platforms. 2016 , 87, 118-38	10
1443	Molecular Basis for the Interaction Between AP4 β and its Accessory Protein, Tepsin. 2016 , 17, 400-15	16
1442	Cellular Therapies: Gene Editing and Next-Gen CAR T Cells. 2016 , 203-247	1
1441	Conditional Control of CRISPR/Cas9 Function. 2016 , 55, 5394-9	36
1440	Off-target effects of engineered nucleases. 2016 , 283, 3239-48	51
1439	Multi-reporter selection for the design of active and more specific zinc-finger nucleases for genome editing. 2016 , 7, 10194	11
1438	Salient Features of Endonuclease Platforms for Therapeutic Genome Editing. 2016 , 24, 422-9	9
1437	EXD2 promotes homologous recombination by facilitating DNA end resection. 2016 , 18, 271-280	46
1436	Editing the epigenome: technologies for programmable transcription and epigenetic modulation. 2016 , 13, 127-37	272
1435	The <i>Neisseria meningitidis</i> CRISPR-Cas9 System Enables Specific Genome Editing in Mammalian Cells. 2016 , 24, 645-54	150
1434	RS-1 enhances CRISPR/Cas9- and TALEN-mediated knock-in efficiency. 2016 , 7, 10548	261
1433	Impact of Different Target Sequences on Type III CRISPR-Cas Immunity. 2016 , 198, 941-50	32
1432	Genome-editing Technologies for Gene and Cell Therapy. 2016 , 24, 430-46	413
1431	Expanding the CRISPR imaging toolset with <i>Staphylococcus aureus</i> Cas9 for simultaneous imaging of multiple genomic loci. 2016 , 44, e75	122
1430	D-repeat in the XIST gene is required for X chromosome inactivation. 2016 , 13, 172-6	16

1429	Genome-wide target specificities of CRISPR-Cas9 nucleases revealed by multiplex Digenome-seq. 2016 , 26, 406-15		141
1428	High-Content Analysis of CRISPR-Cas9 Gene-Edited Human Embryonic Stem Cells. 2016 , 6, 109-20		19
1427	In vivo blunt-end cloning through CRISPR/Cas9-facilitated non-homologous end-joining. 2016 , 44, e76		64
1426	Cas9 Variants Expand the Target Repertoire in <i>Caenorhabditis elegans</i> . 2016 , 202, 381-8		18
1425	Specific Reactivation of Latent HIV-1 by dCas9-SunTag-VP64-mediated Guide RNA Targeting the HIV-1 Promoter. 2016 , 24, 508-21		54
1424	Optimized sgRNA design to maximize activity and minimize off-target effects of CRISPR-Cas9. <i>Nature Biotechnology</i> , 2016 , 34, 184-191	44.5	1790
1423	Highly efficient generation of biallelic reporter gene knock-in mice via CRISPR-mediated genome editing of ESCs. 2016 , 7, 152-6		5
1422	Spell Checking Nature: Versatility of CRISPR/Cas9 for Developing Treatments for Inherited Disorders. 2016 , 98, 90-101		67
1421	Beyond editing: repurposing CRISPR-Cas9 for precision genome regulation and interrogation. 2016 , 17, 5-15		538
1420	Applications of CRISPR-Cas systems in neuroscience. 2016 , 17, 36-44		165
1419	Modeling Alzheimer's disease with human induced pluripotent stem (iPS) cells. 2016 , 73, 13-31		67
1418	A CRISPR-Cas9 gene drive system targeting female reproduction in the malaria mosquito vector <i>Anopheles gambiae</i> . <i>Nature Biotechnology</i> , 2016 , 34, 78-83	44.5	720
1417	Genome Editing for Neuromuscular Diseases. 2016 , 51-79		1
1416	A Traceless Selection: Counter-selection System That Allows Efficient Generation of Transposon and CRISPR-modified T-cell Products. 2016 , 5, e298		2
1415	CRISPR/Cas9: an advanced tool for editing plant genomes. 2016 , 25, 561-73		61
1414	Potential pitfalls of CRISPR/Cas9-mediated genome editing. 2016 , 283, 1218-31		151
1413	Oligonucleotide-Mediated Genome Editing Provides Precision and Function to Engineered Nucleases and Antibiotics in Plants. 2016 , 170, 1917-28		137
1412	Structure and Engineering of <i>Francisella novicida</i> Cas9. 2016 , 164, 950-61		225

1411	Tandem repeat knockout utilizing the CRISPR/Cas9 system in human cells. 2016 , 582, 122-7	3
1410	Efficient Genome Editing in Chicken DF-1 Cells Using the CRISPR/Cas9 System. 2016 , 6, 917-23	19
1409	Chemical and Biophysical Modulation of Cas9 for Tunable Genome Engineering. 2016 , 11, 681-8	72
1408	Efficiency and Inheritance of Targeted Mutagenesis in Maize Using CRISPR-Cas9. 2016 , 43, 25-36	124
1407	Gene Transfection for Stem Cell Therapy. 2016 , 2, 52-61	13
1406	Therapeutic genome editing by combined viral and non-viral delivery of CRISPR system components in vivo. <i>Nature Biotechnology</i> , 2016 , 34, 328-33	44-5 610
1405	Interspecies chimeric complementation for the generation of functional human tissues and organs in large animal hosts. 2016 , 25, 375-84	14
1404	New Transformation Technologies for Trees. 2016 , 31-66	2
1403	Targeted Gene Manipulation in Plants Using the CRISPR/Cas Technology. 2016 , 43, 251-62	41
1402	Targeted genome engineering using designer nucleases: State of the art and practical guidance for application in human pluripotent stem cells. 2016 , 16, 377-86	19
1401	Precise Correction of Disease Mutations in Induced Pluripotent Stem Cells Derived From Patients With Limb Girdle Muscular Dystrophy. 2016 , 24, 685-96	61
1400	Cas-Database: web-based genome-wide guide RNA library design for gene knockout screens using CRISPR-Cas9. 2016 , 32, 2017-23	28
1399	CRISPR/Cas9: A powerful tool for crop genome editing. 2016 , 4, 75-82	98
1398	Correction of the auditory phenotype in C57BL/6N mice via CRISPR/Cas9-mediated homology directed repair. 2016 , 8, 16	86
1397	Genome Editing. 2016 ,	
1396	Chemical Biology Approaches to Genome Editing: Understanding, Controlling, and Delivering Programmable Nucleases. 2016 , 23, 57-73	35
1395	CRISPR-Cas9 Targeting of PCSK9 in Human Hepatocytes In Vivo-Brief Report. 2016 , 36, 783-6	85
1394	Kinetics of the CRISPR-Cas9 effector complex assembly and the role of 3'-terminal segment of guide RNA. 2016 , 44, 2837-45	52

1393	Precision Targeted Mutagenesis via Cas9 Paired Nickases in Rice. 2016 , 57, 1058-68	74
1392	Biosafety of Forest Transgenic Trees. 2016 ,	3
1391	Targeted candidate gene screens using CRISPR/Cas9 technology. 2016 , 135, 89-106	15
1390	Quantitative CRISPR interference screens in yeast identify chemical-genetic interactions and new rules for guide RNA design. 2016 , 17, 45	110
1389	CRISPR-Based Methods for <i>Caenorhabditis elegans</i> Genome Engineering. 2016 , 202, 885-901	156
1388	Strategies to Determine Off-Target Effects of Engineered Nucleases. 2016 , 187-222	
1387	The Development and Use of Zinc-Finger Nucleases. 2016 , 15-28	2
1386	In vivo gene editing in dystrophic mouse muscle and muscle stem cells. 2016 , 351, 407-411	711
1385	Structure of the Sec61 channel opened by a signal sequence. 2016 , 351, 88-91	130
1384	CRISPR/Cas9 advances engineering of microbial cell factories. 2016 , 34, 44-59	152
1383	Highly efficient CRISPR mutagenesis by microhomology-mediated end joining in <i>Aspergillus fumigatus</i> . 2016 , 86, 47-57	149
1382	High content analysis platform for optimization of lipid mediated CRISPR-Cas9 delivery strategies in human cells. 2016 , 34, 143-158	18
1381	Genome Editing in Human Pluripotent Stem Cells: Approaches, Pitfalls, and Solutions. 2016 , 18, 53-65	81
1380	Nuclease Target Site Selection for Maximizing On-target Activity and Minimizing Off-target Effects in Genome Editing. 2016 , 24, 475-87	87
1379	High-fidelity CRISPR-Cas9 nucleases with no detectable genome-wide off-target effects. 2016 , 529, 490-5	1600
1378	Inhibiting cyprinid herpesvirus-3 replication with CRISPR/Cas9. 2016 , 38, 573-8	5
1377	Synthetic RNA Polymerase III Promoters Facilitate High-Efficiency CRISPR-Cas9-Mediated Genome Editing in <i>Yarrowia lipolytica</i> . 2016 , 5, 356-9	230
1376	Creating and evaluating accurate CRISPR-Cas9 scalpels for genomic surgery. 2016 , 13, 41-50	84

1375	Programming Biology: Expanding the Toolset for the Engineering of Transcription. 2016 , 1-64	2
1374	The long noncoding RNA Gm15055 represses Hoxa gene expression by recruiting PRC2 to the gene cluster. 2016 , 44, 2613-27	32
1373	Embryonic Stem Cell Protocols. 2016 ,	
1372	Rationally engineered Cas9 nucleases with improved specificity. 2016 , 351, 84-8	1487
1371	Definitive localization of intracellular proteins: Novel approach using CRISPR-Cas9 genome editing, with glucose 6-phosphate dehydrogenase as a model. 2016 , 494, 55-67	4
1370	Orthogonal Modular Gene Repression in Escherichia coli Using Engineered CRISPR/Cas9. 2016 , 5, 81-8	40
1369	Origins of Programmable Nucleases for Genome Engineering. 2016 , 428, 963-89	173
1368	Controlling transcription in human pluripotent stem cells using CRISPR-effectors. 2016 , 101, 36-42	13
1367	Synthetic Biology. 2016 ,	1
1366	Evaluation of TCR Gene Editing Achieved by TALENs, CRISPR/Cas9, and megaTAL Nucleases. 2016 , 24, 570-81	125
1365	Efficient genomic correction methods in human iPS cells using CRISPR-Cas9 system. 2016 , 101, 27-35	45
1364	Application of genome editing technologies to the study and treatment of hematological disease. 2016 , 60, 122-134	11
1363	Transcriptional Regulation with CRISPR/Cas9 Effectors in Mammalian Cells. 2016 , 1358, 43-57	18
1362	Functional and Genetic Analysis of Spectraplakins in Drosophila. 2016 , 569, 373-405	10
1361	Plant-pathogen interactions: toward development of next-generation disease-resistant plants. 2017 , 37, 229-237	45
1360	CRISPR-Cas9 technology: applications and human disease modelling. 2017 , 16, 4-12	25
1359	Applications of the CRISPR/Cas9 system in murine cancer modeling. 2017 , 16, 25-33	11
1358	Targeted genome regulation via synthetic programmable transcriptional regulators. 2017 , 37, 429-440	18

1357	TALENs and CRISPR/Cas9 fuel genetically engineered clinically relevant <i>Xenopus tropicalis</i> tumor models. 2017 , 55, e23005	20
1356	Profiling single-guide RNA specificity reveals a mismatch sensitive core sequence. 2017 , 7, 40638	54
1355	CRISPR/Cas9 in insects: Applications, best practices and biosafety concerns. 2017 , 98, 245-257	75
1354	Precise and efficient scarless genome editing in stem cells using CORRECT. 2017 , 12, 329-354	51
1353	The application of CRISPR technology to high content screening in primary neurons. 2017 , 80, 170-179	9
1352	Novel Thrombotic Function of a Human SNP in STXBP5 Revealed by CRISPR/Cas9 Gene Editing in Mice. 2017 , 37, 264-270	19
1351	Towards a CRISPR view of early human development: applications, limitations and ethical concerns of genome editing in human embryos. 2017 , 144, 3-7	30
1350	Characterization of the interplay between DNA repair and CRISPR/Cas9-induced DNA lesions at an endogenous locus. 2017 , 8, 13905	109
1349	CRISPR/Cas9 Editing of the Mutant Huntingtin Allele In Vitro and In Vivo. 2017 , 25, 12-23	166
1348	Single Cas9 nickase induced generation of NRAMP1 knockin cattle with reduced off-target effects. 2017 , 18, 13	119
1347	Visualization of aging-associated chromatin alterations with an engineered TALE system. 2017 , 27, 483-504	36
1346	Cas9 Ribonucleoprotein Delivery via Microfluidic Cell-Deformation Chip for Human T-Cell Genome Editing and Immunotherapy. 2017 , 1, e1600007	25
1345	Application of the CRISPR gene-editing technique in insect functional genome studies 1a review. 2017 , 162, 124-132	15
1344	Transgenic Clustered Regularly Interspaced Short Palindromic Repeat/Cas9-Mediated Viral Gene Targeting for Antiviral Therapy of <i>Bombyx mori</i> Nucleopolyhedrovirus. 2017 , 91,	43
1343	Knock-in strategy at 3'-end of Crx gene by CRISPR/Cas9 system shows the gene expression profiles during human photoreceptor differentiation. 2017 , 22, 250-264	8
1342	A Scalable Epitope Tagging Approach for High Throughput ChIP-Seq Analysis. 2017 , 6, 1034-1042	12
1341	ARID2 modulates DNA damage response in human hepatocellular carcinoma cells. 2017 , 66, 942-951	40
1340	Organoid technologies meet genome engineering. 2017 , 18, 367-376	42

1339	Genome editing using FACS enrichment of nuclease-expressing cells and indel detection by amplicon analysis. 2017 , 12, 581-603	69
1338	Optimization of the production of knock-in alleles by CRISPR/Cas9 microinjection into the mouse zygote. 2017 , 7, 42661	38
1337	A fast and reliable strategy to generate TALEN-mediated gene knockouts in the diatom <i>Phaeodactylum tricornutum</i> . 2017 , 23, 186-195	47
1336	Variant-aware saturating mutagenesis using multiple Cas9 nucleases identifies regulatory elements at trait-associated loci. 2017 , 49, 625-634	73
1335	Cre/lox-Recombinase-Mediated Cassette Exchange for Reversible Site-Specific Genomic Targeting of the Disease Vector, <i>Aedes aegypti</i> . 2017 , 7, 43883	13
1334	CREB Signaling Is Involved in Rett Syndrome Pathogenesis. 2017 , 37, 3671-3685	38
1333	The Impact of DNA Topology and Guide Length on Target Selection by a Cytosine-Specific Cas9. 2017 , 6, 1103-1113	17
1332	Reliable CRISPR/Cas9 Genome Engineering in Using a Single Efficient sgRNA and an Easily Recognizable Phenotype. 2017 , 7, 1429-1437	48
1331	Application of CRISPR/Cas9 in plant biology. 2017 , 7, 292-302	94
1330	Gene editing in mouse zygotes using the CRISPR/Cas9 system. 2017 , 121-122, 55-67	30
1329	Promoting Cas9 degradation reduces mosaic mutations in non-human primate embryos. 2017 , 7, 42081	79
1328	Efficient Genome Editing in the Oomycete <i>Phytophthora sojae</i> Using CRISPR/Cas9. 2017 , 44, 21A.1.1-21A.1.26	44
1327	Foxn1- β t transcriptional axis controls CD8 T-cell production in the thymus. 2017 , 8, 14419	29
1326	What rheumatologists need to know about CRISPR/Cas9. 2017 , 13, 205-216	14
1325	CRISPR/Cas9-mediated gene manipulation to create single-amino-acid-substituted and floxed mice with a cloning-free method. 2017 , 7, 42244	34
1324	Enhancement of single guide RNA transcription for efficient CRISPR/Cas-based genomic engineering. 2017 , 60, 537-545	9
1323	Transgenic line for the identification of cholinergic release sites in. 2017 , 220, 1405-1410	19
1322	Gene Editing With CRISPR/Cas9 RNA-Directed Nuclease. 2017 , 120, 876-894	49

1321	Genome editing for inborn errors of metabolism: advancing towards the clinic. 2017 , 15, 43	30
1320	Approaches to Reduce CRISPR Off-Target Effects for Safer Genome Editing. 2017 , 22, 7-13	15
1319	Targeted mutagenesis in the medicinal plant <i>Salvia miltiorrhiza</i> . 2017 , 7, 43320	91
1318	GuideScan software for improved single and paired CRISPR guide RNA design. <i>Nature Biotechnology</i> , 2017 , 35, 347-349	44.5 119
1317	MARK4 inhibits Hippo signaling to promote proliferation and migration of breast cancer cells. 2017 , 18, 420-436	65
1316	Mutagenesis and Transgenesis in Zebrafish. 2017 , 1-31	1
1315	Efficient genome editing in the mouse brain by local delivery of engineered Cas9 ribonucleoprotein complexes. <i>Nature Biotechnology</i> , 2017 , 35, 431-434	44.5 191
1314	Therapeutic genome engineering via CRISPR-Cas systems. 2017 , 9, e1380	17
1313	Precision genome editing using CRISPR-Cas9 and linear repair templates in <i>C. elegans</i> . 2017 , 121-122, 86-93	88
1312	CRISPR/Cas9: Transcending the Reality of Genome Editing. 2017 , 7, 211-222	63
1311	Plastin increases cortical connectivity to facilitate robust polarization and timely cytokinesis. 2017 , 216, 1371-1386	53
1310	CRISPR/Cas9-mediated deletion of lncRNA Gm26878 in the distant Foxf1 enhancer region. 2017 , 28, 275-282	13
1309	Primary cilia regulate the osmotic stress response of renal epithelial cells through TRPM3. 2017 , 312, F791-F805	15
1308	Generation of heritable germline mutations in the jewel wasp <i>Nasonia vitripennis</i> using CRISPR/Cas9. 2017 , 7, 901	47
1307	Advancing chimeric antigen receptor T cell therapy with CRISPR/Cas9. 2017 , 8, 634-643	64
1306	RABL2 interacts with the intraflagellar transport-B complex and CEP19 and participates in ciliary assembly. 2017 , 28, 1652-1666	55
1305	Cell competition with normal epithelial cells promotes apical extrusion of transformed cells through metabolic changes. 2017 , 19, 530-541	112
1304	Marker-free coselection for CRISPR-driven genome editing in human cells. 2017 , 14, 615-620	89

1303	A CRISPR toolbox to study virus-host interactions. 2017 , 15, 351-364	99
1302	CRISPR-Cas9 Targeted Mutagenesis Leads to Simultaneous Modification of Different Homoeologous Gene Copies in Polyploid Oilseed Rape (). 2017 , 174, 935-942	167
1301	Relationship between somatic mosaicism of Pax6 mutation and variable developmental eye abnormalities-an analysis of CRISPR genome-edited mouse embryos. 2017 , 7, 53	20
1300	High-throughput biochemical profiling reveals sequence determinants of dCas9 off-target binding and unbinding. 2017 , 114, 5461-5466	115
1299	BLISS is a versatile and quantitative method for genome-wide profiling of DNA double-strand breaks. 2017 , 8, 15058	203
1298	Integrase-Deficient Lentiviral Vector as an All-in-One Platform for Highly Efficient CRISPR/Cas9-Mediated Gene Editing. 2017 , 5, 153-164	66
1297	Tetraspanin microdomains control localized protein kinase C signaling in B cells. 2017 , 10,	23
1296	CRISPR/Cas9: at the cutting edge of hepatology. 2017 , 66, 1329-1340	26
1295	A Wnt-producing niche drives proliferative potential and progression in lung adenocarcinoma. 2017 , 545, 355-359	190
1294	Harnessing the Potential of Human Pluripotent Stem Cells and Gene Editing for the Treatment of Retinal Degeneration. 2017 , 3, 112-123	22
1293	Targeting genomic rearrangements in tumor cells through Cas9-mediated insertion of a suicide gene. <i>Nature Biotechnology</i> , 2017 , 35, 543-550	44.5 64
1292	Mapping the genomic landscape of CRISPR-Cas9 cleavage. 2017 , 14, 600-606	213
1291	Human phosphatase CDC14A regulates actin organization through dephosphorylation of epithelial protein lost in neoplasm. 2017 , 114, 5201-5206	17
1290	CRISPR/Cas9-Directed Reassignment of the GATA1 Initiation Codon in K562 Cells to Recapitulate AML in Down Syndrome. 2017 , 7, 288-298	6
1289	Quantitative assessment of timing, efficiency, specificity and genetic mosaicism of CRISPR/Cas9-mediated gene editing of hemoglobin beta gene in rhesus monkey embryos. 2017 , 26, 2678-2689 ¹⁷	
1288	The CRISPR/Cas9 system: Their delivery, in vivo and ex vivo applications and clinical development by startups. 2017 , 33, 1035-1045	27
1287	CRISPR/Cas-Mediated In Planta Gene Targeting. 2017 , 1610, 3-11	5
1286	Repurposing a Two-Component System-Based Biosensor for the Killing of <i>Vibrio cholerae</i> . 2017 , 6, 1403-1415	43

1285	Dramatic Improvement of CRISPR/Cas9 Editing in by Increased Single Guide RNA Expression. 2017 , 2,	51
1284	Structural basis of CRISPR-SpyCas9 inhibition by an anti-CRISPR protein. 2017 , 546, 436-439	158
1283	CRISPR/Cas9-loxP-Mediated Gene Editing as a Novel Site-Specific Genetic Manipulation Tool. 2017 , 7, 378-386	22
1282	CRISPR-Cas9-mediated multiplex gene editing in CAR-T cells. 2017 , 27, 154-157	186
1281	Efficient gene targeting in mouse zygotes mediated by CRISPR/Cas9-protein. 2017 , 26, 263-277	18
1280	A mutation in the PSST homologue of complex I (NADH:ubiquinone oxidoreductase) from <i>Tetranychus urticae</i> is associated with resistance to METI acaricides. 2017 , 80, 79-90	50
1279	Multiplex gene editing by CRISPR-Cpf1 using a single crRNA array. <i>Nature Biotechnology</i> , 2017 , 35, 31-3444.5	517
1278	Cellular function reinstatement of offspring red blood cells cloned from the sickle cell disease patient blood post CRISPR genome editing. 2017 , 10, 119	15
1277	CRISPR/Cas9-mediated genome editing induces exon skipping by alternative splicing or exon deletion. 2017 , 18, 108	103
1276	Developmental history and application of CRISPR in human disease. 2017 , 19, e2963	6
1275	CRISPR system in filamentous fungi: Current achievements and future directions. 2017 , 627, 212-221	45
1274	Mutation of the inhibitory ethanol site in GABA _A receptors promotes tolerance to ethanol-induced motor incoordination. 2017 , 123, 201-209	19
1273	CRISPR-Cas9 mediated LAG-3 disruption in CAR-T cells. 2017 , 11, 554-562	116
1272	Application of CRISPR-Cas9 in eye disease. 2017 , 161, 116-123	7
1271	GUIDEseq: a bioconductor package to analyze GUIDE-Seq datasets for CRISPR-Cas nucleases. 2017 , 18, 379	21
1270	Targeted Disruption of V600E-Mutant BRAF Gene by CRISPR-Cpf1. 2017 , 8, 450-458	19
1269	Antiviral Goes Viral: Harnessing CRISPR/Cas9 to Combat Viruses in Humans. 2017 , 25, 833-850	50
1268	Genome editing in <i>Drosophila melanogaster</i> : from basic genome engineering to the multipurpose CRISPR-Cas9 system. 2017 , 60, 476-489	9

