

CITATION REPORT

List of articles citing

**In vivo genome editing via CRISPR/Cas9 mediated
homology-independent targeted integration**

DOI: 10.1038/nature20565
Nature, 2016, 540, 144-149.

Source: <https://exaly.com/paper-pdf/64542442/citation-report.pdf>

Version: 2024-04-10

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
804	Cell-based therapeutic strategies for replacement and preservation in retinal degenerative diseases. 2017 , 58, 1-27		61
803	Protecting retinal ganglion cells. 2017 , 31, 218-224		24
802	Gene therapy approaches for prevention of retinal degeneration in Usher syndrome. 2017 , 24, 68-71		12
801	Interspecies Chimerism with Mammalian Pluripotent Stem Cells. 2017 , 168, 473-486.e15		289
800	Gene Editing With CRISPR/Cas9 RNA-Directed Nuclease. 2017 , 120, 876-894		49
799	Approaches to Reduce CRISPR Off-Target Effects for Safer Genome Editing. 2017 , 22, 7-13		15
798	Practical method for targeted disruption of cilia-related genes by using CRISPR/Cas9-mediated, homology-independent knock-in system. 2017 , 28, 898-906		53
797	CRISPR/Cas9-mediated targeted gene correction in amyotrophic lateral sclerosis patient iPSCs. 2017 , 8, 365-378		70
796	Targeted gene knock-in by homology-directed genome editing using Cas9 ribonucleoprotein and AAV donor delivery. 2017 , 45, e98		54
795	Development and validation of a method for precise dating of female puberty in laboratory rodents: The puberty ovarian maturation score (Pub-Score). 2017 , 7, 46381		26
794	Advancing chimeric antigen receptor T cell therapy with CRISPR/Cas9. 2017 , 8, 634-643		64
793	Animal models for neuropsychiatric disorders: prospects for circuit intervention. 2017 , 45, 59-65		11
792	Advances in CRISPR-Cas based genome engineering. 2017 , 1, 78