1267	CRISPR/Cas9-Mediated Three Nucleotide Insertion Corrects a Deletion Mutation in MRP1/ABCC1 and Restores Its Proper Folding and Function. 2017 , 7, 429-438	4
1266	RNA Activation. 2017 ,	1
1265	Mammalian synthetic biology in the age of genome editing and personalized medicine. 2017 , 40, 57-64	12
1264	Harnessing the natural diversity and in vitro evolution of Cas9 to expand the genome editing toolbox. 2017 , 37, 88-94	21
1263	Using nanoBRET and CRISPR/Cas9 to monitor proximity to a genome-edited protein in real-time. 2017 , 7, 3187	33
1262	Infection Exposure Promotes Precursor B-cell Leukemia via Impaired H3K4 Demethylases. 2017 , 77, 4365-4377	43
1261	CRISPR/Cas9-Based Genome Editing for Disease Modeling and Therapy: Challenges and Opportunities for Nonviral Delivery. 2017 , 117, 9874-9906	287
1260	Genome Editing in Animals. 2017 ,	1
1259	Parkin regulation of CHOP modulates susceptibility to cardiac endoplasmic reticulum stress. 2017 , 7, 2093	24
1258	Progress and Application of CRISPR/Cas Technology in Biological and Biomedical Investigation. 2017 , 118, 3061-3071	6
1257	Treatment of Dyslipidemia Using CRISPR/Cas9 Genome Editing. 2017 , 19, 32	6
1256	One-step generation of complete gene knockout mice and monkeys by CRISPR/Cas9-mediated gene editing with multiple sgRNAs. 2017 , 27, 933-945	110
1255	Improving the DNA specificity and applicability of base editing through protein engineering and protein delivery. 2017 , 8, 15790	240
1254	CRISPR-Cas9-induced t(11;19)/MLL-ENL translocations initiate leukemia in human hematopoietic progenitor cells. 2017 , 102, 1558-1566	42
1253	Hit and go CAS9 delivered through a lentiviral based self-limiting circuit. 2017 , 8, 15334	55
1252	Chd2 regulates chromatin for proper gene expression toward differentiation in mouse embryonic stem cells. 2017 , 45, 8758-8772	19
1251	An episomal vector-based CRISPR/Cas9 system for highly efficient gene knockout in human pluripotent stem cells. 2017 , 7, 2320	43
1250	Use of the CRISPR-Cas9 system for genome editing in cultured Drosophila ovarian somatic cells. 2017 , 126, 186-192	4

1249	Mucin 1 protects against severe <i>Streptococcus pneumoniae</i> infection. 2017 , 8, 1631-1642	13
1248	Using CRISPR-Cas9 to Generate Gene-Corrected Autologous iPSCs for the Treatment of Inherited Retinal Degeneration. 2017 , 25, 1999-2013	84
1247	Analysing the outcome of CRISPR-aided genome editing in embryos: Screening, genotyping and quality control. 2017 , 121-122, 68-76	52
1246	The CRISPR-Cas9 system in <i>Neisseria</i> spp. 2017 , 75,	9
1245	Allele-specific ablation rescues electrophysiological abnormalities in a human iPSC cell model of long-QT syndrome with a <i>CALM2</i> mutation. 2017 , 26, 1670-1677	58
1244	CRISPR/Cas9-mediated efficient genome editing via blastospore-based transformation in entomopathogenic fungus <i>Beauveria bassiana</i> . 2017 , 8, 45763	40
1243	Reprogramming MHC specificity by CRISPR-Cas9-assisted cassette exchange. 2017 , 7, 45775	9
1242	Temperature effect on CRISPR-Cas9 mediated genome editing. 2017 , 44, 199-205	42
1241	Functional dissection of NEAT1 using genome editing reveals substantial localization of the NEAT1_1 isoform outside paraspeckles. 2017 , 23, 872-881	77
1240	Purified Cas9 Fusion Proteins for Advanced Genome Manipulation. 2017 , 1, 1600052	9
1239	Genome-scale CRISPR-Cas9 knockout and transcriptional activation screening. 2017 , 12, 828-863	459
1238	Delivery technologies for genome editing. 2017 , 16, 387-399	309
1237	Monocrotaline Induces Endothelial Injury and Pulmonary Hypertension by Targeting the Extracellular Calcium-Sensing Receptor. 2017 , 6,	34
1236	Genome Engineering of Virulent Lactococcal Phages Using CRISPR-Cas9. 2017 , 6, 1351-1358	58
1235	Genome-wide Specificity of Highly Efficient TALENs and CRISPR/Cas9 for T Cell Receptor Modification. 2017 , 4, 213-224	29
1234	Evaluation and rational design of guide RNAs for efficient CRISPR/Cas9-mediated mutagenesis in <i>Ciona</i> . 2017 , 425, 8-20	38
1233	Functional variomics and network perturbation: connecting genotype to phenotype in cancer. 2017 , 18, 395-410	60
1232	Precision Genome Editing for Systems Biology [A Temporal Perspective]. 2017 , 367-392	

1231	Targeted activation of diverse CRISPR-Cas systems for mammalian genome editing via proximal CRISPR targeting. 2017 , 8, 14958	87
1230	Rhesus iPSC Safe Harbor Gene-Editing Platform for Stable Expression of Transgenes in Differentiated Cells of All Germ Layers. 2017 , 25, 44-53	15
1229	CRISPR-Cas9 Structures and Mechanisms. 2017 , 46, 505-529	732
1228	The native TRPP2-dependent channel of murine renal primary cilia. 2017 , 312, F96-F108	41
1227	CRISPRtools: a flexible computational platform for performing CRISPR/Cas9 experiments in the mouse. 2017 , 28, 283-290	5
1226	CRISPR-Cas9 cleavage efficiency correlates strongly with target-sgRNA folding stability: from physical mechanism to off-target assessment. 2017 , 7, 143	43
1225	Targeted mutagenesis in cotton (<i>Gossypium hirsutum</i> L.) using the CRISPR/Cas9 system. 2017 , 7, 44304	72
1224	Loss of LMOD1 impairs smooth muscle cytocontractility and causes megacystis microcolon intestinal hypoperistalsis syndrome in humans and mice. 2017 , 114, E2739-E2747	62
1223	Functional interrogation of non-coding DNA through CRISPR genome editing. 2017 , 121-122, 118-129	19
1222	Guide Picker is a comprehensive design tool for visualizing and selecting guides for CRISPR experiments. 2017 , 18, 167	15
1221	Editing the genome of hiPSC with CRISPR/Cas9: disease models. 2017 , 28, 348-364	44
1220	Genome engineering for breaking barriers in lignocellulosic bioethanol production. 2017 , 74, 1080-1107	26
1219	Inhibition of demethylase KDM6B sensitizes diffuse large B-cell lymphoma to chemotherapeutic drugs. 2017 , 102, 373-380	36
1218	Detection of on-target and off-target mutations generated by CRISPR/Cas9 and other sequence-specific nucleases. 2017 , 35, 95-104	192
1217	Cornerstones of CRISPR-Cas in drug discovery and therapy. 2017 , 16, 89-100	274
1216	Genome engineering in human pluripotent stem cells. 2017 , 15, 56-67	1
1215	ZEB1 is neither sufficient nor required for epithelial-mesenchymal transition in LS174T colorectal cancer cells. 2017 , 482, 1226-1232	16
1214	Probing the structural dynamics of the CRISPR-Cas9 RNA-guided DNA-cleavage system by coarse-grained modeling. 2017 , 85, 342-353	14

1213	Synthetic Biology-The Synthesis of Biology. 2017 , 56, 6396-6419	103
1212	Intraflagellar transport-A complex mediates ciliary entry and retrograde trafficking of ciliary G protein-coupled receptors. 2017 , 28, 429-439	69
1211	Synthetische Biologie Die Synthese der Biologie. 2017 , 129, 6494-6519	7
1210	Rewiring human cellular input-output using modular extracellular sensors. 2017 , 13, 202-209	91
1209	IL-10 production in murine IgM CD138 cells is driven by Blimp-1 and downregulated in class-switched cells. 2017 , 47, 493-503	13
1208	Genetics and Genomics of Setaria. 2017 ,	7
1207	Single-Molecule Insight Into Target Recognition by CRISPR-Cas Complexes. 2017 , 582, 239-273	13
1206	C2c1-sgRNA Complex Structure Reveals RNA-Guided DNA Cleavage Mechanism. 2017 , 65, 310-322	88
1205	Mathematical and computational analysis of CRISPR Cas9 sgRNA off-target homologies. 2017 , 10, 1750085	1
1204	Application of a novel HiBiT peptide tag for monitoring ATF4 protein expression in Neuro2a cells. 2017 , 12, 40-45	22
1203	Molecular tools for gene manipulation in filamentous fungi. 2017 , 101, 8063-8075	38
1202	High-Throughput Approaches to Pinpoint Function within the Noncoding Genome. 2017 , 68, 44-59	37
1201	Multiplex CRISPR/Cas9-Based Genome Editing in Human Hematopoietic Stem Cells Models Clonal Hematopoiesis and Myeloid Neoplasia. 2017 , 21, 547-555.e8	43
1200	The chemistry of Cas9 and its CRISPR colleagues. 2017 , 1,	69
1199	Designing broad-spectrum anti-HIV-1 gRNAs to target patient-derived variants. 2017 , 7, 14413	22
1198	Genome editing technologies to fight infectious diseases. 2017 , 15, 1001-1013	9
1197	CRISPR/Cas9 Genome-Editing System in Human Stem Cells: Current Status and Future Prospects. 2017 , 9, 230-241	61
1196	LAMTOR/Ragulator is a negative regulator of Arl8b- and BORC-dependent late endosomal positioning. 2017 , 216, 4199-4215	63

1195	Preclinical modeling highlights the therapeutic potential of hematopoietic stem cell gene editing for correction of SCID-X1. 2017 , 9,	116
1194	Genome Editing in Neurosciences. 2017 ,	2
1193	Enhancer connectome in primary human cells identifies target genes of disease-associated DNA elements. 2017 , 49, 1602-1612	253
1192	A Scaled Framework for CRISPR Editing of Human Pluripotent Stem Cells to Study Psychiatric Disease. 2017 , 9, 1315-1327	7
1191	Random mutagenesis and precise gene editing technologies: applications in algal crop improvement and functional genomics. 2017 , 52, 466-481	9
1190	TDP1 is required for efficient non-homologous end joining in human cells. 2017 , 60, 40-49	25
1189	CRISPR/Cas9-mediated gene knockout is insensitive to target copy number but is dependent on guide RNA potency and Cas9/sgRNA threshold expression level. 2017 , 45, 12039-12053	41
1188	In Planta Processing of the SpCas9-gRNA Complex. 2017 , 58, 1857-1867	27
1187	Heterozygous loss of TSC2 alters p53 signaling and human stem cell reprogramming. 2017 , 26, 4629-4641	16
1186	Gene therapy for inherited retinal degenerations: initial successes and future challenges. 2017 , 14, 051002	16
1185	An Efficient Method for Generation of Knockout Human Embryonic Stem Cells Using CRISPR/Cas9 System. 2017 , 26, 1521-1527	6
1184	A review on advanced methods in plant gene targeting. 2017 , 15, 317-321	9
1183	Broad Targeting Specificity during Bacterial Type III CRISPR-Cas Immunity Constrains Viral Escape. 2017 , 22, 343-353.e3	81
1182	Deletion of Cytoplasmic Double-Stranded RNA Sensors Does Not Uncover Viral Small Interfering RNA Production in Human Cells. 2017 , 2,	15
1181	CRISPR/Cas9-Enabled Multiplex Genome Editing and Its Application. 2017 , 149, 111-132	47
1180	Involvement of posttranscriptional regulation of in the emergence of circadian clock oscillation during mouse development. 2017 , 114, E7479-E7488	38
1179	Genome Editing and Directed Differentiation of hPSCs for Interrogating Lineage Determinants in Human Pancreatic Development. 2017 ,	3
1178	Postnatal Cardiac Gene Editing Using CRISPR/Cas9 With AAV9-Mediated Delivery of Short Guide RNAs Results in Mosaic Gene Disruption. 2017 , 121, 1168-1181	36

1177	Cancer-derived exosomes as a delivery platform of CRISPR/Cas9 confer cancer cell tropism-dependent targeting. 2017 , 266, 8-16	196
1176	Lenalidomide modulates gene expression in human ABC-DLBCL cells by regulating IKAROS interaction with an intronic control region of SPIB. 2017 , 56, 46-57.e1	8
1175	Genome editing reveals a role for OCT4 in human embryogenesis. 2017 , 550, 67-73	210
1174	Control of actin polymerization via the coincidence of phosphoinositides and high membrane curvature. 2017 , 216, 3745-3765	50
1173	Exploiting off-targeting in guide-RNAs for CRISPR systems for simultaneous editing of multiple genes. 2017 , 591, 3288-3295	9
1172	Targeted Genome Replacement via Homology-directed Repair in Non-dividing Cardiomyocytes. 2017 , 7, 9363	24
1171	Glia-specific enhancers and chromatin structure regulate NFIA expression and glioma tumorigenesis. 2017 , 20, 1520-1528	24
1170	Tumor cell-targeted delivery of CRISPR/Cas9 by aptamer-functionalized lipopolymer for therapeutic genome editing of VEGFA in osteosarcoma. 2017 , 147, 68-85	100
1169	Crystal structure of the human lysosomal mTORC1 scaffold complex and its impact on signaling. 2017 , 358, 377-381	62
1168	Combining Comprehensive Analysis of Off-Site Lambda Phage Integration with a CRISPR-Based Means of Characterizing Downstream Physiology. 2017 , 8,	0
1167	Loss Promotes Gliomagenesis via Aberrant Neural Stem Cell Proliferation and Differentiation. 2017 , 77, 6097-6108	27
1166	PRC2 specifies ectoderm lineages and maintains pluripotency in primed but not naïve ESCs. 2017 , 8, 672	55
1165	The promise and peril of CRISPR gene drives: Genetic variation and inbreeding may impede the propagation of gene drives based on the CRISPR genome editing technology. 2017 , 39, 1700109	14
1164	Thyroid hormone receptor beta and NCOA4 regulate terminal erythrocyte differentiation. 2017 , 114, 10107-10112	24
1163	DC2 and KCP2 mediate the interaction between the oligosaccharyltransferase and the ER translocon. 2017 , 216, 3625-3638	29
1162	Identifying DNase I hypersensitive sites as driver distal regulatory elements in breast cancer. 2017 , 8, 436	14
1161	A Standard Methodology to Examine On-site Mutagenicity As a Function of Point Mutation Repair Catalyzed by CRISPR/Cas9 and SsODN in Human Cells. 2017 ,	3
1160	CRISPR-Mediated Base Editing Enables Efficient Disruption of Eukaryotic Genes through Induction of STOP Codons. 2017 , 67, 1068-1079.e4	191

1159	Safety, Security, and Policy Considerations for Plant Genome Editing. 2017 , 149, 215-241	20
1158	Beyond Native Cas9: Manipulating Genomic Information and Function. 2017 , 35, 983-996	54
1157	Generation of apoptosis-resistant HEK293 cells with CRISPR/Cas mediated quadruple gene knockout for improved protein and virus production. 2017 , 114, 2539-2549	7
1156	CRISPR/Cas9-Directed Gene Editing for the Generation of Loss-of-Function Mutants in High-Throughput Zebrafish F Screens. 2017 , 119, 31.9.1-31.9.22	16
1155	CRISPR/Cas9-Mediated Scanning for Regulatory Elements Required for HPRT1 Expression via Thousands of Large, Programmed Genomic Deletions. 2017 , 101, 192-205	87
1154	Dynamics of in vivo ASC speck formation. 2017 , 216, 2891-2909	40
1153	Contribution of the clathrin adaptor AP-1 subunit μ 1 to acidic cluster protein sorting. 2017 , 216, 2927-2943	25
1152	Implications of human genetic variation in CRISPR-based therapeutic genome editing. 2017 , 23, 1095-1101	75
1151	Progress and prospects in plant genome editing. 2017 , 3, 17107	264
1150	Correction of a pathogenic gene mutation in human embryos. 2017 , 548, 413-419	567
1149	Towards CRISPR/Cas crops - bringing together genomics and genome editing. 2017 , 216, 682-698	165
1148	Human Germline Genome Editing. 2017 , 101, 167-176	105
1147	Genome editing in crop improvement: Present scenario and future prospects. 2017 , 31, 453-559	42
1146	Sugarcane Biotechnology: Challenges and Prospects. 2017 ,	3
1145	Optimised metrics for CRISPR-KO screens with second-generation gRNA libraries. 2017 , 7, 7384	25
1144	Recent advances in CRISPR/Cas mediated genome editing for crop improvement. 2017 , 11, 193-207	24
1143	Modeling of TREX1-Dependent Autoimmune Disease using Human Stem Cells Highlights L1 Accumulation as a Source of Neuroinflammation. 2017 , 21, 319-331.e8	158
1142	Cas9-mediated excision of disrupts endoderm development, pharynx formation and oral-aboral patterning. 2017 , 144, 2951-2960	20

1141	CRISPR-Cas9 System as a Genome Editing Tool in Sugarcane. 2017 , 155-172	3
1140	Targeted genome editing in <i>Caenorhabditis elegans</i> using CRISPR/Cas9. 2017 , 6, e287	10
1139	CRISPR/Cas-mediated gene editing using purified protein in <i>Drosophila suzukii</i> . 2017 , 164, 350-362	24
1138	Direct Generation of Conditional Alleles Using CRISPR/Cas9 in Mouse Zygotes. 2017 , 1642, 21-35	13
1137	Disabling Cas9 by an anti-CRISPR DNA mimic. 2017 , 3, e1701620	216
1136	Genome-scale activation screen identifies a lncRNA locus regulating a gene neighbourhood. 2017 , 548, 343-346	243
1135	Ethanol Exposure Regulates Expression via Histone Deacetylation at the Promoter in Cultured Cortical Neurons. 2017 , 363, 1-11	16
1134	Suppression of HBV replication by the expression of nickase- and nuclease dead-Cas9. 2017 , 7, 6122	11
1133	Characterization of noncoding regulatory DNA in the human genome. <i>Nature Biotechnology</i> , 2017 , 35, 732-746	44-5 50
1132	Human genetic variation alters CRISPR-Cas9 on- and off-targeting specificity at therapeutically implicated loci. 2017 , 114, E11257-E11266	66
1131	Genome Editing Principles and Applications for Functional Genomics Research and Crop Improvement. 2017 , 36, 291-309	73
1130	In situ functional dissection of RNA cis-regulatory elements by multiplex CRISPR-Cas9 genome engineering. 2017 , 8, 2109	7
1129	Therapeutic relevance of the PP2A-B55 inhibitory kinase MASTL/Greatwall in breast cancer. 2018 , 25, 828-840	53
1128	Structural basis for genome wide recognition of 5-bp GC motifs by SMAD transcription factors. 2017 , 8, 2070	46
1127	A Protocol for the Production of Integrase-deficient Lentiviral Vectors for CRISPR/Cas9-mediated Gene Knockout in Dividing Cells. 2017 ,	9
1126	Programmable DNA looping using engineered bivalent dCas9 complexes. 2017 , 8, 1628	43
1125	Techniques and strategies employing engineered transcription factors. 2017 , 4, 152-162	0
1124	Towards personalised allele-specific CRISPR gene editing to treat autosomal dominant disorders. 2017 , 7, 16174	46

1123	Genome Editing: The Recent History and Perspective in Cardiovascular Diseases. 2017 , 70, 2808-2821	14
1122	CRISPR/Cas9-Based Safe-Harbor Gene Editing in Rhesus iPSCs. 2017 , 43, 5A.11.1-5A.11.14	4
1121	Antibiotics and Antibiotics Resistance Genes in Soils. 2017 ,	4
1120	Precision Medicine, CRISPR, and Genome Engineering. 2017 ,	0
1119	A Transgenic Core Facility's Experience in Genome Editing Revolution. 2017 , 1016, 75-90	20
1118	CRISPR: From Prokaryotic Immune Systems to Plant Genome Editing Tools. 2017 , 1016, 101-120	1
1117	Hit-and-run epigenetic editing prevents senescence entry in primary breast cells from healthy donors. 2017 , 8, 1450	63
1116	Genotoxicity and Biochemical Toxicity of Soil Antibiotics to Earthworms. 2017 , 327-340	1
1115	In Vivo Knockout of the Vegfa Gene by Lentiviral Delivery of CRISPR/Cas9 in Mouse Retinal Pigment Epithelium Cells. 2017 , 9, 89-99	40
1114	CRISPR/Cas9-Mediated Deletion of CTG Expansions Recovers Normal Phenotype in Myogenic Cells Derived from Myotonic Dystrophy 1 Patients. 2017 , 9, 337-348	44
1113	Genetic engineering as a tool for the generation of mouse models to understand disease phenotypes and gene function. 2017 , 48, 228-233	
1112	Identifying synthetic lethal targets using CRISPR/Cas9 system. 2017 , 131, 66-73	14
1111	A Novel Rat Model of Nonalcoholic Fatty Liver Disease Constructed Through CRISPR/Cas-Based Hydrodynamic Injection. 2017 , 59, 365-373	10
1110	Generation of complement protein C3 deficient pigs by CRISPR/Cas9-mediated gene targeting. 2017 , 7, 5009	22
1109	Genome editing: the breakthrough technology for inherited retinal disease?. 2017 , 17, 1245-1254	6
1108	CRISPR/Cas9 editing of Nf1 gene identifies CRMP2 as a therapeutic target in neurofibromatosis type 1-related pain that is reversed by (S)-Lacosamide. 2017 , 158, 2301-2319	52
1107	Type II CRISPR/Cas9 approach in the oncological therapy. 2017 , 36, 80	11
1106	Therapeutic Gene Editing Safety and Specificity. 2017 , 31, 787-795	10

1105	Knocking out of carotenoid catabolic genes in rice fails to boost carotenoid accumulation, but reveals a mutation in strigolactone biosynthesis. 2017 , 36, 1533-1545	22
1104	CRISPR Epigenome Editing of AKAP150 in DRG Neurons Abolishes Degenerative IVD-Induced Neuronal Activation. 2017 , 25, 2014-2027	26
1103	Biodegradable Amino-Ester Nanomaterials for Cas9 mRNA Delivery in Vitro and in Vivo. 2017 , 9, 25481-25487	53
1102	A Critical Analysis of the Role of SNARE Protein SEC22B in Antigen Cross-Presentation. 2017 , 19, 2645-2656	29
1101	Stabilization of Foxp3 expression by CRISPR-dCas9-based epigenome editing in mouse primary T cells. 2017 , 10, 24	68
1100	Massively Parallel Biophysical Analysis of CRISPR-Cas Complexes on Next Generation Sequencing Chips. 2017 , 170, 35-47.e13	62
1099	A Natural Allele of a Transcription Factor in Rice Confers Broad-Spectrum Blast Resistance. 2017 , 170, 114-126.e15	242
1098	Synthetic peptide TEKKRRETVEREKE derived from ezrin induces differentiation of NIH/3T3 fibroblasts. 2017 , 811, 249-259	4
1097	Proof-of-Concept Gene Editing for the Murine Model of Inducible Arginase-1 Deficiency. 2017 , 7, 2585	9
1096	Protein Sam68 regulates the alternative splicing of survivin DEx3. 2017 , 292, 13745-13757	10
1095	CRISPR/Cas9, a universal tool for genomic engineering. 2017 , 7, 440-458	3
1094	Evaluation and Design of Genome-Wide CRISPR/SpCas9 Knockout Screens. 2017 , 7, 2719-2727	211
1093	Comparative analysis of chimeric ZFP-, TALE- and Cas9-piggyBac transposases for integration into a single locus in human cells. 2017 , 45, 8411-8422	28
1092	Multidimensional chemical control of CRISPR-Cas9. 2017 , 13, 9-11	106
1091	CRISPR/Cas9 in zebrafish: an efficient combination for human genetic diseases modeling. 2017 , 136, 1-12	68
1090	CRISPR Guide RNA Validation In Vitro. 2017 , 14, 383-386	8
1089	Eukaryotic Transcriptional and Post-Transcriptional Gene Expression Regulation. 2017 ,	1
1088	Using an Inducible CRISPR-dCas9-KRAB Effector System to Dissect Transcriptional Regulation in Human Embryonic Stem Cells. 2017 , 1507, 221-233	20

1087	Transient transcription in the early embryo sets an epigenetic state that programs postnatal growth. 2017 , 49, 110-118	48
1086	Zygote injection of CRISPR/Cas9 RNA successfully modifies the target gene without delaying blastocyst development or altering the sex ratio in pigs. 2017 , 26, 97-107	35
1085	CRISPR-Based Technologies for the Manipulation of Eukaryotic Genomes. 2017 , 168, 20-36	545
1084	CRISPR/Cas9, a powerful tool to target human herpesviruses. 2017 , 19, e12694	35
1083	The Impact of Chromatin Dynamics on Cas9-Mediated Genome Editing in Human Cells. 2017 , 6, 428-438	82
1082	Adaptation of CRISPR nucleases for eukaryotic applications. 2017 , 532, 90-94	7
1081	Efficient Screening of CRISPR/Cas9-Induced Events in Drosophila Using a Co-CRISPR Strategy. 2017 , 7, 87-93	26
1080	Exploring the potential of genome editing CRISPR-Cas9 technology. 2017 , 599, 1-18	90
1079	CRISPR: express delivery to any DNA address. 2017 , 23, 5-11	5
1078	Inactivation of Cancer Mutations Utilizing CRISPR/Cas9. 2017 , 109,	24
1077	Generation of chromosomal deletions in dicotyledonous plants employing a user-friendly genome editing toolkit. 2017 , 89, 155-168	77
1076	Genome editing in cardiovascular diseases. 2017 , 14, 11-20	57
1075	Enhancer RNAs. 2017 ,	1
1074	CRISPR/Cas9 Genome Editing in Embryonic Stem Cells. 2017 , 1468, 221-34	11
1073	Targeted Gene Activation Using RNA-Guided Nucleases. 2017 , 1468, 235-50	4
1072	Efficient targeted multi-allelic mutagenesis in tetraploid potato (<i>Solanum tuberosum</i>) by transient CRISPR-Cas9 expression in protoplasts. 2017 , 36, 117-128	297
1071	Design and Validation of CRISPR/Cas9 Systems for Targeted Gene Modification in Induced Pluripotent Stem Cells. 2017 , 1498, 3-21	5
1070	All-in-One CRISPR-Cas9/FokI-dCas9 Vector-Mediated Multiplex Genome Engineering in Cultured Cells. 2017 , 1498, 41-56	10

1069	CRISPR/Cas9-Mediated Mutagenesis of Human Pluripotent Stem Cells in Defined Xeno-Free E8 Medium. 2017 , 1498, 57-78	5
1068	Paired Design of dCas9 as a Systematic Platform for the Detection of Featured Nucleic Acid Sequences in Pathogenic Strains. 2017 , 6, 211-216	60
1067	Heritability of targeted gene modifications induced by plant-optimized CRISPR systems. 2017 , 74, 1075-1093	34
1066	Precision genome editing in the CRISPR era. 2017 , 95, 187-201	82
1065	CRISPR/Cas9 Immune System as a Tool for Genome Engineering. 2017 , 65, 233-240	59
1064	In Silico Meets In Vivo: Towards Computational CRISPR-Based sgRNA Design. 2017 , 35, 12-21	71
1063	The p53 Family Coordinates Wnt and Nodal Inputs in Mesendodermal Differentiation of Embryonic Stem Cells. 2017 , 20, 70-86	78
1062	The organic anion transporting polypeptide 1a5 is a pivotal transporter for the uptake of microcystin-LR by gonadotropin-releasing hormone neurons. 2017 , 182, 1-10	21
1061	RNA-Generated and Gene-Edited Induced Pluripotent Stem Cells for Disease Modeling and Therapy. 2017 , 232, 1262-1269	11
1060	Characteristics of Genome Editing Mutations in Cereal Crops. 2017 , 22, 38-52	84
1059	β-Catenin promotes tumorigenesis and metastasis of lung adenocarcinoma. 2018 , 39, 809-817	12
1058	Plant genome editing made efficient and easy: targeted mutagenesis using the CRISPR/Cas system. 2017 , 209-214	0
1057	Correction of a Disease Mutation using CRISPR/Cas9-assisted Genome Editing in Japanese Black Cattle. 2017 , 7, 17827	24
1056	TRH Action Is Impaired in Pituitaries of Male IGSF1-Deficient Mice. 2017 , 158, 815-830	26
1055	Monitoring of the spatial and temporal dynamics of BER/SSBR pathway proteins, including MYH, UNG2, MPG, NTH1 and NEIL1-3, during DNA replication. 2017 , 45, 8291-8301	18
1054	Generation of an arrayed CRISPR-Cas9 library targeting epigenetic regulators: from high-content screens to in vivo assays. 2017 , 12, 1065-1075	21
1053	Flexible CRISPR library construction using parallel oligonucleotide retrieval. 2017 , 45, e101	4
1052	Genome Engineering Using Haploid Embryonic Stem Cells. 2017 , 152, 83-94	

1051	Use of Zinc-Finger Nucleases for Crop Improvement. 2017 , 149, 47-63	12
1050	Rescue of high-specificity Cas9 variants using sgRNAs with matched 5' nucleotides. 2017 , 18, 218	52
1049	Gene editing rescue of a novel mutant associated with congenital amegakaryocytic thrombocytopenia. 2017 , 1, 1815-1826	6
1048	Gene correction of reversed Kostmann disease phenotype in patient-specific induced pluripotent stem cells. 2017 , 1, 903-914	15
1047	CRISPR-offfinder: a CRISPR guide RNA design and off-target searching tool for user-defined protospacer adjacent motif. 2017 , 13, 1470-1478	26
1046	Progress in Genome Editing Technology and Its Application in Plants. 2017 , 8, 177	54
1045	Use of Natural Diversity and Biotechnology to Increase the Quality and Nutritional Content of Tomato and Grape. 2017 , 8, 652	32
1044	Gateway-Compatible CRISPR-Cas9 Vectors and a Rapid Detection by High-Resolution Melting Curve Analysis. 2017 , 8, 1171	11
1043	CRISPR/Cas9: A Practical Approach in Date Palm Genome Editing. 2017 , 8, 1469	24
1042	Gene Editing and Crop Improvement Using CRISPR-Cas9 System. 2017 , 8, 1932	177
1041	Production of β -3-galactosyltransferase and cytidine monophosphate-N-acetylneuraminic acid hydroxylase gene double-deficient pigs by CRISPR/Cas9 and handmade cloning. 2017 , 63, 17-26	36
1040	Correction of Monogenic and Common Retinal Disorders with Gene Therapy. 2017 , 8,	29
1039	New Directions for Epigenetics: Application of Engineered DNA-Binding Molecules to Locus-Specific Epigenetic Research. 2017 , 635-652	2
1038	Recent advances in DNA-free editing and precise base editing in plants. 2017 , 1, 161-168	5
1037	CRISPR Genome Engineering for Human Pluripotent Stem Cell Research. 2017 , 7, 4445-4469	18
1036	CRISPR/Cas9. 2017 ,	
1035	Forward and Reverse Genetics to Model Human Diseases in the Mouse. 2017 , 727-752	0
1034	Genome Editing in Plants: An Overview of Tools and Applications. 2017 , 2017, 1-15	58

1033	Whole genome analysis of CRISPR Cas9 sgRNA off-target homologies via an efficient computational algorithm. 2017 , 18, 826	8
1032	May I Cut in? Gene Editing Approaches in Human Induced Pluripotent Stem Cells. 2017 , 6,	30
1031	A Prospective Treatment Option for Lysosomal Storage Diseases: CRISPR/Cas9 Gene Editing Technology for Mutation Correction in Induced Pluripotent Stem Cells. 2017 , 5,	8
1030	Genome Editing Tools in Plants. 2017 , 8,	42
1029	Gene Drive for Mosquito Control: Where Did It Come from and Where Are We Headed?. 2017 , 14,	63
1028	CRISPR/Cas9-Mediated Correction of the FANCD1 Gene in Primary Patient Cells. 2017 , 18,	15
1027	Pofut1 point-mutations that disrupt O-fucosyltransferase activity destabilize the protein and abolish Notch1 signaling during mouse somitogenesis. 2017 , 12, e0187248	10
1026	Removal of Integrated Hepatitis B Virus DNA Using CRISPR-Cas9. 2017 , 7, 91	62
1025	IL-36 β Regulates Tubulointerstitial Inflammation in the Mouse Kidney. 2017 , 8, 1346	14
1024	Engineering Strategies to Decode and Enhance the Genomes of Coral Symbionts. 2017 , 8, 1220	30
1023	Dynamics of Indel Profiles Induced by Various CRISPR/Cas9 Delivery Methods. 2017 , 152, 49-67	15
1022	Simple Meets Single: The Application of CRISPR/Cas9 in Haploid Embryonic Stem Cells. 2017 , 2017, 2601746	3
1021	Cellular Reprogramming, Genome Editing, and Alternative CRISPR Cas9 Technologies for Precise Gene Therapy of Duchenne Muscular Dystrophy. 2017 , 2017, 8765154	23
1020	Modeling Cancer Using CRISPR-Cas9 Technology. 2017 , 905-924	
1019	4.32 Gene Editing Tools. 2017 , 589-599	
1018	Constitutive and activation-dependent phosphorylation of lymphocyte phosphatase-associated phosphoprotein (LPAP). 2017 , 12, e0182468	7
1017	Characterization of host proteins interacting with the lymphocytic choriomeningitis virus L protein. 2017 , 13, e1006758	12
1016	Functional significance of rare neuroligin 1 variants found in autism. 2017 , 13, e1006940	48

1015	Insertional Mutagenesis by CRISPR/Cas9 Ribonucleoprotein Gene Editing in Cells Targeted for Point Mutation Repair Directed by Short Single-Stranded DNA Oligonucleotides. 2017 , 12, e0169350	30
1014	Systematic analysis of transcription start sites in avian development. 2017 , 15, e2002887	22
1013	Scalable Design of Paired CRISPR Guide RNAs for Genomic Deletion. 2017 , 13, e1005341	44
1012	Development of a CRISPR/Cas9 genome editing toolbox for <i>Corynebacterium glutamicum</i> . 2017 , 16, 205	68
1011	Crossing enhanced and high fidelity SpCas9 nucleases to optimize specificity and cleavage. 2017 , 18, 190	72
1010	Perfectly matched 20-nucleotide guide RNA sequences enable robust genome editing using high-fidelity SpCas9 nucleases. 2017 , 18, 191	79
1009	CRISPR/Cas9-mediated targeted chromosome elimination. 2017 , 18, 224	93
1008	Divergent susceptibilities to AAV-SaCas9-gRNA vector-mediated genome-editing in a single-cell-derived cell population. 2017 , 10, 720	6
1007	An efficient system for homology-dependent targeted gene integration in medaka (). 2017 , 3, 10	14
1006	Deep mutational scanning of <i>S. pyogenes</i> Cas9 reveals important functional domains. 2017 , 7, 16836	11
1005	Genome Editing: Innovation in Molecular Biology. 2017 , 06,	
1004	The Smart Programmable CRISPR Technology: A Next Generation Genome Editing Tool for Investigators. 2017 , 18, 1653-1663	7
1003	Induction of DISE in ovarian cancer cells. 2017 , 8, 84643-84658	21
1002	Efficient Generation of Somatic Cell Nuclear Transfer-Competent Porcine Cells with Mutated Alleles at Multiple Target Loci by Using CRISPR/Cas9 Combined with Targeted Toxin-Based Selection System. 2017 , 18,	7
1001	Novel Technologies for Plant Functional Genomics. 2017 , 241-257	1
1000	Risk associated with off-target plant genome editing and methods for its limitation. 2017 , 1, 231-240	33
999	CRISPR-Cas9: a promising tool for gene editing on induced pluripotent stem cells. 2017 , 32, 42-61	35
998	A CRISPR/Cas9-based method and primer design tool for seamless genome editing in fission yeast. 2016 , 1, 19	14

997	Glucose deprivation elicits phenotypic plasticity via ZEB1-mediated expression of NNMT. 2017 , 8, 26200-26220	30
996	Current Progress and Future Prospects in Nucleic Acid Based Therapeutics. 2017 , 280-313	3
995	Recent developments in genome editing for potential use in plants. 2017 , 10,	3
994	Isolated polycystic liver disease genes define effectors of polycystin-1 function. 2017 , 127, 1772-1785	74
993	Multiple Applications of a Transient CRISPR-Cas9 Coupled with Electroporation (TRACE) System in the Species Complex. 2018 , 208, 1357-1372	51
992	STAT3 is required for proliferation and exhibits a cell type-specific binding preference in mouse female germline stem cells. 2018 , 14, 95-102	7
991	Double-stranded DNA break polarity skews repair pathway choice during intrachromosomal and interchromosomal recombination. 2018 , 115, 2800-2805	10
990	MAP4K3 mediates amino acid-dependent regulation of autophagy via phosphorylation of TFEB. 2018 , 9, 942	54
989	Applications of CRISPR-Cas9 Technology in Translational Research on Solid-Tumor Cancers. 2018 , 1, 47-54	5
988	LKB1, Salt-Inducible Kinases, and MEF2C Are Linked Dependencies in Acute Myeloid Leukemia. 2018 , 69, 1017-1027.e6	64
987	Enzyme-Free Amplification Strategy for Biosensing Using Fe-Poly(glutamic acid) Coordination Chemistry. 2018 , 90, 4725-4732	19
986	KRAB-type zinc-finger proteins PITA and PISA specifically regulate p53-dependent glycolysis and mitochondrial respiration. 2018 , 28, 572-592	18
985	Potential high-frequency off-target mutagenesis induced by CRISPR/Cas9 in Arabidopsis and its prevention. 2018 , 96, 445-456	99
984	Genome Editing in Stem Cells for Disease Therapeutics. 2018 , 60, 329-338	8
983	Nontransgenic Marker-Free Gene Disruption by an Episomal CRISPR System in the Oleaginous Microalga, <i>Nannochloropsis oceanica</i> CCMP1779. 2018 , 7, 962-968	66
982	Heme degradation enzyme biliverdin IX α reductase is required for stem cell glutamine metabolism. 2018 , 475, 1211-1223	2
981	Allele-Specific CRISPR-Cas9 Genome Editing of the Single-Base P23H Mutation for Rhodopsin-Associated Dominant Retinitis Pigmentosa. 2018 , 1, 55-64	60
980	CRISPR-Cas9-Based Genome Editing of Human Induced Pluripotent Stem Cells. 2018 , 44, 5B.7.1-5B.7.22	20

979	Using the 2A Protein Coexpression System: Multicistronic 2A Vectors Expressing Gene(s) of Interest and Reporter Proteins. 2018 , 1755, 31-48	10
978	Methylation-induced silencing of SPG20 facilitates gastric cancer cell proliferation by activating the EGFR/MAPK pathway. 2018 , 500, 411-417	13
977	Strategies for In Vivo Genome Editing in Nondividing Cells. 2018 , 36, 770-786	36
976	Genetic variation may confound analysis of CRISPR-Cas9 off-target mutations. 2018 , 4, 18	9
975	Multi-faceted immunomodulatory and tissue-tropic clinical bacterial isolate potentiates prostate cancer immunotherapy. 2018 , 9, 1591	40
974	CRISPR/Cas9 genome editing technology significantly accelerated herpes simplex virus research. 2018 , 25, 93-105	28
973	The potential of CRISPR/Cas9 genome editing for the study and treatment of intervertebral disc pathologies. 2018 , 1, e1003	16
972	Impact of Genetic Variation on CRISPR-Cas Targeting. 2018 , 1, 159-170	16
971	Robust interaction of IFT70 with IFT52-IFT88 in the IFT-B complex is required for ciliogenesis. 2018 , 7,	18
970	Precision medicine based on surgical oncology in the era of genome-scale analysis and genome editing technology. 2018 , 2, 106-115	4
969	Self-Delivering RNAi Targeting PD-1 Improves Tumor-Specific T Cell Functionality for Adoptive Cell Therapy of Malignant Melanoma. 2018 , 26, 1482-1493	29
968	Multiple sgRNAs with overlapping sequences enhance CRISPR/Cas9-mediated knock-in efficiency. 2018 , 50, 1-9	20
967	Cutting Edge Genetics: CRISPR/Cas9 Editing of Plant Genomes. 2018 , 59, 1608-1620	27
966	Designer nuclease-mediated gene correction via homology-directed repair in an in vitro model of canine hemophilia B. 2018 , 20, e3020	8
965	High-efficiency genome editing using a dmc1 promoter-controlled CRISPR/Cas9 system in maize. 2018 , 16, 1848-1857	78
964	The C-Terminal Extension Unique to the Long Isoform of the Shelterin Component TIN2 Enhances Its Interaction with TRF2 in a Phosphorylation- and Dyskeratosis Congenita Cluster-Dependent Fashion. 2018 , 38,	15
963	CRISPR/Cas9-Mediated Gene Disruption Reveals the Importance of Zinc Metabolism for Fitness of the Dimorphic Fungal Pathogen <i>Blastomyces dermatitidis</i> . 2018 , 9,	36
962	CRISPyS: Optimal sgRNA Design for Editing Multiple Members of a Gene Family Using the CRISPR System. 2018 , 430, 2184-2195	10

961	A Rapid CRISPR/Cas-based Mutagenesis Assay in Zebrafish for Identification of Genes Involved in Thyroid Morphogenesis and Function. 2018 , 8, 5647	28
960	Innovations in CRISPR technology. 2018 , 52, 95-101	14
959	Engineering Point Mutant and Epitope-Tagged Alleles in Mice Using Cas9 RNA-Guided Nuclease. 2018 , 8, 28-53	17
958	Review of CRISPR/Cas9 sgRNA Design Tools. 2018 , 10, 455-465	113
957	Integrated design, execution, and analysis of arrayed and pooled CRISPR genome-editing experiments. 2018 , 13, 946-986	42
956	Germline Mutations in the Mitochondrial 2-Oxoglutarate/Malate Carrier Gene Confer a Predisposition to Metastatic Paragangliomas. 2018 , 78, 1914-1922	71
955	CRISPR whole-genome screening identifies new necroptosis regulators and RIPK1 alternative splicing. 2018 , 9, 261	16
954	Versatile Cas9-Driven Subpopulation Selection Toolbox for <i>Lactococcus lactis</i> . 2018 , 84,	33
953	Modulation of Host Learning in <i>Aedes aegypti</i> Mosquitoes. 2018 , 28, 333-344.e8	47
952	CRISPR interference-based specific and efficient gene inactivation in the brain. 2018 , 21, 447-454	95
951	The prospects of CRISPR-based genome engineering in the treatment of neurodegenerative disorders. 2018 , 11, 1756285617741837	9
950	The multiplexed CRISPR targeting platforms. 2018 , 28, 53-61	5
949	Hallmarks of cancer: The CRISPR generation. 2018 , 93, 10-18	42
948	CRISPR/Cas9 generated human CD46, CD55 and CD59 knockout cell lines as a tool for complement research. 2018 , 456, 15-22	14
947	Personalised genome editing - The future for corneal dystrophies. 2018 , 65, 147-165	28
946	Concise Review: Assessing the Genome Integrity of Human Induced Pluripotent Stem Cells: What Quality Control Metrics?. 2018 , 36, 814-821	32
945	Partial DNA-guided Cas9 enables genome editing with reduced off-target activity. 2018 , 14, 311-316	140
944	Correction of diverse muscular dystrophy mutations in human engineered heart muscle by single-site genome editing. 2018 , 4, eaap9004	138

943	Modulating Gene Expression in Epstein-Barr Virus (EBV)-Positive B Cell Lines with CRISPRa and CRISPRi. 2018 , 121, 31.13.1-31.13.18	4
942	A Myc enhancer cluster regulates normal and leukaemic haematopoietic stem cell hierarchies. 2018 , 553, 515-520	142
941	In Vivo Ovarian Cancer Gene Therapy Using CRISPR-Cas9. 2018 , 29, 223-233	36
940	History of genome editing in yeast. 2018 , 35, 361-368	26
939	The evolution of CRISPR/Cas9 and their cousins: hope or hype?. 2018 , 40, 465-477	15
938	The initiation, propagation and dynamics of CRISPR-SpyCas9 R-loop complex. 2018 , 46, 350-361	40
937	Hybridization Kinetics Explains CRISPR-Cas Off-Targeting Rules. 2018 , 22, 1413-1423	58
936	CRISPR/CAS9 ablation of individual miRNAs from a miRNA family reveals their individual efficacies for regulating cardiac differentiation. 2018 , 150, 10-20	6
935	The WDR11 complex facilitates the tethering of AP-1-derived vesicles. 2018 , 9, 596	22
934	Advancing Metabolic Engineering of <i>Saccharomyces cerevisiae</i> Using the CRISPR/Cas System. 2018 , 13, e1700601	34
933	Combining cell and gene therapy to advance cardiac regeneration. 2018 , 18, 409-423	16
932	Duchenne muscular dystrophy: an updated review of common available therapies. 2018 , 128, 854-864	29
931	p62 filaments capture and present ubiquitinated cargos for autophagy. 2018 , 37,	153
930	Tuning CRISPR-Cas9 Gene Drives in. 2018 , 8, 999-1018	28
929	CRISPR/Cas9-Mediated Fluorescent Tagging of Endogenous Proteins in Human Pluripotent Stem Cells. 2018 , 96, 21.11.1-21.11.20	30
928	Precise and efficient nucleotide substitution near genomic nick via noncanonical homology-directed repair. 2018 , 28, 223-230	29
927	The Conformational Dynamics of Cas9 Governing DNA Cleavage Are Revealed by Single-Molecule FRET. 2018 , 22, 372-382	59
926	Robust genome editing of CRISPR-Cas9 at NAG PAMs in rice. 2018 , 61, 122-125	36

925	CRISPR/Cas9 therapeutics for liver diseases. 2018 , 119, 4265-4278	7
924	DEPDC5 deficiency contributes to resistance to leucine starvation via p62 accumulation in hepatocellular carcinoma. 2018 , 8, 106	10
923	Establishing RNA virus resistance in plants by harnessing CRISPR immune system. 2018 , 16, 1415-1423	132
922	Ciliopathy-associated mutations of IFT122 impair ciliary protein trafficking but not ciliogenesis. 2018 , 27, 516-528	30
921	Use of CRISPR/Cas9 gene-editing tools for developing models in drug discovery. 2018 , 23, 519-533	23
920	Efficient CRISPR/Cas9-based genome editing in carrot cells. 2018 , 37, 575-586	95
919	Rapid chromatin repression by Aire provides precise control of immune tolerance. 2018 , 19, 162-172	25
918	Split Cas9, Not Hairs - Advancing the Therapeutic Index of CRISPR Technology. 2018 , 13, e1700432	19
917	Scarless Genome Editing of Human Pluripotent Stem Cells via Transient Puromycin Selection. 2018 , 10, 642-654	38
916	A validated gRNA library for CRISPR/Cas9 targeting of the human glycosyltransferase genome. 2018 , 28, 295-305	43
915	Implementing CRISPR-Cas technologies in conventional and non-conventional yeasts: Current state and future prospects. 2018 , 36, 641-665	83
914	Prediction of off-target activities for the end-to-end design of CRISPR guide RNAs. 2018 , 2, 38-47	127
913	Cas9/sgRNA selective targeting of the P23H Rhodopsin mutant allele for treating retinitis pigmentosa by intravitreal AAV9.PHP.B-based delivery. 2018 , 27, 761-779	73
912	Refined sgRNA efficacy prediction improves large- and small-scale CRISPR-Cas9 applications. 2018 , 46, 1375-1385	105
911	Improving CRISPR-Cas specificity with chemical modifications in single-guide RNAs. 2018 , 46, 792-803	133
910	Multimode drug inducible CRISPR/Cas9 devices for transcriptional activation and genome editing. 2018 , 46, e25	24
909	The Dynamic Landscape of Open Chromatin during Human Cortical Neurogenesis. 2018 , 172, 289-304.e18	177
908	Gene editing as a promising approach for respiratory diseases. 2018 , 55, 143-149	6

907	MicroRNA-focused CRISPR-Cas9 library screen reveals fitness-associated miRNAs. 2018 , 24, 966-981	33
906	CRISPR/Cas9: the Jedi against the dark empire of diseases. 2018 , 25, 29	14
905	Harnessing "A Billion Years of Experimentation": The Ongoing Exploration and Exploitation of CRISPR-Cas Immune Systems. 2018 , 1, 141-158	32
904	Targeted gene disruption by use of CRISPR/Cas9 ribonucleoprotein complexes in the water flea <i>Daphnia pulex</i> . 2018 , 23, 494-502	14
903	Generation of App knock-in mice reveals deletion mutations protective against Alzheimer's disease-like pathology. 2018 , 9, 1800	14
902	A proteomic analysis of an in vitro knock-out of miR-200c. 2018 , 8, 6927	4
901	A Cas9 transgenic <i>Plasmodium yoelii</i> parasite for efficient gene editing. 2018 , 222, 21-28	9
900	Concerns regarding 'off-target' activity of genome editing endonucleases. 2018 , 131, 22-30	19
899	Paired D10A Cas9 nickases are sometimes more efficient than individual nucleases for gene disruption. 2018 , 46, e71	35
898	Efficient In Vivo Liver-Directed Gene Editing Using CRISPR/Cas9. 2018 , 26, 1241-1254	36
897	Genomic and Functional Approaches to Understanding Cancer Aneuploidy. 2018 , 33, 676-689.e3	377
896	Detection of target DNA with a novel Cas9/sgRNAs-associated reverse PCR (CARP) technique. 2018 , 410, 2889-2900	33
895	Chemically Modified Cpf1-CRISPR RNAs Mediate Efficient Genome Editing in Mammalian Cells. 2018 , 26, 1228-1240	39
894	Highly efficient heritable targeted deletions of gene clusters and non-coding regulatory regions in <i>Arabidopsis</i> using CRISPR/Cas9. 2018 , 8, 4443	37
893	The physicist's guide to one of biotechnology's hottest new topics: CRISPR-Cas. 2018 , 15, 041002	10
892	CRISPR-Cas9-Mediated Correction of the 1.02 kb Common Deletion in in Induced Pluripotent Stem Cells from Patients with Batten Disease. 2018 , 1, 75-87	12
891	Easy quantification of template-directed CRISPR/Cas9 editing. 2018 , 46, e58	80
890	Mutant IDH1 Cooperates with ATRX Loss to Drive the Alternative Lengthening of Telomere Phenotype in Glioma. 2018 , 78, 2966-2977	42

889	Developing precision medicine using scarless genome editing of human pluripotent stem cells. 2018 , 28, 3-12	6
888	CRISPR/Cas9 Mediated Disruption of the Swedish APP Allele as a Therapeutic Approach for Early-Onset Alzheimer's Disease. 2018 , 11, 429-440	71
887	Role for Wnt Signaling in Retinal Neuropil Development: Analysis via RNA-Seq and In Vivo Somatic CRISPR Mutagenesis. 2018 , 98, 109-126.e8	37
886	CRISPR-Cas9 genome engineering: Treating inherited retinal degeneration. 2018 , 65, 28-49	43
885	CRISPR/Cas9-mediated Targeted Integration In Vivo Using a Homology-mediated End Joining-based Strategy. 2018 ,	9
884	Gene-knocked out chimeric antigen receptor (CAR) T cells: Tuning up for the next generation cancer immunotherapy. 2018 , 423, 95-104	43
883	Precise Cas9 targeting enables genomic mutation prevention. 2018 , 115, 3669-3673	18
882	Zinc Fingers, TALEs, and CRISPR Systems: A Comparison of Tools for Epigenome Editing. 2018 , 1767, 19-63	47
881	Designing Epigenome Editors: Considerations of Biochemical and Locus Specificities. 2018 , 1767, 65-87	1
880	PKM1 Confers Metabolic Advantages and Promotes Cell-Autonomous Tumor Cell Growth. 2018 , 33, 355-367.e73	73
879	DCEO Biotechnology: Tools To Design, Construct, Evaluate, and Optimize the Metabolic Pathway for Biosynthesis of Chemicals. 2018 , 118, 4-72	97
878	CRISPR/Cas9: An RNA-guided highly precise synthetic tool for plant genome editing. 2018 , 233, 1844-1859	52
877	High efficient multisites genome editing in allotetraploid cotton (<i>Gossypium hirsutum</i>) using CRISPR/Cas9 system. 2018 , 16, 137-150	127
876	Genetic and pharmacological antagonism of NK receptor prevents opiate abuse potential. 2018 , 23, 1745-1755.17	17
875	Advances with using CRISPR/Cas-mediated gene editing to treat infections with hepatitis B virus and hepatitis C virus. 2018 , 244, 311-320	44
874	Comparative analyses of secreted proteins in plant pathogenic smut fungi and related basidiomycetes. 2018 , 112, 21-30	60
873	Genome Engineering and Modification Toward Synthetic Biology for the Production of Antibiotics. 2018 , 38, 229-260	12
872	Use of CRISPR/Cas9 to model brain diseases. 2018 , 81, 488-492	15

871	Increasing the efficiency of CRISPR-Cas9-VQR precise genome editing in rice. 2018 , 16, 292-297	56
870	The Application of CRISPR/Cas Technology to Efficiently Model Complex Cancer Genomes in Stem Cells. 2018 , 119, 134-140	8
869	Targeted mutagenesis in tetraploid switchgrass (<i>Panicum virgatum</i> L.) using CRISPR/Cas9. 2018 , 16, 381-393	39
868	Prokaryotic Argonaute proteins: novel genome-editing tools?. 2018 , 16, 5-11	60
867	Application of the gene editing tool, CRISPR-Cas9, for treating neurodegenerative diseases. 2018 , 112, 187-196	21
866	A technological and regulatory outlook on CRISPR crop editing. 2018 , 119, 1291-1298	37
865	Enhanced guide-RNA design and targeting analysis for precise CRISPR genome editing of single and consortia of industrially relevant and non-model organisms. 2018 , 34, 16-23	24
864	Expanding the CRISPR/Cas9 toolkit for <i>Pichia pastoris</i> with efficient donor integration and alternative resistance markers. 2018 , 119, 3183-3198	62
863	Genomes in Focus: Development and Applications of CRISPR-Cas9 Imaging Technologies. 2018 , 57, 4329-4337	46
862	Enhanced Genome Editing Tools For Multi-Gene Deletion Knock-Out Approaches Using Paired CRISPR sgRNAs in CHO Cells. 2018 , 13, e1700211	25
861	CRISPR/Cas9-mediated noncoding RNA editing in human cancers. 2018 , 15, 35-43	49
860	Functional validation of ATF4 and GADD34 in Neuro2a cells by CRISPR/Cas9-mediated genome editing. 2018 , 440, 65-75	8
859	Serine 392 phosphorylation modulates p53 mitochondrial translocation and transcription-independent apoptosis. 2018 , 25, 190-203	40
858	Inducible CRISPR genome-editing tool: classifications and future trends. 2018 , 38, 573-586	18
857	Timing of CRISPR/Cas9-related mRNA microinjection after activation as an important factor affecting genome editing efficiency in porcine oocytes. 2018 , 108, 29-38	23
856	Induced mutation and epigenetics modification in plants for crop improvement by targeting CRISPR/Cas9 technology. 2018 , 233, 4578-4594	14
855	High Efficiency Gene Correction in Hematopoietic Cells by Donor-Template-Free CRISPR/Cas9 Genome Editing. 2018 , 10, 1-8	25
854	SaCas9 Requires 5'-NNGRRT-3' PAM for Sufficient Cleavage and Possesses Higher Cleavage Activity than SpCas9 or FnCpf1 in Human Cells. 2018 , 13, e1700561	27

853	Selection is required for efficient Cas9-mediated genome editing in <i>Fusarium graminearum</i> . 2018 , 122, 131-137	29
852	Transcriptional landscape of a RET-mutated iPSC and its CRISPR-corrected isogenic control reveals the putative role of EGR1 transcriptional program in the development of multiple endocrine neoplasia type 2A-associated cancers. 2018 , 26, 8-16	11
851	Excessive UBE3A dosage impairs retinoic acid signaling and synaptic plasticity in autism spectrum disorders. 2018 , 28, 48-68	57
850	Genome im Fokus: Entwicklung und Anwendungen von CRISPR-Cas9-Bildgebungstechnologien. 2018 , 130, 4412-4420	2
849	Fetal haemoglobin induction in sickle cell disease. 2018 , 180, 189-200	34
848	Synthetic AAV/CRISPR vectors for blocking HIV-1 expression in persistently infected astrocytes. 2018 , 66, 413-427	36
847	Diverse Class 2 CRISPR-Cas Effector Proteins for Genome Engineering Applications. 2018 , 13, 347-356	16
846	A heart-enriched antisense long non-coding RNA regulates the balance between cardiac and skeletal muscle triadin. 2018 , 1865, 247-258	11
845	Functional characterization of E2F3b in human HepG2 liver cancer cell line. 2018 , 119, 3429-3439	5
844	DNA molecular markers in plant breeding: current status and recent advancements in genomic selection and genome editing. 2018 , 32, 261-285	272
843	A refined method to study gene dosage changes in vitro using CRISPR/Cas9. 2017 ,	2
842	Improvements in algal lipid production: a systems biology and gene editing approach. 2018 , 38, 369-385	51
841	Perspective: the opportunities and possibilities unleashed by clustered regularly interspaced short palindromic repeats and artificial intelligence. 2018 , 3, 4-4	
840	Development of an integrated CRISPRi targeting Np63 for treatment of squamous cell carcinoma. 2018 , 9, 29220-29232	17
839	Identification of on-target mutagenesis during correction of a beta-thalassemia splice mutation in iPSC cells with optimised CRISPR/Cas9-double nickase reveals potential safety concerns. 2018 , 2, 046103	11
838	Dynamics changes of CRISPR-Cas9 systems induced by high fidelity mutations. 2018 , 20, 27439-27448	8
837	CRISPR/Cas9-mediated generation of a knockout mouse model. 2018 , 34, 279-287	5
836	Generation of knockout mouse models of cyclin-dependent kinase inhibitors by engineered nuclease-mediated genome editing. 2018 , 34, 264-269	3

835	Deletion of the glucocorticoid receptor chaperone FKBP51 prevents glucocorticoid-induced skin atrophy. 2018 , 9, 34772-34783	14
834	CRISPR/Cas9 System: A Breakthrough in Genome Editing. 2018 , 07,	2
833	WDFY4 is required for cross-presentation in response to viral and tumor antigens. 2018 , 362, 694-699	115
832	Genetic Resistance to Avian Leukosis Viruses Induced by CRISPR/Cas9 Editing of Specific Receptor Genes in Chicken Cells. 2018 , 10,	14
831	Syncytial germline architecture is actively maintained by contraction of an internal actomyosin corset. 2018 , 9, 4694	15
830	CRISPR/Cas9-mediated mutagenesis of homologous genes in Chinese kale. 2018 , 8, 16786	14
829	Conferring DNA virus resistance with high specificity in plants using virus-inducible genome-editing system. 2018 , 19, 197	38
828	A CRISPR-Cas9-triggered strand displacement amplification method for ultrasensitive DNA detection. 2018 , 9, 5012	148
827	CRISPR/Cas9-Mediated Gene Editing Tool and Fathomless Genetic and Metabolic Engineering Applications in Plants. 2018 , 167-179	1
826	A Transcription Factor Addiction in Leukemia Imposed by the MLL Promoter Sequence. 2018 , 34, 970-981.e8	22
825	Pulse Improvement. 2018 ,	1
824	Genome Engineering Tools for Functional Genomics and Crop Improvement in Legumes. 2018 , 219-234	1
823	Orthogonal Cas9-Cas9 chimeras provide a versatile platform for genome editing. 2018 , 9, 4856	19
822	Phosphate Lock Residues of <i>Acidothermus cellulolyticus</i> Cas9 Are Critical to Its Substrate Specificity. 2018 , 7, 2908-2917	3
821	Retinoic acid and BMP4 cooperate with p63 to alter chromatin dynamics during surface epithelial commitment. 2018 , 50, 1658-1665	32
820	DNA-Free Genome Editing of and Protoplasts Using CRISPR-Cas9 Ribonucleoprotein Complexes. 2018 , 9, 1594	85
819	Generation and characterization of pathogenic Mab21l2(R51C) mouse model. 2018 , 56, e23261	5
818	Aptazyme-mediated direct modulation of post-transcriptional sgRNA level for conditional genome editing and gene expression. 2018 , 288, 23-29	9

817	Effects of CRISPR/Cas9 dosage on TICAM1 and RBL gene mutation rate, embryonic development, hatchability and fry survival in channel catfish. 2018 , 8, 16499	18
816	Familial episodic limb pain in kindreds with novel Nav1.9 mutations. 2018 , 13, e0208516	6
815	Genome Editing Using Crispr/Cas System: New Era Genetic Technology in Agriculture to Boost Crop Output. 2018 , 07,	2
814	Clonal analysis by tunable CRISPR-mediated excision. 2019 , 146,	5
813	Genetically modified pigs are protected from classical swine fever virus. 2018 , 14, e1007193	40
812	NmeCas9 is an intrinsically high-fidelity genome-editing platform. 2018 , 19, 214	60
811	Analysis of novel domain-specific mutations in the zebrafish ndr2/cyclops gene generated using CRISPR-Cas9 RNPs. 2018 , 97, 1315-1325	9
810	Emerging Concepts and Techniques. 2018 , 729-743	
809	Agnostic detection of genomic alterations by holistic DNA structural interrogation. 2018 , 13, e0208054	
808	Hairy Roots. 2018 ,	13
807	Engineering in Hairy Roots Using CRISPR/Cas9-Mediated Editing. 2018 , 329-342	3
806	CRISPR/Cas9-Mediated Deletion of Large Genomic Fragments in Soybean. 2018 , 19,	45
805	Engineered dCas9 with reduced toxicity in bacteria: implications for genetic circuit design. 2018 , 46, 11115-11125	15
804	UBN1/2 of HIRA complex is responsible for recognition and deposition of H3.3 at cis-regulatory elements of genes in mouse ES cells. 2018 , 16, 110	21
803	Histone variants H2A.Z and H3.3 coordinately regulate PRC2-dependent H3K27me3 deposition and gene expression regulation in mES cells. 2018 , 16, 107	33
802	AP-4 vesicles contribute to spatial control of autophagy via RUSC-dependent peripheral delivery of ATG9A. 2018 , 9, 3958	62
801	CRISPR/Cas9 engineering of a KIM-1 reporter human proximal tubule cell line. 2018 , 13, e0204487	4
800	Recent Biotechnological Advances in the Improvement of Cassava. 2018 ,	4

799	Recognition of CRISPR/Cas9 off-target sites through ensemble learning of uneven mismatch distributions. 2018 , 34, i757-i765	22
798	Genome Editing of Pigs for Agriculture and Biomedicine. 2018 , 9, 360	43
797	Highly efficient genome editing via CRISPR-Cas9 in human pluripotent stem cells is achieved by transient BCL-XL overexpression. 2018 , 46, 10195-10215	62
796	Transgene-free genome editing in marine algae by bacterial conjugation - comparison with biolistic CRISPR/Cas9 transformation. 2018 , 8, 14401	30
795	CRISPR/Cas9-mediated knockout of Populus BRANCHED1 and BRANCHED2 orthologs reveals a major function in bud outgrowth control. 2018 , 38, 1588-1597	26
794	CRISPR-Cas9/Cas12a biotechnology and application in bacteria. 2018 , 3, 135-149	58
793	CRISPR/Cas9 gene-editing: Research technologies, clinical applications and ethical considerations. 2018 , 42, 487-500	22
792	Combined Experimental and System-Level Analyses Reveal the Complex Regulatory Network of miR-124 during Human Neurogenesis. 2018 , 7, 438-452.e8	25
791	Genetic Modulation of RNA Splicing with a CRISPR-Guided Cytidine Deaminase. 2018 , 72, 380-394.e7	66
790	Alcohol reduces muscle fatigue through atomistic interactions with nicotinic receptors. 2018 , 1, 159	1
789	CRISPR deletion of MIEN1 in breast cancer cells. 2018 , 13, e0204976	14
788	ATRX loss induces multiple hallmarks of the alternative lengthening of telomeres (ALT) phenotype in human glioma cell lines in a cell line-specific manner. 2018 , 13, e0204159	23
787	HIT-Cas9: A CRISPR/Cas9 Genome-Editing Device under Tight and Effective Drug Control. 2018 , 13, 208-219	14
786	Genetic and Tissue Engineering Approaches to Modeling the Mechanics of Human Heart Failure for Drug Discovery. 2018 , 5, 120	6
785	CRISPR-Cas9 off-targeting assessment with nucleic acid duplex energy parameters. 2018 , 19, 177	50
784	Genome-wide screening for functional long noncoding RNAs in human cells by Cas9 targeting of splice sites. <i>Nature Biotechnology</i> , 2018 ,	44.5 71
783	Minimal PAM specificity of a highly similar SpCas9 ortholog. 2018 , 4, eaau0766	125
782	Paired CRISPR/Cas9 Nickases Mediate Efficient Site-Specific Integration of into rDNA Locus of Mouse ESCs. 2018 , 19,	12

781	High fidelity CRISPR/Cas9 increases precise monoallelic and biallelic editing events in primordial germ cells. 2018 , 8, 15126	21
780	CRISPR/Cas9 System: A Bacterial Tailor for Genomic Engineering. 2018 , 2018, 3797214	12
779	Instability of microsatellites linked to targeted genes in CRISPR/Cas9-edited and traditional gene knockout mouse strains. 2018 , 45, 553-556	1
778	CRISPR/Cas9 can mediate high-efficiency off-target mutations in mice in vivo. 2018 , 9, 1099	33
777	Opposite Carcinogenic Effects of Circadian Clock Gene BMAL1. 2018 , 8, 16023	28
776	Oncogenic role of SFRP2 in p53-mutant osteosarcoma development via autocrine and paracrine mechanism. 2018 , 115, E11128-E11137	21
775	Defining CRISPR-Cas9 genome-wide nuclease activities with CIRCLE-seq. 2018 , 13, 2615-2642	46
774	Prediction of Human Immunodeficiency Virus Type 1 Subtype-Specific Off-Target Effects Arising from CRISPR-Cas9 Gene Editing Therapy. 2018 , 1, 294-302	9
773	The applications of CRISPR/Cas system in molecular detection. 2018 , 22, 5807-5815	28
772	Efficient CRISPR-Cas9 mediated multiplex genome editing in yeasts. 2018 , 11, 277	39
771	Production of hypoallergenic milk from DNA-free beta-lactoglobulin (BLG) gene knockout cow using zinc-finger nucleases mRNA. 2018 , 8, 15430	21
770	CRISPRO: identification of functional protein coding sequences based on genome editing dense mutagenesis. 2018 , 19, 169	20
769	CRISPR-Cas9 and CRISPR-Assisted Cytidine Deaminase Enable Precise and Efficient Genome Editing in <i>Klebsiella pneumoniae</i> . 2018 , 84,	53
768	CRISPR/Cas9-mediated Stearoyl-CoA Desaturase 1 (SCD1) Deficiency Affects Fatty Acid Metabolism in Goat Mammary Epithelial Cells. 2018 , 66, 10041-10052	19
767	Effect of MAPK Inhibition on the Differentiation of a Rhabdomyosarcoma Cell Line Combined With CRISPR/Cas9 Technology: An In Vitro Model of Human Muscle Diseases. 2018 , 77, 964-972	4
766	A limited number of double-strand DNA breaks is sufficient to delay cell cycle progression. 2018 , 46, 10132-10144	38
765	Specific Targeting of Oncogenes Using CRISPR Technology. 2018 , 78, 5506-5512	3
764	Cell Therapies: New Frontier for the Management of Diabetic Foot Ulceration. 2018 , 219-235	

763	Comprehensive off-target analysis of dCas9-SAM-mediated HIV reactivation via long noncoding RNA and mRNA profiling. 2018 , 11, 78	7
762	Structural Basis for the RNA-Guided Ribonuclease Activity of CRISPR-Cas13d. 2018 , 175, 212-223.e17	96
761	Targeted genome fragmentation with CRISPR/Cas9 enables fast and efficient enrichment of small genomic regions and ultra-accurate sequencing with low DNA input (CRISPR-DS). 2018 , 28, 1589-1599	25
760	Genome sequencing of rice subspecies and genetic analysis of recombinant lines reveals regional yield- and quality-associated loci. 2018 , 16, 102	34
759	Expansion of the genetic code via expansion of the genetic alphabet. 2018 , 46, 196-202	31
758	Accurate classification of BRCA1 variants with saturation genome editing. 2018 , 562, 217-222	308
757	In vivo CRISPR editing with no detectable genome-wide off-target mutations. 2018 , 561, 416-419	202
756	Off-target predictions in CRISPR-Cas9 gene editing using deep learning. 2018 , 34, i656-i663	65
755	Whole exome sequencing of ENU-induced thrombosis modifier mutations in the mouse. 2018 , 14, e1007658	2
754	CRISPR/Cas9 genome engineering in hematopoietic cells. 2018 , 28, 33-39	7
753	Disruption of the β L Isoform of GABP Reverses Glioblastoma Replicative Immortality in a TERT Promoter Mutation-Dependent Manner. 2018 , 34, 513-528.e8	55
752	CRISPR-Induced Deletion with SaCas9 Restores Dystrophin Expression in Dystrophic Models In Vitro and In Vivo. 2018 , 26, 2604-2616	39
751	Regulating exopolysaccharide gene wcaF allows control of Escherichia coli biofilm formation. 2018 , 8, 13127	15
750	Targeted Reactivation of Transcription in Fragile X Syndrome Embryonic Stem Cells. 2018 , 11, 282	28
749	Establishing a dual knock-out cell line by lentivirus based combined CRISPR/Cas9 and Loxp/Cre system. 2018 , 70, 1595-1605	0
748	Genome Editing in Mice Using CRISPR/Cas9 Technology. 2018 , 81, e57	10
747	Optimization of sand fly embryo microinjection for gene editing by CRISPR/Cas9. 2018 , 12, e0006769	9
746	Robust CRISPR/Cas9 Genome Editing of the HUDEP-2 Erythroid Precursor Line Using Plasmids and Single-Stranded Oligonucleotide Donors. 2018 , 1,	12

745	Double genetic disruption of lactate dehydrogenases A and B is required to ablate the "Warburg effect" restricting tumor growth to oxidative metabolism. 2018 , 293, 15947-15961	88
744	Engineered CRISPR-Cas9 nuclease with expanded targeting space. 2018 , 361, 1259-1262	486
743	() is essential for preimplantation embryo development. 2018 , 7,	16
742	Overview of current mouse models of autism and strategies for their development using CRISPR/Cas9 technology. 2018 , 112, 19	
741	Delivering CRISPR: a review of the challenges and approaches. 2018 , 25, 1234-1257	452
740	The genomic landscape of TERT promoter wildtype-IDH wildtype glioblastoma. 2018 , 9, 2087	78
739	The new normal of structure/function studies in the era of CRISPR/Cas9. 2018 , 475, 1635-1642	1
738	Curative Ex Vivo Hepatocyte-Directed Gene Editing in a Mouse Model of Hereditary Tyrosinemia Type 1. 2018 , 29, 1315-1326	24
737	HPV Oncogene Manipulation Using Nonvirally Delivered CRISPR/Cas9 or Argonaute. 2018 , 5, 1700540	55
736	CRISPR off-target analysis in genetically engineered rats and mice. 2018 , 15, 512-514	118
735	Generation of genetically-engineered animals using engineered endonucleases. 2018 , 41, 885-897	16
734	Generation and validation of homozygous fluorescent knock-in cells using CRISPR-Cas9 genome editing. 2018 , 13, 1465-1487	58
733	Cas9 versus Cas12a/Cpf1: Structure-function comparisons and implications for genome editing. 2018 , 9, e1481	103
732	Inducible high-efficiency CRISPR-Cas9-targeted gene editing and precision base editing in African trypanosomes. 2018 , 8, 7960	27
731	CRISPR/Cas9 system targeting regulatory genes of HIV-1 inhibits viral replication in infected T-cell cultures. 2018 , 8, 7784	55
730	Genetic Inactivation of CD33 in Hematopoietic Stem Cells to Enable CAR T Cell Immunotherapy for Acute Myeloid Leukemia. 2018 , 173, 1439-1453.e19	197
729	Site-Specific Gene Editing of Human Hematopoietic Stem Cells for X-Linked Hyper-IgM Syndrome. 2018 , 23, 2606-2616	66
728	Zinc finger proteins orchestrate active gene silencing during embryonic stem cell differentiation. 2018 , 46, 6592-6607	8

727	Global untargeted serum metabolomic analyses nominate metabolic pathways responsive to loss of expression of the orphan metallo β -lactamase, MBLAC1. 2018 , 14, 142-155	4
726	Improved design and analysis of CRISPR knockout screens. 2018 , 34, 4095-4101	21
725	Enhanced Genome Editing with Cas9 Ribonucleoprotein in Diverse Cells and Organisms. 2018 ,	22
724	CRISPR/Cas9-Mediated Genome Editing for Huntington's Disease. 2018 , 1780, 463-481	9
723	Efficient genome editing by FACS enrichment of paired D10A Cas9 nickases coupled with fluorescent proteins. 2018 , 41, 911-920	3
722	Versatile High-Throughput Fluorescence Assay for Monitoring Cas9 Activity. 2018 , 90, 6913-6921	12
721	Application of the CRISPR/Cas9 System to Drug Resistance in Breast Cancer. 2018 , 5, 1700964	35
720	Research progress of gene editing technology CRISPR/Cas9 system in animal gene editing. 2018 , 4, 015-019	1
719	CRISPR-induced deletion with SaCas9 restores dystrophin expression in dystrophic models in vitro and in vivo.	
718	Multiple-gene targeting and mismatch tolerance can confound analysis of genome-wide pooled CRISPR screens.	2
717	BIOLOGICAL SCIENCES: Genetics.	
716	Zfp189 Mediates Stress Resilience Through a CREB-Regulated Transcriptional Network in Prefrontal Cortex.	
715	Knock-in rats expressing Cre and Flp recombinases at the Parvalbumin locus.	
714	New human chromosomal safe harbor sites for genome engineering with CRISPR/Cas9, TAL effector and homing endonucleases.	2
713	Heat-shock inducible CRISPR/Cas9 system generates heritable mutations in rice.	1
712	Knock-in rat lines with Cre recombinase at the dopamine D1 and adenosine 2a receptor loci.	3
711	Deletion of FOXL2 by CRISPR promotes cell cycle G0/G1 restriction in KGN cells. 2019 , 43, 567-574	5
710	Unlimited genetic switches for cell-type specific manipulation.	2

- 709 Functional Interrogation of Lynch Syndrome Associated MSH2 Missense Variants Using CRISPR-Cas9 Gene Editing in Human Embryonic Stem Cells.
- 708 Towards best-practice approaches for CRISPR/Cas9 gene engineering.
- 707 53BP1 nuclear body-marked replication stress in a human mammary cell model of BRCA2 deficiency.
- 706 Identifying Context-specific Network Features for CRISPR-Cas9 Targeting Efficiency Using Accurate and Interpretable Deep Neural Network.
- 705 GRIBCG: A software for selection of sgRNAs in the design of balancer chromosomes.
- 704 Therapeutic suppression of proteolipid protein rescues Pelizaeus-Merzbacher Disease in mice.
- 703 Identification and mitigation of pervasive off-target activity in CRISPR-Cas9 screens for essential non-coding elements. 1
- 702 A nucleotide resolution map of Top2-linked DNA breaks in the yeast and human genome. 2
- 701 Disrupted Mechanobiology Links the Molecular and Cellular Phenotypes in Familial Dilated Cardiomyopathy. 0
- 700 Dot1L-dependent H3K79 methylation facilitates histone variant H2A.Z exchange at DNA double strand breaks and is required for high fidelity, homology-directed DNA repair. 1
- 699 Multiplexed CRISPR-Cas9 based genome editing of *Rhodospiridium toruloides*. 1
- 698 *Francisella novicida* Cas9 interrogates genomic DNA with very high specificity and can be used for mammalian genome editing.
- 697 Distinct mechanisms of microRNA sorting into cancer cell-derived extracellular vesicle subtypes.
- 696 A Single Defined Sister Chromatid Fusion Destabilizes Cell Cycle through Micronuclei Formation.
- 695 Suppression of unwanted CRISPR/Cas9 editing by co-administration of catalytically inactivating truncated guide RNAs.
- 694 Casilio-ME: Enhanced CRISPR-based DNA demethylation by RNA-guided coupling methylcytosine oxidation and DNA repair pathways.
- 693 Allosteric Inhibition of CRISPR-Cas9 by Bacteriophage-derived Peptides. 1
- 692 Discovering functional sequences with RELICS, an analysis method for tiling CRISPR screens.

- 691 Alpha/Beta Hydrolase Domain-Containing Protein 2 regulates the rhythm of follicular maturation and estrous stages of the female reproductive cycle. 0
- 690 Cas9HF1 enhanced specificity in *Ustilago maydis*.
- 689 The CHORD protein CHP-1 regulates EGF receptor trafficking and signaling in *C. elegans* and in human cells.
- 688 Efficient multiplex genome editing using CRISPR-Mb3Cas12a in mice.
- 687 Evaluating the Probability of CRISPR-based Gene Drive Contaminating Another Species. 0
- 686 KIAA0319 influences cilia length, cell migration and mechanical cell-substrate interaction. 1
- 685 The Red Flour Beetle as Model for Comparative Neural Development: Genome Editing to Mark Neural Cells in *Tribolium* Brain Development. **2020**, 2047, 191-217 8
- 684 Highly efficient and specific genome editing in human cells with paired CRISPR-Cas9 nickase ribonucleoproteins. 1
- 683 AsCRISPR: a web server for allele-specific sgRNA design in precision medicine.
- 682 A novel toolkit for the efficient delivery of Cas9/sgRNA complexes to chromosomes in cells.
- 681 CRISPR/Cas9 mediated intersectional knockout of GSK3 β in D2 receptor expressing mPFC neurons reveals contributions to emotional regulation.
- 680 The use of CRISPR for variant specificity in the genetic diagnosis of primary immunodeficiency disease (PID).
- 679 Tandem paired nicking promotes precise genome editing with scarce interference by p53.
- 678 Dynamic regulation of CD45 by tetraspanin CD53.
- 677 Chchd10 or Chchd2 are not Required for Human Motor Neuron Differentiation In Vitro but Modify Synaptic Transcriptomes.
- 676 RBM45 associates with nuclear stress bodies and forms nuclear inclusions during chronic cellular stress and in neurodegenerative diseases.
- 675 Genome editing to model and reverse a prevalent mutation associated with myeloproliferative neoplasms.
- 674 SNP-CRISPR: a web tool for SNP-specific genome editing. 1

- 673 Loss of function variants inPCYT1Acausing spondylometaphyseal dysplasia with cone/rod dystrophy have broad consequences on lipid metabolism, chondrocyte differentiation, and lipid droplet formation.
- 672 NickSeq for genome-wide strand-specific identification of DNA single-strand break sites with single nucleotide resolution. 2
- 671 BACH family members regulate angiogenesis and lymphangiogenesis by modulating VEGFC expression.
- 670 Efficient Generation of Human IgG1 Light Kappa Constant Region Knock-in Mouse by CRISPR/Cas9 System. **2019**, 25, 372-380 1
- 669 Enhancement of Target Specificity of CRISPR-Cas12a by Using a Chimeric DNA-RNA Guide.
- 668 Optimized sgRNA design by deep learning to balance the off-target effects and on-target activity of CRISPR/Cas9.
- 667 Transcriptional Regulators of theGolli/Myelin Basic ProteinLocus Integrate Additive and Stealth Activities. 1
- 666 Involvement of I-BAR protein IRSp53 in tumor cell growth via extracellular microvesicle secretion. 0
- 665 High-throughput in vitro specificity profiling of natural and high-fidelity CRISPR-Cas9 variants. 1
- 664 Small molecule H89 renders the phosphorylation of S6K1 and AKT resistant to mTOR inhibitors. **2020**, 477, 1847-1863 4
- 663 Integrative proteomics reveals principles of dynamic phospho-signaling networks in human erythropoiesis.
- 662 Rapid self-selecting and clone-free integration of transgenes into engineered CRISPR safe harbor locations in *Caenorhabditis elegans*. 0
- 661 Efficient Production of loxP Knock-in Mouse using CRISPR/Cas9 System. **2020**, 26, 114-119
- 660 CRISPR/Cas9-based silencing of the ATXN1 gene in Spinocerebellar ataxia type 1 (SCA1) fibroblasts.
- 659 Application of CRISPR/Cas9 nuclease in amphioxus genome editing.
- 658 Activation of pancreatic β cell genes by multiplex epigenetic CRISPR-editing. 0
- 657 CRISPR-Decryptr reveals cis-regulatory elements from noncoding perturbation screens.
- 656 Wheat, barley and maize genes editing using the CRISPR/Cas system. **2020**, 3, 46-56 5

- 655 The human Origin Recognition Complex is essential for pre-RC assembly, mitosis and maintenance of nuclear structure.
- 654 Automated design of CRISPR prime editors for 56,000 human pathogenic variants. **2021**, 103380 1
- 653 Computational Approaches for Designing Highly Specific and Efficient sgRNAs. **2022**, 2349, 147-166
- 652 A comprehensive evaluation of CRISPR lineage recorders using TraceQC.
- 651 Drag-and-drop genome insertion without DNA cleavage with CRISPR-directed integrases. 6
- 650 Most commonly mutated genes in High Grade Serous Ovarian Carcinoma are nonessential for ovarian surface epithelial stem cell transformation. 1
- 649 Genome Editing Technologies for Resistance Against Phytopathogens: Principles, Applications and Future Prospects. **2020**, 237-245 0
- 648 In vitro Assay Revealed Mismatches between Guide RNA and Target DNA can Enhance Cas9 Nuclease Activity. **2020**, 1, 69-72
- 647 KLF17 promotes human naïve pluripotency but is not required for its establishment.
- 646 DENT-seq for genome-wide strand-specific identification of DNA single-strand break sites with single-nucleotide resolution. **2021**, 31, 75-87 1
- 645 Genome-wide identification and analysis of highly specific CRISPR/Cas9 editing sites in pepper (*Capsicum annuum* L.). **2020**, 15, e0244515 3
- 644 Gene Editing in Dimorphic Fungi Using CRISPR/Cas9. **2020**, 59, e132 0
- 643 CRISPR-mediated dense mutagenesis: a tool for rational targeting of multiprotein complexes and the noncoding genome. **2022**, 57-64
- 642 Single-guide RNAs: rationale and design. **2022**, 47-55 1
- 641 Translational Research Using CRISPR/Cas. **2020**, 165-191
- 640 High-throughput screens of PAM-flexible Cas9 variants for gene knock-out and transcriptional modulation. 2
- 639 Ares-GT: design of guide RNAs targeting multiple genes for CRISPR-Cas experiments.
- 638 Application of Bioinformatics Tools in CRISPR/Cas. **2020**, 31-52 3

- 637 The G-protein coupled receptor SRX-97 is required for concentration dependent sensing of Benzaldehyde in *Caenorhabditis elegans*. 1
- 636 Gene Editing for Corneal Stromal Regeneration. **2020**, 2145, 59-75 0
- 635 Genome Editing by Targeted Nucleases and the CRISPR/Cas Revolution. **2020**, 953-964 1
- 634 Modular and distinct PlexinA4/Farp2/Rac1 signaling controls dendrite morphogenesis.
- 633 Building Scarless Gene Libraries in the Chromosome of Bacteria. **2020**, 189-211 1
- 632 CRISPR and Food Security: Applications in Cereal Crops. **2020**, 53-67
- 631 CRISPR/Cas9 Guide RNA Design Rules for Predicting Activity. **2020**, 2115, 351-364 3
- 630 Genome Engineering Tools in Immunotherapy. **2020**, 73-102
- 629 CRISPR/Cas9-based genome editing, with focus on transcription factors, for plant improvement. **2020**, 63-84
- 628 Screening Method for CRISPR/Cas9 Inhibition of a Human DNA Virus: Herpes Simplex Virus. **2020**, 10, e3748 1
- 627 Invasive Species Control and Resolution of Wildlife Damage Conflicts: A Framework for Chemical and Genetically Based Management Methods. **2020**, 193-222 1
- 626 No excessive mutations in transcription activator-like effector nuclease-mediated β 1,3-galactosyltransferase knockout Yucatan miniature pigs. **2020**, 33, 360-372 1
- 625 Faster and better CRISPR guide RNA design with the Crackling method.
- 624 Functionally non-redundant paralogs spe-47 and spe-50 encode FB-MO associated proteins and interact with him-8.
- 623 Regulation of caveolae through cholesterol-depletion dependent tubulation by PACSIN2/Syndapin II. 1
- 622 CROP: A CRISPR/Cas9 guide selection program based on mapping guide variants.
- 621 Bar-seq strategies for the LeishGEdit toolbox.
- 620 FORCAST: a fully integrated and open source pipeline to design Cas-mediated mutagenesis experiments. 0

619	CRISPR-Cas9 Genome Editing of Primary Human Vascular Cells In Vitro. 2021 , 1, e291	0
618	MAP4K3 inhibits Sirtuin-1 to repress LKB1-AMPK to promote amino acid dependent activation of mTORC1.	
617	Simple and Rapid Assembly of TALE Modules Based on the Degeneracy of the Codons and Trimer Repeats. 2021 , 12,	0
616	Loss of Profilin3 Impairs Spermiogenesis by Affecting Acrosome Biogenesis, Autophagy, Manchette Development and Mitochondrial Organization. 2021 , 9, 749559	1
615	Anti-apoptotic MCL1 Protein Represents Critical Survival Molecule for Most Burkitt Lymphomas and BCL2-negative Diffuse Large B-cell Lymphomas. 2021 ,	1
614	A temporally resolved, multiplex molecular recorder based on sequential genome editing.	2
613	A Novel Isogenic Human Cell-Based System for MEN1 Syndrome Generated by CRISPR/Cas9 Genome Editing. 2021 , 22,	0
612	Somatostatin-evoked A β catabolism in the brain: Mechanistic involvement of Endosulfine-K channel pathway. 2021 ,	1
611	Blocking Osa-miR1871 enhances rice resistance against Magnaporthe oryzae and yield. 2021 ,	3
610	Genome-wide Cas9 binding specificity in. 2020 , 8, e9442	2
609	The SPPL3-defined glycosphingolipid repertoire regulates immune responses by improving HLA class I access.	0
608	CaBagE: a Cas9-based Background Elimination strategy for targeted, long-read DNA sequencing.	
607	Scientific considerations for the biosafety of the off-target effects of gene editing in crops. 2020 , 47, 185-193	2
606	Crispr2vec: Machine Learning Model Predicts Off-Target Cuts of CRISPR systems.	0
605	Ethanol β action at BK channels accelerates the transition from moderate to excessive alcohol consumption.	0
604	CRISPR/Cas9-mediated correction of mutated copper transporter ATP7B. 2020 , 15, e0239411	3
603	A saturating mutagenesis CRISPR-Cas9-mediated functional genomic screen identifies and regulatory elements of in murine ESCs. 2020 , 295, 15797-15809	2
602	Phage Peptides Mediate Precision Base Editing with Focused Targeting Window.	1

601	Surfaceome CRISPR Screen Identifies OLFML3 as a Rhinovirus-inducible IFN Antagonist.	1
600	Template-independent genome editing and repairing correct frameshift disease in vivo.	
599	The BTB transcription factors ZBTB11 and ZFP131 maintain pluripotency by pausing POL II at pro-differentiation genes.	
598	NK cells promote cancer immunoediting through tumor-intrinsic loss of interferon-stimulated gene expression.	
597	Intracellular hyaluronic acid-binding protein 4 (HABP4): a candidate tumor suppressor in colorectal cancer. 2020 , 11, 4325-4337	1
596	TALEN and CRISPR/Cas Genome Editing Systems: Tools of Discovery. 2014 , 6, 19-40	62
595	The Application of CRISPR/Cas9 for the Treatment of Retinal Diseases. 2017 , 90, 533-541	13
594	Genome Surgery and Gene Therapy in Retinal Disorders. 2017 , 90, 523-532	8
593	Expression of RecA and cell-penetrating peptide (CPP) fusion protein in bacteria and in mammalian cells. 2018 , 9, 1-10	4
592	[Construction of EZH2 Knockout Animal Model by CRISPR/Cas9 Technology]. 2018 , 21, 358-364	
591	Blocking activity of the HPV18 virus in cervical cancer cells using the CRISPR/Cas9 system. 2018 , 11, 4230-4235	2
590	Use of dual-transfection for programmed death cell protein 1 disruption mediated by CRISPR-Cas9 in human peripheral blood mononuclear cells. 2021 , 24, 44-50	
589	Mouse Embryonic Fibroblasts Isolated From Nthl1 D227Y Knockin Mice Exhibit Defective DNA Repair and Increased Genome Instability. 2021 , 109, 103247	
588	CRISPR/Cas System and Factors Affecting Its Precision and Efficiency.. 2021 , 9, 761709	0
587	Theoretical Guarantees for Phylogeny Inference from Single-Cell Lineage Tracing.	0
586	VviPLATZ1 is a major factor that controls female flower morphology determination in grapevine. 2021 , 12, 6995	2
585	An App knock-in rat model for Alzheimer's disease exhibiting A β and tau pathologies, neuronal death and cognitive impairments. 2021 ,	1
584	Engineering a PAM-flexible SpdCas9 variant as a universal gene repressor. 2021 , 12, 6916	0

583 CRISPR and KRAS: a match yet to be made. **2021**, 28, 77

582 Optimizing sgRNA to Improve CRISPR/Cas9 Knockout Efficiency: Special Focus on Human and Animal Cell. **2021**, 9, 775309 3

581 Applications of CRISPR-Cas Technologies to Proteomics. **2021**, 12, 1

580 A Kalirin missense mutation enhances dendritic RhoA signaling and leads to regression of cortical dendritic arbors across development. **2021**, 118, 0

579 Single Nucleotide Substitutions Effectively Block Cas9 and Allow for Scarless Genome Editing in *Caenorhabditis elegans*. **2021**, 0

578 BAd-CRISPR: Inducible gene knockout in interscapular brown adipose tissue of adult mice. **2021**, 297, 101402 0

577 Targeted Inter-Homologs Recombination in Arabidopsis Euchromatin and Heterochromatin. **2021**, 22, 3

576 Conditional Deletion of Identifies the Cell-Intrinsic Action of PD-1 on Functional CD8 T Cell Subsets for Antitumor Efficacy.. **2021**, 12, 752348 0

575 Uncertainty-aware and interpretable evaluation of Cas9-gRNA and Cas12a-gRNA specificity for fully matched and partially mismatched targets with Deep Kernel Learning. **2021**, 0

574 Targeted integration of EpCAM-specific CAR in human induced pluripotent stem cells and their differentiation into NK cells. **2021**, 12, 580 0

573 CRISPR-Cas9 sgRNA design and outcome assessment: Bioinformatics tools and aquaculture applications. **2021**, 7, 121-121 5

572 Single molecule methods for studying CRISPR Cas9-induced DNA unwinding. **2021**, 0

571 A Critical Review: Recent Advancements in the Use of CRISPR/Cas9 Technology to Enhance Crops and Alleviate Global Food Crises. **2021**, 43, 1950-1976 9

570 A Highly Sensitive GFP Activation Assay for Detection of DNA Cleavage in Cells. **2021**, 9, 771248

569 Applications of genome editing tools in stem cells towards regenerative medicine: An update. **2021**, 0

568 Between the Devil and the Deep Blue Sea: Non-Coding RNAs Associated with Transmissible Cancers in Tasmanian Devil, Domestic Dog and Bivalves. **2021**, 7, 1

567 piCRISPR: Physically Informed Features Improve Deep Learning Models for CRISPR/Cas9 Off-Target Cleavage Prediction.

566 Revealing the composition of the eukaryotic microbiome of oyster spat by CRISPR-Cas Selective Amplicon Sequencing (CCSAS). **2021**, 9, 230 0

565	CRISPR/Cas and Hepatitis B Therapy: Technological Advances and Practical Barriers. 2021 ,	0
564	Structural basis for Cas9 off-target activity.	1
563	R-CRISPR: A Deep Learning Network to Predict Off-Target Activities with Mismatch, Insertion and Deletion in CRISPR-Cas9 System.. 2021 , 12,	0
562	Tumor microenvironment based stimuli-responsive CRISPR/Cas delivery systems: A viable platform for interventional approaches. 2021 , 210, 112257	0
561	Conformational surveillance of Orai1 by a rhomboid intramembrane protease prevents inappropriate CRAC channel activation. 2021 , 81, 4784-4798.e7	2
560	Reengineering of the CRISPR/Cas System. 2022 , 149-186	
559	CRISPR/Cas9 Ribonucleoprotein-Mediated Genome and Epigenome Editing in Mammalian Cells.. 2021 , 114087	1
558	NAD bioavailability mediates PARG inhibition-induced replication arrest, intra S-phase checkpoint and apoptosis in glioma stem cells. 2021 , 3, zcab044	2
557	CRISPR-Cas9-mediated gene disruption of HIV-1 co-receptors confers broad resistance to infection in human T cells and humanized mice.. 2022 , 24, 321-331	0
556	Genome Editing with AAV-BR1-CRISPR in Postnatal Mouse Brain Endothelial Cells.. 2022 , 18, 652-660	1
555	ZC3HC1 is a structural element of the nuclear basket effecting interlinkage of TPR polypeptides.	1
554	Modulating CRISPR-Cas genome editing using guide-complementary DNA oligonucleotides.	
553	A molecular brake that modulates spliceosome pausing at detained introns contributes to neurodegeneration.	0
552	A quantitative model for the dynamics of target recognition and off-target rejection by the CRISPR-Cas Cascade complex.	0
551	Discovery and validation of human genomic safe harbor sites for gene and cell therapies.. 2022 , 2, 100154	1
550	Effective use of sequence information to predict CRISPR-Cas9 off-target.. 2022 , 20, 650-661	1
549	Mobility of kinetochore proteins measured by FRAP analysis in living cells.. 2022 , 1	2
548	Challenges and Future Prospects of CRISPR Technology. 2022 , 311-333	0

547	SCP4-STK35/PDIK1L complex is a dual phospho-catalytic signaling dependency in acute myeloid leukemia.. 2022 , 38, 110233	
546	Distribution, Diversity and Roles of CRISPR-Cas Systems in Human and Animal Pathogenic Streptococci.. 2022 , 13, 828031	0
545	Long- read sequencing and de novo assembly of the cynomolgus macaque genome.. 2022 ,	0
544	CRISPR/Cas9 system and prospects in animal modeling of neurodegenerative diseases. 2022 , 69-76	
543	ON-target Adverse Events of CRISPR-Cas9 Nuclease: More Chaotic than Expected.. 2022 ,	1
542	Bioinformatic Tools in CRISPR/Cas Platform. 2022 , 53-111	
541	Targeting CCR5 as a Component of an HIV-1 Therapeutic Strategy.. 2021 , 12, 816515	1
540	KIAA0319 influences cilia length, cell migration and mechanical cell-substrate interaction.. 2022 , 12, 722	2
539	Nodal is a short-range morphogen with activity that spreads through a relay mechanism in human gastruloids.. 2022 , 13, 497	4
538	The Scope of Pathogenic ABCA4 Mutations Targetable by CRISPR DNA Base Editing Systems-A Systematic Review.. 2021 , 12, 814131	0
537	Utilization of CRISPR-Mediated Tools for Studying Functional Genomics in Hematological Malignancies: An Overview on the Current Perspectives, Challenges, and Clinical Implications.. 2021 , 12, 767298	0
536	Two high-fidelity variants: efSaCas9 and SaCas9-HF, which one is better?. 2022 ,	0
535	2'-Methyl modified guide RNA promotes the single nucleotide polymorphism (SNP) discrimination ability of CRISPR-Cas12a systems.. 2022 , 13, 2050-2061	2
534	CRISPR/Cas genome-editing toolkit to enhance salt stress tolerance in rice and wheat.. 2022 , e13642	5
533	Tailoring Cardiac Synthetic Transcriptional Modulation Towards Precision Medicine.. 2021 , 8, 783072	0
532	Advances in the Development of Phage-Based Probes for Detection of Bio-Species.. 2022 , 12,	5
531	Genome-wide detection of CRISPR editing in vivo using GUIDE-tag.. 2022 , 13, 437	1
530	Multi-layered regulation of neuroectoderm differentiation by retinoic acid in a primitive streak-like context.. 2022 ,	0

529	Simultaneous Improvement of Grain Yield and Quality through Manipulating Two Type C G Protein Gamma Subunits in Rice.. 2022 , 23,	
528	Systematic decomposition of sequence determinants governing CRISPR/Cas9 specificity.. 2022 , 13, 474	2
527	CRISPR-Cas9 induces large structural variants at on-target and off-target sites in vivo that segregate across generations.. 2022 , 13, 627	5
526	Challenges of CRISPR-Based Gene Editing in Primary T Cells.. 2022 , 23,	0
525	Autism genes converge on asynchronous development of shared neuron classes.. 2022 ,	10
524	Development of an ion pairing reversed-phase liquid chromatography-mass spectrometry method for characterization of clustered regularly interspaced short palindromic repeats guide ribonucleic acid.. 2022 , 1665, 462839	2
523	The zebrafish model system for dyslipidemia and atherosclerosis research: Focus on environmental/exposome factors and genetic mechanisms.. 2022 , 155138	2
522	Transcriptional regulation and chromatin architecture maintenance are decoupled modular functions at the Sox2 locus.	0
521	Highly reliable creation of floxed alleles by electroporating single-cell embryos.. 2022 , 20, 31	2
520	dCas9-VPR-mediated transcriptional activation of functionally equivalent genes for gene therapy.. 2022 ,	1
519	Strategies for High-Efficiency Mutation Using the CRISPR/Cas System.. 2021 , 9, 803252	0
518	Gene Editing with CRISPR/Cas Methodology and Thyroid Cancer: Where Are We?. 2022 , 14,	1
517	Efficient CRISPR Mutagenesis in Sturgeon Demonstrates Its Utility in Large, Slow-Maturing Vertebrates.. 2022 , 10, 750833	0
516	Reactivation of β globin expression using a minicircle DNA system to treat β thalassemia.. 2022 , 820, 146289	2
515	Broad spectrum of CRISPR-induced edits in an embryonic lethal gene. 2021 , 11, 23732	
514	Chronos: a cell population dynamics model of CRISPR experiments that improves inference of gene fitness effects.. 2021 , 22, 343	8
513	Inconclusive studies on possible CRISPR-Cas off-targets should moderate expectations about enzymes that have evolved to be non-specific. 2018 , 43, 225-228	1
512	Analysis of novel domain-specific mutations in the zebrafish / gene generated using CRISPR-Cas9 RNPs. 2018 , 97, 1315-1325	7

511	positively regulates and to affect tooth development and bone mineralization in zebrafish larvae. 2019 , 44,	1
510	Extension and Improvement of CRISPR-Based Technology. 2022 , 93-140	
509	Gene Editing Through CRISPR-Based Technology. 2022 , 23-92	
508	Crispr-Embedding: CRISPR/Cas9 Off-Target Activity Prediction Using DNA <i>k</i>-Mer Embedding.	
507	Development and Vision of CRISPR-Based Technology. 2022 , 1-22	
506	GuideMaker: Software to design CRISPR-Cas guide RNA pools in non-model genomes.. 2022 , 11,	1
505	An efficient and specific CRISPR-Cas9 genome editing system targeting soybean phytoene desaturase genes.. 2022 , 22, 7	3
504	Developing Non-Human Primate Models of Inherited Retinal Diseases.. 2022 , 13,	
503	Saturation variant interpretation using CRISPR prime editing.. <i>Nature Biotechnology</i> , 2022 ,	44.5 8
502	CROPSR: an automated platform for complex genome-wide CRISPR gRNA design and validation.. 2022 , 23, 74	0
501	Systematic Investigation of the Effects of Multiple SV40 Nuclear Localization Signal Fusion on the Genome Editing Activity of Purified SpCas9.. 2022 , 9,	0
500	Cyclin-Dependent Kinases (CDKs) and the Human Cytomegalovirus-Encoded CDK Ortholog pUL97 Represent Highly Attractive Targets for Synergistic Drug Combinations.. 2022 , 23,	2
499	Application of CRISPR/Cas9-based mutant enrichment technique to improve the clinical sensitivity of plasma EGFR testing in patients with non-small cell lung cancer.. 2022 , 22, 82	0
498	Post-insemination selection dominates pre-insemination selection in driving rapid evolution of male competitive ability.. 2022 , 18, e1010063	
497	CRISPR in cancer biology and therapy.. 2022 ,	11
496	A novel analgesic pathway from parvocellular oxytocin neurons to the periaqueductal gray.	0
495	GeneTargeter: Automated Design for Genome Editing in the Malaria Parasite, .. 2022 , 5, 155-164	0
494	E3 Ligase for CENP-A (Part 2).	

493	Antispacer peptide nucleic acids for sequence-specific CRISPR-Cas9 modulation.. 2022 ,	0
492	The BTB transcription factors ZBTB11 and ZFP131 maintain pluripotency by repressing pro-differentiation genes.. 2022 , 38, 110524	0
491	Ubiquitylation of cyclin C by HACE1 regulates cisplatin-associated sensitivity in gastric cancer.. 2022 , 12, e770	2
490	Commercially Available Reagents and Contract Research Services for CRISPR-Based Studies. 2022 , 47-59	
489	Gene-Edited Cell Models to Study Chronic Wasting Disease.. 2022 , 14,	
488	A non-coding single nucleotide polymorphism at 8q24 drives IDH1-mutant glioma formation.	
487	Phage peptides mediate precision base editing with focused targeting window.. 2022 , 13, 1662	0
486	CRISPR-Cas gene editing technology and its application prospect in medicinal plants.. 2022 , 17, 33	1
485	Human epigenetic and transcriptional T cell differentiation atlas for identifying functional T cell-specific enhancers.. 2022 , 55, 557-574.e7	0
484	Homozygous might be hemizygous: CRISPR/Cas9 editing in iPSCs results in detrimental on-target defects that escape standard quality controls.. 2022 ,	3
483	Transiently expressed CRISPR/Cas9 induces wild-type dystrophin in vitro in DMD patient myoblasts carrying duplications.. 2022 , 12, 3756	0
482	Transcytosis-mediated anterograde transport of TrkA receptors is necessary for sympathetic neuron development and function.	
481	An in situ cut-and-paste genome editing platform mediated by CRISPR/Cas9 or Cas12a.	
480	Benchmarking of SpCas9 variants enables deeper base editor screens of BRCA1 and BCL2.. 2022 , 13, 1318	1
479	CRISPR-Cas9 gRNA efficiency prediction: an overview of predictive tools and the role of deep learning.. 2022 ,	4
478	Genome sequencing and genetic analysis of recombinant inbred lines reveals important agronomic traits related loci under different nitrogen fertilization.. 2022 , 1	2
477	Specificity of CRISPR-Cas9 Gene Editing. 2022 , 289-312	
476	Computational tools and resources for CRISPR/Cas genome editing.. 2022 ,	4

475	CRISPR/Cas gene editing in the human germline.. 2022,	1
474	Inducible CRISPR/Cas9 allows for multiplexed and rapidly segregated single target genome editing in <i>Synechocystis</i> sp. PCC 6803.	0
473	Whole-genome sequencing reveals that variants in the Interleukin 18 Receptor Accessory Protein 3'UTR protect against ALS.. 2022,	1
472	Principles and Applications of CRISPR Toolkit in Virus Manipulation, Diagnosis, and Virus-Host Interactions.. 2022, 11,	1
471	Two Compact Cas9 Ortholog-Based Cytosine Base Editors Expand the DNA Targeting Scope and Applications and .. 2022, 10, 809922	1
470	Computational Tools for Target Design and Analysis. 2022, 61-72	
469	FrCas9 is a CRISPR/Cas9 system with high editing efficiency and fidelity.. 2022, 13, 1425	1
468	Target residence of Cas9: challenges and opportunities in genome editing. 2022, 3, 57-69	
467	A kinetic model predicts SpCas9 activity, improves off-target classification, and reveals the physical basis of targeting fidelity.. 2022, 13, 1367	1
466	CRISPR-Cas9 treatment partially restores amyloid- β 2/40 in human fibroblasts with the Alzheimer's disease M146L mutation.. 2022, 28, 450-461	1
465	CNN-XG: A Hybrid Framework for sgRNA On-Target Prediction.. 2022, 12,	0
464	KPT330 improves Cas9 precision genome- and base-editing by selectively regulating mRNA nuclear export.. 2022, 5, 237	1
463	Efficient Gene Knockout in Salivary Gland Epithelial Organoid Cultures.	
462	Imaging tools generated by CRISPR/Cas9 tagging reveal cytokinetic diversity in mammalian cells.	
461	Drug addiction mutations unveil a methylation ceiling in EZH2-mutant lymphoma.	2
460	TransCRISPR - sgRNA design tool for CRISPR/Cas9 experiments targeting transcription factor motifs.	
459	CHD8 haploinsufficiency links autism to transient alterations in excitatory and inhibitory trajectories.. 2022, 39, 110615	2
458	Development and Application of CRISPR-Cas Based Tools.. 2022, 10, 834646	2

457	A functional map of HIV-host interactions in primary human T cells.. 2022 , 13, 1752	1
456	Dual-gRNA approach with limited off-target effect corrects C9ORF72 repeat expansion in vivo.. 2022 , 12, 5672	0
455	Controlling CRISPR-Cas9 by guide RNA engineering.. 2022 , e1731	0
454	Therapeutic potentials of CRISPR-Cas genome editing technology in human viral infections.. 2022 , 148, 112743	1
453	Designing electrospun fiber platforms for efficient delivery of genetic material and genome editing tools.. 2022 , 114161	1
452	Targeted Gene Mutations in the Forest Pathogen Using CRISPR/Cas9.. 2022 , 11,	1
451	CRISPR-Cas9-mediated induction of large chromosomal inversions in human bronchial epithelial cells.. 2022 , 3, 101257	0
450	Endogenous BiP reporter system for simultaneous identification of ER stress and antibody production in Chinese hamster ovary cells.. 2022 ,	1
449	CRISPR-Based Genetic Switches and Other Complex Circuits: Research and Application. 2021 , 11,	1
448	Applications of and considerations for using CRISPR-Cas9-mediated gene conversion systems in rodents.. 2021 ,	1
447	CRISPR/Cas9 Targeted Editing of Genes Associated With Fungal Susceptibility in <i>L. cv. Thompson</i> Seedless Using Geminivirus-Derived Replicons.. 2021 , 12, 791030	2
446	Unexpected gene activation following CRISPR-Cas9-mediated genome editing.. 2021 , e53902	0
445	Transformation systems, gene silencing and gene editing technologies in oomycetes. 2021 ,	0
444	Analysis of a Cas12a-based gene-drive system in budding yeast.. 2021 , 3, 000301	1
443	You can't keep a bad idea down: Dark history, death, and potential rebirth of eugenics.. 2021 ,	2
442	A Tunable and Expandable Transactivation System in Probiotic Yeast .. 2021 ,	0
441	Genetically modified large animal models for investigating neurodegenerative diseases.. 2021 , 11, 218	2
440	H-VAE: A Hybrid Variational AutoEncoder with Data Augmentation in Predicting CRISPR/Cas9 Off-target. 2021 ,	

439	A Survey of Machine Learning and Deep Learning Applications in Genome Editing. 2022 , 145-162	0
438	Stem cell specific interferon stimulated gene expression is regulated by the formative pluripotency network through IRF1.	
437	A specific inhibitor of ALDH1A3 regulates retinoic acid biosynthesis in glioma stem cells.. 2021 , 4, 1420	3
436	The Membrane-Anchoring Region of the AcMNPV P74 Protein Is Expendable or Interchangeable with Homologs from Other Species.. 2021 , 13,	
435	CRISPR/Cas9-mediated generation of biallelic F0 anemonefish (<i>Amphiprion ocellaris</i>) mutants.. 2021 , 16, e0261331	0
434	Clustered regularly interspaced short palindromic repeats, a glimpse ² - impacts in molecular biology, trends and highlights. 2021 ,	
433	Gene editing and its applications in biomedicine.. 2022 , 65, 660	3
432	OUP accepted manuscript.	0
431	CRISPR/Cas9-engineered mutation to identify the roles of phytochromes in regulating photomorphogenesis and flowering time in soybean. 2022 ,	0
430	Innovative Approaches to Genome Editing in Chickens. 2022 , 56, 196-207	
429	Application of CRISPR-Cas9 System to Study Biological Barriers to Drug Delivery. 2022 , 14, 894	1
428	CRISPR/Cas9 in Planta Hairy Root Transformation: A Powerful Platform for Functional Analysis of Root Traits in Soybean.. 2022 , 11,	0
427	Computational normal mode analysis accurately replicates the activity and specificity profiles of CRISPR-Cas9 and high-fidelity variants.. 2022 , 20, 2013-2019	0
426	Correction of a CD55 mutation to quantify the efficiency of targeted knock-in via flow cytometry.. 2022 , 1	
425	Differences in renal cortex transcriptional profiling of wild-type and novel type B cystinuria model rats.. 2022 , 50, 279	
424	WT-PE: Prime editing with nuclease wild-type Cas9 enables versatile large-scale genome editing.. 2022 , 7, 108	1
423	A preclinical platform for assessing antitumor effects and systemic toxicities of cancer drug targets.. 2022 , 119, e2110557119	1
422	Establishment and application of a human osteosarcoma U-2OS cell line that can stably express Cas9 protein.. 2022 ,	1

421	Validation of reliable safe harbor locus for efficient porcine transgenesis.. 2022 , 1	1
420	Novel Plant Breeding Techniques Shake Hands with Cereals to Increase Production.. 2022 , 11,	1
419	CRISPR-Based Genome Editing: Advancements and Opportunities for Rice Improvement.. 2022 , 23,	2
418	Image_1.TIF. 2018 ,	
417	Image_2.TIF. 2018 ,	
416	Image_3.TIF. 2018 ,	
415	Image_4.TIF. 2018 ,	
414	Image_5.TIF. 2018 ,	
413	Table_1.pdf. 2018 ,	
412	Data_Sheet_1.DOCX. 2020 ,	
411	Image_1.tiff. 2020 ,	
410	Image_2.tiff. 2020 ,	
409	Image_3.tiff. 2020 ,	
408	Image_4.tiff. 2020 ,	
407	Image_5.tiff. 2020 ,	
406	Table_1.DOCX. 2020 ,	
405	Table_2.XLSX. 2020 ,	
404	Table_3.DOCX. 2020 ,	

403 Table_4.XLSX. 2020,

402 Data_Sheet_1.docx. 2020,

401 Table_1.docx. 2020,

400 Presentation_1.pptx. 2019,

399 Table_1.XLSX. 2019,

398 Data_Sheet_1.XLSX. 2020,

397 Data_Sheet_2.CSV. 2020,

396 Presentation_1.PDF. 2018,

395 Table_1.XLSX. 2018,

394 Data_Sheet_1.pdf. 2019,

393 Presentation_1.PPTX. 2019,

392 Table_1.XLSX. 2019,

391 Table_2.XLSX. 2019,

390 Table_3.xlsx. 2019,

389 Data_Sheet_1.PDF. 2019,

388 Table_1.XLSX. 2019,

387 Table_2.XLSX. 2019,

386 Data_Sheet_1.docx. 2020,

385 Presentation_1.PPTX. 2020,

384 Data_Sheet_1.pdf. 2020,

383 DataSheet1.pdf. 2018,

382 Image_1.pdf. 2018,

381 Image_1.TIF. 2020,

380 Table_1.xlsx. 2020,

379 Table_2.xlsx. 2020,

378 Table_3.xlsx. 2020,

377 Image_1.JPEG. 2018,

376 Table_1.XLSX. 2018,

375 Image1.TIF. 2018,

374 Image2.TIF. 2018,

373 Image3.TIF. 2018,

372 Image4.TIF. 2018,

371 Table1.DOCX. 2018,

370 Table_1.DOCX. 2020,

369 Table_2.XLSX. 2020,

368 Table_3.XLSX. 2020,

367 Table_4.XLSX. 2020,

366 Table_5.XLSX. 2020,

365 Table_6.XLSX. 2020,

364 Data_Sheet_1.PDF. 2019,

363 Data_Sheet_2.PDF. 2019,

362 Data_Sheet_3.PDF. 2019,

361 Data_Sheet_4.PDF. 2019,

360 Data_Sheet_1.docx. 2018,

359 Table_1.DOCX. 2018,

358 Table_2.DOCX. 2018,

357 Data_Sheet_1.PDF. 2018,

356 Table_1.XLSX. 2020,

355 CRISPR/Cas9-Mediated Genome Editing System in Insect Genomics and Pest Management. 2022, 2360, 347-366

354 Recent advancements in CRISPR/Cas technology for accelerated crop improvement.. 2022, 255, 109 ○

353 Regulatory Considerations for Clinical Trial Applications with CRISPR-Based Medicinal Products.. 2022, ○

352 Efficient CRISPR-Cas9 editing of major evolutionary loci in sticklebacks.. 2019, 20, 107-132 1

351 Identification and Validation of CRISPR/Cas9 Off-Target Activity in Hematopoietic Stem and Progenitor Cells.. 2022, 2429, 281-306

350 ExsgRNA: reduce off-target efficiency by on-target mismatched sgRNA.. 2022, 1

- 349 MicroRNA-Mediated Insect Resistance in Field Crops. **2022**, 369-392
- 348 CRISPR/Cas9 Based Site-Specific Modification of FAD2 -Regulatory Motifs in Peanut (). **2022**, 13, 849961 1
- 347 CRISPR/Cas9-Based Genome Editing and Its Application in Aspergillus Species. **2022**, 8, 467 1
- 346 A comprehensive Bioconductor ecosystem for the design of CRISPR guide RNAs across nucleases and technologies. 0
- 345 Role of CRISPR Technology in Gene Editing of Emerging and Re-emerging Vector Borne Disease.
- 344 DNA methylation can alter CRISPR/Cas9 editing frequency and DNA repair outcome in a target-specific manner.. **2022**, 0
- 343 Genome editing in animals with minimal PAM CRISPR-Cas9 enzymes.. **2022**, 13, 2601 1
- 342 CRISPR-Cas9 Knock-In of T513M and G41S Mutations in the Murine β -Galactosyl-Ceramidase Gene Re-capitulates Early-Onset and Adult-Onset Forms of Krabbe Disease. **2022**, 15, 0
- 341 CRISPR/Cas therapeutic strategies for autosomal dominant disorders.. **2022**, 132, 0
- 340 Subfunctionalized expression drives evolutionary retention of ribosomal protein paralogs in vertebrates.
- 339 Targeted epigenomic editing ameliorates adult anxiety and excessive drinking after adolescent alcohol exposure.. **2022**, 8, eabn2748 2
- 338 Transcription Factor 4 loss-of-function is associated with deficits in progenitor proliferation and cortical neuron content.. **2022**, 13, 2387 0
- 337 Recent advances in high-throughput metabolic engineering: Generation of oligonucleotide-mediated genetic libraries.. **2022**, 107970 1
- 336 Lymph node colonization induces tumor-immune tolerance to promote distant metastasis.. **2022**, 3
- 335 Zinc transporters ZIPT-2.4 and ZIPT-15 are required for normal *C. elegans* fecundity.. **2022**,
- 334 CRISPR-Cas Assisted Shotgun Mutagenesis Method for Evolutionary Genome Engineering.. **2022**, 11, 1958-1970
- 333 Current Progress of Mitochondrial Genome Editing by CRISPR.. **2022**, 13, 883459 1
- 332 Genome-wide CRISPR guide RNA design and specificity analysis with GuideScan2. 1

331	Targeting double-strand break indel byproducts with secondary guide RNAs improves Cas9 HDR-mediated genome editing efficiencies.. 2022 , 13, 2351	1
330	CRISPR-based VEGF suppression using paired guide RNAs for treatment of choroidal neovascularization. 2022 , 28, 613-622	2
329	Decrypting the mechanistic basis of CRISPR/Cas9 protein.. 2022 ,	0
328	Multiplex base- and prime-editing with drive-and-process CRISPR arrays.. 2022 , 13, 2771	3
327	Can SpRY recognize any PAM in human cells?. 2022 , 23, 382-391	0
326	Synthetic biology and the regulatory roadmap for the commercialization of designer microbes. 2022 , 449-475	
325	Oxidative stress monitoring in iPSC-derived motor neurons using genetically encoded biosensors of H ₂ O ₂ . 2022 , 12,	
324	Allele-specific knockouts reveal a role for apontic-like in the evolutionary loss of larval pigmentation in the domesticated silkworm, <i>Bombyx mori</i> .	
323	The origin of unwanted editing byproducts in gene editing. 2022 ,	0
322	BSA-Seq and Fine Linkage Mapping for the Identification of a Novel Locus (qPH9) for Mature Plant Height in Rice (<i>Oryza sativa</i>). 2022 , 15,	1
321	Engineered Cas12i2 is a versatile high-efficiency platform for therapeutic genome editing. 2022 , 13,	0
320	Understanding of the various aspects of gene regulatory networks related to crop improvement. 2022 , 833, 146556	0
319	CRISPR-Cas-Based Gene Therapy to Target Viral Infections. 2022 , 85-125	0
318	Ingestion of single guide RNAs induces gene overexpression and extends lifespan in <i>C. elegans</i> via CRISPR activation. 2022 , 102085	0
317	Deletion mapping of regulatory elements for GATA3 reveals a distal T helper 2 cell enhancer involved in allergic diseases.	
316	The Gain-of-Function R222S Variant in <i>Scn11a</i> Contributes to Visceral Hyperalgesia and Intestinal Dysmotility in <i>Scn11a</i> R222S/R222S Mice. 13,	
315	Robust and Versatile Arrayed Libraries for Human Genome-Wide CRISPR Activation, Deletion and Silencing.	1
314	Use of CRISPR/Cas9 with homology-directed repair to silence the human topoisomerase II β intron-19 5' splice site: Generation of etoposide resistance in human leukemia K562 cells. 2022 , 17, e0265794	1

- 313 CRISPR/Cas9-Mediated Excision of ALS/FTD-Causing Hexanucleotide Repeat Expansion in C9ORF72 rescues major disease mechanisms in vivo and in vitro.
- 312 CRISPR-Cas effector specificity and target mismatches determine phage escape outcomes.
- 311 Precise CRISPR-Cas-mediated gene repair with minimal off-target and unintended on-target mutations in human hematopoietic stem cells. **2022**, 8, 0
- 310 A scaling law in CRISPR repertoire sizes arises from the avoidance of autoimmunity. **2022**, 1
- 309 Development of Multiple-Heading-Date mtl Haploid Inducer Lines in Rice. **2022**, 12, 806
- 308 Hematopoietic Stem Cell Gene-Addition/Editing Therapy in Sickle Cell Disease. **2022**, 11, 1843 2
- 307 Electroporation of His-Cre fusion protein triggers a specific recombinase-mediated cassette exchange in HEK 293T cells. **2022**, 106128
- 306 Establishment of mouse line showing inducible priapism-like phenotypes. **2022**, 21,
- 305 CRISPR-on for Endogenous Activation of SMARCA4 Expression in Bovine Embryos. **2022**, 129-148
- 304 CRISPR-AsCas12a Efficiently Corrects a GPR143 Intronic Mutation in Induced Pluripotent Stem Cells from an Ocular Albinism Patient. **2022**, 5, 457-471
- 303 Utility of iPSC-Derived Cells for Disease Modeling, Drug Development, and Cell Therapy. **2022**, 11, 1853 3
- 302 Nociceptive signaling through TRPV1 is regulated by Cdk5-mediated phosphorylation of T407 in vivo. 174480692211114
- 301 Cas9-induced large deletions and small indels are controlled in a convergent fashion. **2022**, 13, 2
- 300 Amplifying Intermolecular Events by Streptavidin-Induced Proximity.
- 299 A user-friendly and streamlined protocol for CRISPR/Cas9 genome editing in budding yeast. **2022**, 3, 101358
- 298 Molecular Mechanism of D1135E-Induced Discriminated CRISPR-Cas9 PAM Recognition. 3
- 297 Diagnostics of COVID-19 Based on CRISPR-Cas Coupled to Isothermal Amplification: A Comparative Analysis and Update. **2022**, 12, 1434 1
- 296 Transcriptional regulation and chromatin architecture maintenance are decoupled functions at the Sox2 locus. 1

- 295 Methionine oxidation activates pyruvate kinase M2 to promote pancreatic cancer metastasis. **2022**, 0
- 294 Dysfunction of AMPA receptor GluA3 is associated with aggressive behavior in human. 0
- 293 CRISPR-Cas9-Based Technology and Its Relevance to Gene Editing in Parkinson's Disease. **2022**, 14, 1252 2
- 292 Multigenerational laboratory culture of pelagic ctenophores and CRISPR-Cas9 genome editing in the lobate *Mnemiopsis leidyi*. 1
- 291 HideRNAs protect against CRISPR-Cas9 re-cutting after successful single base-pair gene editing. **2022**, 12,
- 290 Rapid Whole-Genome Identification of High Quality CRISPR Guide RNAs with the Crackling Method. **2022**, 5, 410-421
- 289 Origin of the genome editing systems: application for crop improvement.
- 288 dCas9-mediated dysregulation of gene expression in human induced pluripotent stem cells during primitive streak differentiation. **2022**, 73, 70-81
- 287 Protocol to study sufficiency of cis-regulatory elements in mouse embryonic stem cells using a CRISPR-mediated knockin approach. **2022**, 3, 101492
- 286 Genome edited wheat- current advances for the second green revolution. **2022**, 60, 108006 0
- 285 Tetraspanin CD53 controls T cell immunity through regulation of CD45RO stability, mobility, and function. **2022**, 39, 111006 0
- 284 Loss of the cleaved-protamine 2 domain leads to incomplete histone-to-protamine exchange and infertility in mice. **2022**, 18, e1010272 0
- 283 Technical considerations towards commercialization of porcine respiratory and reproductive syndrome (PRRS) virus resistant pigs. **2022**, 3, 1
- 282 CRISPR/Cas- and Topical RNAi-Based Technologies for Crop Management and Improvement: Reviewing the Risk Assessment and Challenges Towards a More Sustainable Agriculture. 10, 0
- 281 An isogenic panel of App knock-in mouse models: Profiling β secretase inhibition and endosomal abnormalities. **2022**, 8, 1
- 280 Cas-CLOVER is a novel high-fidelity nuclease for safe and robust generation of TSCM-enriched allogeneic CAR-T cells. **2022**, 0
- 279 Accounting for small variations in the tracrRNA sequence improves sgRNA activity predictions for CRISPR screening.
- 278 MLL3 regulates the CDKN2A tumor suppressor locus in liver cancer.

277	CASPER: An Integrated Software Platform for Rapid Development of CRISPR Tools.	
276	A DNA-Free Editing Platform for Genetic Screens in Soybean via CRISPR/Cas9 Ribonucleoprotein Delivery. 13,	1
275	DNA base editing in nuclear and organellar genomes. 2022,	1
274	Allele-specific knockouts reveal a role for apontic-like in the evolutionary loss of larval melanin pigmentation in the domesticated silkworm, <i>Bombyx mori</i> .	1
273	Calcium sparks enhance the tissue fluidity within epithelial layers and promote apical extrusion of transformed cells. 2022, 40, 111078	
272	A time-resolved, multi-symbol molecular recorder via sequential genome editing.	4
271	Human-Induced Pluripotent Stem Cell-Derived Cardiomyocyte Model for TNNT2 Δ 60E-Induced Cardiomyopathy.	1
270	Microscale Thermophoresis as a Tool to Study Protein Interactions and Their Implication in Human Diseases. 2022, 23, 7672	0
269	Massively targeted evaluation of therapeutic CRISPR off-targets in cells. 2022, 13,	1
268	Recent Advances in Improving Gene-Editing Specificity through CRISPR-Cas9 Nuclease Engineering. 2022, 11, 2186	0
267	Generation of a ceramide synthase 6 mouse lacking the DDRSDIE C-terminal motif. 2022, 17, e0271675	
266	ACTivE: Assembly and CRISPR-targeted in vivo Editing for Yeast Genome Engineering Using Minimum Reagents and Time.	0
265	CRISPR-Surfaceome: an online tool for designing highly efficient sgRNAs targeting cell surface proteins. 2022,	
264	CRISPR/Cas9-Mediated Efficient Targeted Mutagenesis in Sesame (<i>Sesamum indicum</i> L.). 13,	1
263	CRISPR/Cas9-based genome-wide screening of <i>Dictyostelium</i> . 2022, 12,	0
262	Precise exogenous insertion and sequence replacements in poplar by simultaneous HDR overexpression and NHEJ suppression using CRISPR-Cas9.	2
261	SMAP design: A multiplex PCR amplicon and gRNA design tool to screen for natural and CRISPR-induced genetic variation.	
260	Modulating CRISPR-Cas Genome Editing Using Guide-Complementary DNA Oligonucleotides.	

259	Employment of the CRISPR/Cas9 system to improve cellulase production in <i>Trichoderma reesei</i> . 2022 , 60, 108022	0
258	New Hope for Genome Editing in Cultivated Grasses: CRISPR Variants and Application. 13,	0
257	Transient upregulation of IRF1 during exit from naive pluripotency confers viral protection.	0
256	CRISPR/Cas9 system in breast cancer therapy: advancement, limitations and future scope. 2022 , 22,	0
255	RISC-y Business: Limitations of Short Hairpin RNA-Mediated Gene Silencing in the Brain and a Discussion of CRISPR/Cas-Based Alternatives. 15,	0
254	CRISPR applications for Duchenne muscular dystrophy: From animal models to potential therapies.	0
253	Efficient Cas9-based Genome Editing Using CRISPR Analysis Webtools in Severe Early-onset-obesity Patient-derived iPSCs. 2022 , 2,	
252	R-loop formation and conformational activation mechanisms of Cas9.	3
251	CRISPR/Cas-Powered Biosensing.	
250	PAM-altering SNP-based allele-specific CRISPR-Cas9 therapeutic strategies for Huntington's disease. 2022 ,	
249	Genome editing for primary immunodeficiencies: A therapeutic perspective on Wiskott-Aldrich syndrome. 13,	
248	Ethical Challenges and Controversies in the Practice and Advancement of Gene Therapy. 2022 , 2022, 1-5	0
247	Aberrant Splicing of <i>INS</i> Impairs Beta-Cell Differentiation and Proliferation by ER Stress in the Isogenic iPSC Model of Neonatal Diabetes. 2022 , 23, 8824	1
246	Uncovering the roles of dihydropyrimidine dehydrogenase in fatty-acid induced steatosis using human cellular models. 2022 , 12,	1
245	Visualizing Single-Nucleotide Variations in a Nuclear Genome Using Colocalization of Dual-Engineered CRISPR Probes.	1
244	The CRISPR Revolution in the Drug Discovery Workflow: An Industry Perspective.	
243	A Novel CRISPR-MultiTargeter Multi-agent Reinforcement learning (CMT-MARL) algorithm to identify editable target regions using a Hybrid scoring from multiple similar sequences.	
242	New Advances in Using Virus-like Particles and Related Technologies for Eukaryotic Genome Editing Delivery. 2022 , 23, 8750	

- 241 Transcriptional regulation of the thymus master regulator Foxn1. **2022**, 7,
- 240 PIWI-Interacting RNA (piRNA) and Epigenetic Editing in Environmental Health Sciences. 1
- 239 Full-Length Dystrophin Restoration via Targeted Exon Addition in DMD-Patient Specific iPSCs and Cardiomyocytes. **2022**, 23, 9176 0
- 238 A Machine Learning Approach to Identify the Importance of Novel Features for CRISPR/Cas9 Activity Prediction. **2022**, 12, 1123
- 237 Precise somatic genome editing for treatment of inborn errors of immunity. 13,
- 236 Applications of CRISPR/Cas9 for Selective Sequencing and Clinical Diagnostics.
- 235 ZC3HC1 is a structural element of the nuclear basket effecting interlinkage of TPR polypeptides. **2022**, 33, 1
- 234 Effective splicing restoration of a deep-intronic ABCA4 variant in cone photoreceptor precursor cells by CRISPR/SpCas9 approaches. **2022**, 29, 511-524 0
- 233 gDesigner: computational design of synthetic gRNAs for Cas12a-based transcriptional repression in mammalian cells. **2022**, 8, 0
- 232 Comparative analysis of CRISPR off-target activity discovery tools following ex vivo editing of CD34+ hematopoietic stem and progenitor cells. 0
- 231 Cytosolic sequestration of spatacsin by Protein Kinase A and 14-3-3 proteins. **2022**, 174, 105858 0
- 230 New Directions for Epigenetics: Application of Engineered DNA-binding Molecules to Locus-specific Epigenetic Research. **2023**, 843-868 0
- 229 Genome editing in cancer: Challenges and potential opportunities. **2023**, 21, 394-402 0
- 228 CRISPR Genome Editing Brings Global Food Security into the First Lane: Enhancing Nutrition and Stress Resilience in Crops. **2022**, 285-344 0
- 227 Genetic Engineering of Nonhuman Primate Models for Studying Neurodevelopmental Disorders. **2022**, 235-262 0
- 226 CRISPR/Cas9 On- and Off-Target Activity Using Correlative Force and Fluorescence Single-Molecule Microscopy. **2022**, 349-378 0
- 225 Negative DNA Supercoiling Induces Genome Wide Cas9 Off-Target Activity. 0
- 224 The Use of CRISPR Technologies for Crop Improvement in Maize. **2022**, 271-294 0

223	Emerging CRISPR Technologies.	0
222	Dynamic observations of CRISPR-Cas target recognition and cleavage heterogeneities. 2022 , 11, 4419-4425	3
221	CRISPR Screens. 2022 , 213-232	0
220	How to Completely Squeeze a Fungus Advanced Genome Mining Tools for Novel Bioactive Substances. 2022 , 14, 1837	1
219	In vitro selection of Engineered Transcriptional Repressors for targeted epigenetic silencing and initial evaluation of their specificity profile.	0
218	An Ultrasensitive, One-Pot RNA Detection Method Based on Rationally Engineered Cas9 Nickase-Assisted Isothermal Amplification Reaction. 2022 , 94, 12461-12471	0
217	Efficient Targeted DNA Methylation with dCas9-Coupled DNMT3A-DNMT3L Methyltransferase. 2023 , 177-188	0
216	Editing human hematopoietic stem cells: advances and challenges. 2022 ,	0
215	Haplotyping SNPs for allele-specific gene editing of the expanded huntingtin allele using long-read sequencing. 2022 , 100146	1
214	A comprehensive overview of CRISPR/Cas 9 technology and application thereof in drug discovery.	1
213	Multiplexed functional genomic assays to decipher the noncoding genome.	0
212	CRISPR FISHer enables high-sensitivity imaging of nonrepetitive DNA in living cells through phase separation-mediated signal amplification.	1
211	Deciphering the QR Code of the CRISPR-Cas9 System: Synergy between Gln768 (Q) and Arg976 (R).	0
210	Advances in CRISPR/Cas9. 2022 , 2022, 1-13	2
209	Evasion of Cas9 toxicity to develop an efficient genome editing system and its application to increase ethanol yield in <i>Fusarium venenatum</i> TB01. 2022 , 106, 6583-6593	0
208	Impaired expression of serine/arginine protein kinase 2 (SRPK2) affects melanoma progression. 13,	0
207	Expression of the phagocytic receptors α M β 2 and α X β 2 is controlled by RIAM, VASP and Vinculin in neutrophil-differentiated HL-60 cells. 13,	0
206	Reversibility and Therapeutic Development for Neurodevelopmental Disorders, Insights from Genetic Animal Models. 2022 , 114562	1

205	An Alternate Approach to Generate Induced Pluripotent Stem Cells with Precise CRISPR/Cas9 Tool. 2022 , 2022, 1-17	0
204	Accounting for small variations in the tracrRNA sequence improves sgRNA activity predictions for CRISPR screening. 2022 , 13,	0
203	Fast bioluminescent nucleic acid detection using one-pot isothermal amplification and dCas9-based split luciferase complementation.	0
202	General guidelines for CRISPR/Cas-based genome editing in plants.	1
201	Functional inhibition of the StERF3 gene by dual targeting through CRISPR/Cas9 enhances resistance to the late blight disease in <i>Solanum tuberosum</i> L..	0
200	CRISPR/Cas System Toward the Development of Next-Generation Recombinant Vaccines: Current Scenario and Future Prospects.	1
199	SYNJ2BP Improves the Production of Lentiviral Envelope Protein by Facilitating the Formation of Mitochondrion-Associated Endoplasmic Reticulum Membrane.	0
198	A noncoding single-nucleotide polymorphism at 8q24 drives IDH1 -mutant glioma formation. 2022 , 378, 68-78	1
197	Unbiased prediction of off-target sites in genome-edited rice using SITE-Seq analysis on a web-based platform.	1
196	Time-ordering japonica / geng genomes analysis indicates the importance of large structural variants in rice breeding.	1
195	Generation of germ cell-deficient pigs by<i>NANOS3</i> knockout. 2022 ,	0
194	Polymer-Mediated Delivery of CRISPR-Cas9 Genome-Editing Therapeutics for CNS Disease. 2022 , 229-258	0
193	Targeted Genome-Editing Techniques in Plant Defense Regulation. 2022 , 1-32	0
192	ACTivE: Assembly and CRISPR-Targeted in Vivo Editing for Yeast Genome Engineering Using Minimum Reagents and Time.	0
191	Highly Conserved Interaction Profiles between Clinically Relevant Mutants of the Cytomegalovirus CDK-like Kinase pUL97 and Human Cyclins: Functional Significance of Cyclin H. 2022 , 23, 11814	0
190	Evaluation of efficiency prediction algorithms and development of ensemble model for CRISPR/Cas9 gRNA selection.	0
189	CRISPR-Cas Genome Editing Technique for Fish Disease Management: Current Study and Future Perspective. 2022 , 10, 2012	0
188	Genome editing in mice and its application to the study of spermatogenesis. 2022 , 100014	0

187	Automated identification of sequence-tailored Cas9 proteins using massive metagenomic data. 2022 , 13,	0
186	In vivo application of base and prime editing to treat inherited retinal diseases. 2022 , 101132	0
185	Application of CRISPR for In Vivo Mouse Cancer Studies. 2022 , 14, 5014	0
184	A Simple, Improved Method for Scarless Genome Editing of Budding Yeast Using CRISPR-Cas9. 2022 , 5, 79	0
183	CRISPR/Cas9-mediated excision of ALS/FTD-causing hexanucleotide repeat expansion in C9ORF72 rescues major disease mechanisms in vivo and in vitro. 2022 , 13,	1
182	Development of a Cellular Model Mimicking Specific HDAC Inhibitors. 2023 , 51-73	0
181	In-cell chemical crosslinking identifies hotspots for p62-IBB1 interaction that underscore a critical role of p62 in limiting NF- κ B activation through IBB1 stabilization.	0
180	Development and Applications of CRISPR/Cas9-Based Genome Editing in Lactobacillus. 2022 , 23, 12852	0
179	Contribution of CRISPRable DNA to human complex traits. 2022 , 5,	0
178	Design of SaCas9-HF for In Vivo Gene Therapy. 2023 , 261-268	0
177	Introgression of a Complex Genomic Structural Variation Causes Hybrid Male Sterility in GJ Rice (<i>Oryza sativa</i> L.) Subspecies. 2022 , 23, 12804	0
176	Multi-species analysis of inflammatory response elements reveals ancient and lineage-specific contributions of transposable elements to NF- κ B binding.	0
175	Structural basis for Cas9 off-target activity. 2022 , 185, 4067-4081.e21	1
174	PEGG: A computational pipeline for rapid design of prime editing guide RNAs and sensor libraries.	0
173	Comprehensive analysis and accurate quantification of unintended large gene modifications induced by CRISPR-Cas9 gene editing. 2022 , 8,	1
172	A comprehensive Bioconductor ecosystem for the design of CRISPR guide RNAs across nucleases and technologies. 2022 , 13,	0
171	Transcriptional and functional consequences of alterations to MEF2C and its topological organization in neuronal models. 2022 , 109, 2049-2067	2
170	In vivo delivery of CRISPR-Cas9 genome editing components for therapeutic applications. 2022 , 291, 121876	1

- 169 New genetic modification techniques: challenges and prospects. **2023**, 918-937 ○
- 168 Construction of an IL12 and CXCL11 armed oncolytic herpes simplex virus using the CRISPR/Cas9 system for colon cancer treatment. **2023**, 323, 198979 1
- 167 Specific detection of antibiotic-resistant bacteria using CRISPR/Cas9 induced isothermal exponential amplification reaction (IEXPAR). **2023**, 253, 124045 ○
- 166 Genetic scissors—CRISPR/Cas9 genome editing cutting-edge biocarrier technology for bone and cartilage repair. **2023**, 22, 254-273 ○
- 165 Improvement of Resistance in Plants Against Insect-Pests Using Genome Editing Tools. **2022**, 237-249 ○
- 164 Recent Trends in Targeting Genome Editing of Tomato for Abiotic and Biotic Stress Tolerance. **2022**, 273-285 ○
- 163 Design and application of a kinetic model of lipid metabolism in *Saccharomyces cerevisiae*. **2023**, 75, 12-18 ○
- 162 Applications of CRISPR/Cas9 in agriculture, nutrition, health and disease. **2019**, 17, 30-35 ○
- 161 Identification and Analysis of Small Molecule Inhibitors of CRISPR-Cas9 in Human Cells. **2022**, 11, 3574 ○
- 160 Cancer-selective metabolic vulnerabilities in MYC-amplified medulloblastoma. **2022**, ○
- 159 NDRG1 is induced by antigen-receptor signaling but dispensable for B and T cell self-tolerance. **2022**, 5, ○
- 158 CRISPR nuclease off-target activity and mitigation strategies. 4, ○
- 157 Allele-specific gene editing approach for vision loss restoration in RHO-associated Retinitis Pigmentosa. ○
- 156 Efficient Gene Knockout in Salivary Gland Epithelial Explant Cultures. 002203452211282 ○
- 155 CRISPR-Cas9 Technology for the Creation of Biological Avatars Capable of Modeling and Treating Pathologies: From Discovery to the Latest Improvements. **2022**, 11, 3615 ○
- 154 New Effective Method of *Lactococcus* Genome Editing Using Guide RNA-Directed Transposition. **2022**, 23, 13978 ○
- 153 Shifted PAMs generate DNA overhangs and enhance SpCas9 post-catalytic complex dissociation. ○
- 152 Natural Nucleoside Modifications in Guide RNAs Can Modulate the Activity of the CRISPR-Cas9 System In Vitro. ○

151	Genome editing and bioinformatics. 2022 , 3-4, 100018	0
150	A redox switch regulates the assembly and anti-CRISPR activity of AcrIIIC1. 2022 , 13,	0
149	rAAV-CRISPRa therapy corrects Rai1 haploinsufficiency and rescues selective disease features in Smith-Magenis syndrome mice. 2022 , 102728	0
148	Protocol for gene characterization in <i>Aspergillus niger</i> using 5S rRNA-CRISPR-Cas9-mediated Tet-on inducible promoter exchange. 2022 , 3, 101838	0
147	The landscape of CRISPR/Cas9 for inborn errors of metabolism. 2023 , 138, 106968	0
146	A bacterial Argonaute from <i>Tepiditoga spiralis</i> with the ability of RNA guided plasmid cleavage. 2023 , 640, 157-163	0
145	CRISPR/Cas9 genome editing demonstrates functionality of the autoimmunity-associated SNP rs12946510. 2023 , 1869, 166599	0
144	Multiplexing with CRISPR-Cas Arrays. 2022 ,	0
143	CRISPR/Cas systems: Delivery and application in gene therapy. 10,	0
142	Gene editing of human iPSCs rescues thrombophilia in hereditary antithrombin deficiency in mice. 2022 , 14,	0
141	Thermodynamic Parameters Contributions of Single Internal Mismatches In RNA/DNA Hybrid Duplexes.	0
140	Suppressing gain-of-function proteins via CRISPR/Cas9 system in SCA1 cells. 2022 , 12,	0
139	The effect of crRNA target mismatches on cOA-mediated interference by a type III-A CRISPR-Cas system. 2022 , 19, 1293-1304	0
138	Cytokinetic diversity in mammalian cells is revealed by the characterization of endogenous anillin, Ect2 and RhoA. 2022 , 12,	1
137	High-content CRISPR screening in tumor immunology. 13,	0
136	TEMPO enables sequential genetic labeling and manipulation of vertebrate cell lineages. 2022 ,	0
135	Optimized prime editing in monocot plants using PlantPegDesigner and engineered plant prime editors (ePPEs).	0
134	Drag-and-drop genome insertion of large sequences without double-strand DNA cleavage using CRISPR-directed integrases.	2

- 133 A review on bioinformatics advances in CRISPR-Cas technology. ○
- 132 CRISPRi-FGP: web-based genome-scale CRISPRi sgRNA design and validation tool in prokaryotes. ○
- 131 Multiplexed engineering and precision gene editing in cellular immunotherapy. 13, ○
- 130 Prediction of protein-protein interactions between anti-CRISPR and CRISPR-Cas using machine learning technique. ○
- 129 Single-molecule visualization of stalled replication-fork rescue by the Escherichia coli Rep helicase. ○
- 128 Novel compound heterozygous mutations in UHRF1 are associated with atypical immunodeficiency, centromeric instability, and facial anomalies (ICF) syndrome with distinctive genome-wide DNA hypomethylation. ○
- 127 Induction of Male Sterility by Targeted Mutation of a Restorer-of-Fertility Gene with CRISPR/Cas9-Mediated Genome Editing in Brassica napus L.. **2022**, 11, 3501 ○
- 126 CRISPR Manipulations in Stem Cell Lines. **2023**, 249-256 ○
- 125 Human genetic diversity alters off-target outcomes of therapeutic gene editing. 2
- 124 Sniper2L, a high-fidelity Cas9 variant with high activity. ○
- 123 Genome Editing and Diabetic Cardiomyopathy. **2023**, 103-114 ○
- 122 CRISPR Off-Target Analysis Platforms. **2023**, 279-285 ○
- 121 Bioinformatic and literature assessment of toxicity and allergenicity of a CRISPR-Cas9 engineered gene drive to control the human malaria mosquito vector Anopheles gambiae. ○
- 120 sgRNA structural constraints and genetic limitations for efficient Cas9 genome editing to generate knock-outs. ○
- 119 Multiparametric and accurate functional analysis of genetic sequence variants using CRISPR-Select. **2022**, 54, 1983-1993 1
- 118 Cognate microglia-cell interactions shape the functional regulatory T cell pool in experimental autoimmune encephalomyelitis pathology. **2022**, 23, 1749-1762 ○
- 117 Is CRISPR/Cas9 a way forward to fast-track genetic improvement in commercial palms? Prospects and limits. 13, ○
- 116 Inducible CRISPRi-based operon silencing and selective transgene complementation in Borrelia burgdorferi. ○

- 115 A transcriptional switch controls sex determination in *Plasmodium falciparum*. **2022**, 612, 528-533 ○
- 114 Challenges and prospects in using biotechnological interventions in *O. glaberrima*, an African cultivated rice. **2022**, 13, 372-387 ○
- 113 BRD8 maintains glioblastoma by epigenetic reprogramming of the p53 network. ○
- 112 A Tet-Inducible CRISPR Platform for High-Fidelity Editing of Human Pluripotent Stem Cells. **2022**, 13, 2363 ○
- 111 Gene therapy review: Duchenne muscular dystrophy case study. **2022**, ○
- 110 Mechanistic Insights of the LEMD2 p.L13R Mutation and Its Role in Cardiomyopathy. 1
- 109 Doxycycline-dependent Cas9-expressing pig resources for conditional in vivo gene nullification and activation. **2023**, 24, ○
- 108 In-cell chemical crosslinking identifies hotspots for SQSTM-1/p62- $\text{I}\kappa\text{B}\beta$ interaction that underscore a critical role of p62 in limiting NF- κB activation through $\text{I}\kappa\text{B}\beta$ stabilization. **2023**, 100495 ○
- 107 Hematopoietic stem and progenitors cells gene editing: Beyond blood disorders. 4, ○
- 106 NEK6 Regulates Redox Balance and DNA Damage Response in DU-145 Prostate Cancer Cells. **2023**, 12, 256 ○
- 105 Biotechnologies and Strategies for Grapevine Improvement. **2023**, 9, 62 ○
- 104 AntiPD-1 antibodies recognizing the membrane-proximal region are PD-1 agonists that can down-regulate inflammatory diseases. **2023**, 8, ○
- 103 Machine learning in the estimation of CRISPR-Cas9 cleavage sites for plant system. 13, ○
- 102 Gene editing for dyslipidemias: New tools to μt lipids. **2023**, ○
- 101 Harnessing antimicrobial peptide genes to expedite disease-resistant enhancement in aquaculture: Transgenesis and genome editing. ○
- 100 Application of CRISPR-Cas9 for Functional Analysis in *A. mexicanus*. **2023**, 193-220 ○
- 99 Identification of novel regulators involved in AD pathogenesis using the CRISPR-Cas9 system. **2023**, 158, 21-25 ○
- 98 Pigs with an INS point mutation derived from zygotes electroporated with CRISPR/Cas9 and ssODN. 11, ○

- 97 Updated toolkits for nucleic acid-based biosensors. **2023**, 116943 ○
- 96 CAS12e (CASX2) CLEAVAGE OF CCR5: IMPACT OF GUIDE RNA LENGTH AND PAM SEQUENCE ON CLEAVAGE ACTIVITY. ○
- 95 CRISPR genome editing using computational approaches: A survey. 2, ○
- 94 Role of Adenylyl Cyclase Type 7 in Functions of BV-2 Microglia. **2023**, 24, 347 ○
- 93 sgRNA-2wPSM: Identify sgRNAs on-target activity by combining two-window-based position specific mismatch and synthetic minority oversampling technique. **2022**, 106489 ○
- 92 Transformation and gene editing in the bioenergy grass Miscanthus. **2022**, 15, ○
- 91 RNA-guided multiplex genome engineering using cas9 nucleases for crop improvement: A review. **2018**, 88, 1811-1817 ○
- 90 Genome Editing in Crops to Control Insect Pests. **2023**, 297-313 ○
- 89 SMAP design: a multiplex PCR amplicon and gRNA design tool to screen for natural and CRISPR-induced genetic variation. ○
- 88 SNP-D-CRISPR: Single Nucleotide Polymorphism-Distinguishable Repression or Enhancement of a Target Gene Expression by CRISPR System. **2023**, 49-62 ○
- 87 Genome Editing Mediated by Primordial Germ Cell in Chicken. **2023**, 301-312 ○
- 86 CRISPR-Cas genome editing for the development of abiotic stress-tolerant wheat. **2023**, 195-207 ○
- 85 Monoamine oxidase A-dependent ROS formation modulates human cardiomyocyte differentiation through AKT and WNT activation. **2023**, 118, ○
- 84 A CRISPR screen in intestinal epithelial cells identifies novel factors for polarity and apical transport. 12, ○
- 83 Auxin-inducible degron 2 system deciphers functions of CTCF domains in transcriptional regulation. **2023**, 24, ○
- 82 Inducible CRISPRi-Based Operon Silencing and Selective in Trans Gene Complementation in *Borrelia burgdorferi*. ○
- 81 Strategies for generation of mice via CRISPR/HDR-mediated knock-in. ○
- 80 Implications of CRISPR-Cas9 genome editing methods in atherosclerotic cardiovascular diseases. **2023**, 101603 ○

- 79 Single chromosome dynamics reveals locus-dependent dynamics and chromosome territory orientation. ○
- 78 Targeted mutagenesis with sequence-specific nucleases for accelerated improvement of polyploid crops: Progress, challenges, and prospects. ○
- 77 De novo PAM generation to reach initially inaccessible target sites for base editing. **2023**, 150, ○
- 76 Genome Editing by CRISPR/Cas9 in Polyploids. **2023**, 459-473 ○
- 75 Small-molecule inhibitors of proteasome increase CjCas9 protein stability. **2023**, 18, e0280353 ○
- 74 A flexible loop in the paxillin LIM3 domain mediates direct binding to integrin β . ○
- 73 Future Perspectives of Prime Editing for the Treatment of Inherited Retinal Diseases. **2023**, 12, 440 ○
- 72 The Many (Inter)faces of Anti-CRISPRs: Modulation of CRISPR-Cas Structure and Dynamics by Mechanistically Diverse Inhibitors. **2023**, 13, 264 ○
- 71 Effect of Protein Arginine Methyltransferase 1 Gene Knockout on the Proliferation of Human Embryonic Kidney 293T Cells. **2022**, 49, S1-S11 ○
- 70 Floxing by Electroporating Single-Cell Embryos with Two CRISPR RNPs and Two ssODNs. **2023**, 231-252 ○
- 69 Mastering targeted genome engineering of GC-rich oleaginous yeast for tailored plant oil alternatives for the food and chemical sector. **2023**, 22, ○
- 68 Retinitis pigmentosa-associated mutations in mouse Prpf8 cause misexpression of circRNAs and degeneration of cerebellar granule cells. **2023**, 6, e202201855 ○
- 67 CRISPR-Cas effector specificity and cleavage site determine phage escape outcomes. **2023**, 21, e3002065 ○
- 66 Use of CRISPR-based screens to identify mechanisms of chemotherapy resistance. ○
- 65 Hybrid Multitask Learning Reveals Sequence Features Driving Specificity in the CRISPR/Cas9 System. **2023**, 13, 641 ○
- 64 Recent Advances in Genome-Editing Technology with CRISPR/Cas9 Variants and Stimuli-Responsive Targeting Approaches within Tumor Cells: A Future Perspective of Cancer Management. **2023**, 24, 7052 ○
- 63 A universal CRISPR/Cas12a-powered intelligent point-of-care testing platform for multiple small molecules in the healthcare, environment, and food. **2023**, 225, 115102 ○
- 62 Construction and Confirmation of Adcy3 Gene Editing Mouse Model by CRISPR/Cas9 Technology. **2022**, 12, 257-263 ○

- 61 Tail-Engineered Phage P2 Enables Delivery of Antimicrobials into Multiple Gut Pathogens. **2023**, 12, 596-607 1
- 60 Profiling the impact of the promoters on CRISPR-Cas12a system in human cells. 0
- 59 CRISPR-Cas: A robust technology for enhancing consumer-preferred commercial traits in crops. 14, 0
- 58 IVT generation of guideRNAs for Cas9-enrichment Nanopore Sequencing. 0
- 57 CRISPRi in *Xanthomonas* demonstrates functional convergence of transcription activator-like effectors in two divergent pathogens. **2023**, 238, 1593-1604 0
- 56 Histone demethylase KDM2A is a selective vulnerability of cancers relying on alternative telomere maintenance. 0
- 55 Gene Drive: Past, Present and Future Roads to Vertebrate Biocontrol. **2023**, 2, 52-70 0
- 54 Comparative analysis of CRISPR off-target discovery tools following ex vivo editing of CD34+ hematopoietic stem and progenitor cells. **2023**, 31, 1074-1087 0
- 53 The transmission of plant viruses. **2022**, 68, 119-126 0
- 52 Removal of the GAA repeat in the heart of a Friedreich's ataxia mouse model using CjCas9. 0
- 51 Design of a stable human acid- α -glucosidase: towards improved Gaucher disease therapy and mutation classification. 0
- 50 Delivery challenges for CRISPR-Cas9 genome editing for Duchenne muscular dystrophy. **2023**, 4, 011307 0
- 49 Efficient prioritization of CRISPR screen hits by accounting for targeting efficiency of guide RNA. **2023**, 21, 0
- 48 An analgesic pathway from parvocellular oxytocin neurons to the periaqueductal gray in rats. **2023**, 14, 0
- 47 Gene Therapy and Gene Editing. **2023**, 269-334 0
- 46 Correcting inborn errors of immunity: From viral mediated gene addition to gene editing. **2023**, 66, 101731 0
- 45 CRISPR techniques and potential for the detection and discrimination of SARS-CoV-2 variants of concern. **2023**, 161, 117000 0
- 44 Metabolic Engineering of *Yarrowia lipolytica* for Terpenoid Production: Tools and Strategies. **2023**, 12, 639-656 0

- 43 Predicting CRISPR-Cas12a guide efficiency for targeting using Machine Learning. ○
- 42 HAP1, a new revolutionary cell model for gene editing using CRISPR-Cas9. 11, ○
- 41 Sniper2L is a high-fidelity Cas9 variant with high activity. ○
- 40 Off-target effects in CRISPR/Cas9 gene editing. 11, ○
- 39 Genetic improvement in Musa through modern biotechnological methods. **2023**, 8, 1-13 ○
- 38 A molecular glue approach to control the half-life of CRISPR-based technologies. ○
- 37 Danger Analysis: Risk-Averse on/off-Target Assessment for CRISPR Editing Without a Reference Genome. ○
- 36 Split-tracrRNA as an efficient tracrRNA system with an improved potential of scalability. ○
- 35 Combining fusion of cells with CRISPR-Cas9 editing for the cloning of large DNA fragments or complete bacterial genomes in yeast. ○
- 34 CRISPR/sgRNA-directed synergistic activation mediator (SAM) as a therapeutic tool for Parkinson's disease. ○
- 33 Phage Against the Machine: Discovery and Mechanism of Type V Anti-CRISPRs. **2023**, 435, 168054 ○
- 32 Guide-specific loss of efficiency and off-target reduction with Cas9 variants. ○
- 31 Nanopore Cas9-targeted sequencing enables accurate and simultaneous identification of transgene integration sites, their structure and epigenetic status in recombinant Chinese hamster ovary cells. ○
- 30 In vivo DNA methylation editing in zebrafish. **2023**, 18, ○
- 29 CRISPR-Cas-mediated transcriptional modulation: The therapeutic promises of CRISPRa and CRISPRi. **2023**, ○
- 28 Nanotechnology and CRISPR/Cas9 system for sustainable agriculture. ○
- 27 Recent progress and challenges in CRISPR-Cas9 engineered algae and cyanobacteria. **2023**, 71, 103068 ○
- 26 Drug addiction unveils a repressive methylation ceiling in EZH2-mutant lymphoma. ○

- 25 Strategies and Methods for Improving the Efficiency of CRISPR/Cas9 Gene Editing in Plant Molecular Breeding. **2023**, 12, 1478 ○
- 24 Histone demethylase KDM2A is a selective vulnerability of cancers relying on alternative telomere maintenance. **2023**, 14, ○
- 23 Genetic and Molecular Quality Control of Genetically Engineered Mice. **2023**, 53-101 ○
- 22 Obesity-Linked PPAR α Ser273 Phosphorylation Promotes Beneficial Effects on the Liver, despite Reduced Insulin Sensitivity in Mice. **2023**, 13, 632 ○
- 21 Efficient genetic editing of human intestinal organoids using ribonucleoprotein-based CRISPR. ○
- 20 Metabolic resistance to acetolactate synthase inhibitors in *Beckmannia syzigachne* : identification of CYP81Q32 and its transcription regulation. ○
- 19 Astrocytes express aberrant immunoglobulins as putative gatekeeper of astrocytes to neuronal progenitor conversion. **2023**, 14, ○
- 18 Modelling the effect of migration on the localisation and spread of a gene drive. ○
- 17 Review: Recent Applications of Gene Editing in Fish Species and Aquatic Medicine. **2023**, 13, 1250 ○
- 16 Hypoxia switches TET1 from being tumor-suppressive to oncogenic. ○
- 15 Screening Method for the Identification and Characterization of Transcription Factors Regulating Flesh Fruit Development and Ripening. **2023**, 17-61 ○
- 14 Animal Transgenesis and Cloning: Combined Development and Future Perspectives. **2023**, 121-149 ○
- 13 Engineered CRISPR-OsCas12f1 and RhCas12f1 with robust activities and expanded target range for genome editing. **2023**, 14, ○
- 12 In the business of base editors: Evolution from bench to bedside. **2023**, 21, e3002071 ○
- 11 Computationally Engineered CRISPR-SpyCas9 High-Fidelity Variants with Improved Specificity and Reduced Non-specific DNA Damage. ○
- 10 Overcoming the Limitations of CRISPR-Cas9 Systems in *Saccharomyces cerevisiae*: Off-Target Effects, Epigenome, and Mitochondrial Editing. **2023**, 11, 1040 ○
- 9 CRISPR-mediated genome editing in poplar issued by efficient transformation. 14, ○
- 8 High-resolution genome-wide mapping of chromosome-arm-scale truncations induced by CRISPR-Cas9 editing. ○

- 7 VEGFA mRNA-LNP promotes biliary epithelial cell-to-hepatocyte conversion in acute and chronic liver diseases and reverses steatosis and fibrosis. ○
- 6 Using traditional machine learning and deep learning methods for on- and off-target prediction in CRISPR/Cas9: a review. ○
- 5 CasKAS: direct profiling of genome-wide dCas9 and Cas9 specificity using ssDNA mapping. **2023**, 24, ○
- 4 Mechanisms of the Specificity of the CRISPR/Cas9 System in Genome Editing. **2023**, 57, 258-271 ○
- 3 Discovery of Diverse CRISPR-Cas Systems and Expansion of the Genome Engineering Toolbox. ○
- 2 Deep sampling of gRNA in the human genome and deep-learning-informed prediction of gRNA activities. **2023**, 9, ○
- 1 Insight into the molecular mechanism of the transposon-encoded type I-F CRISPR-Cas system. **2023**, 21, ○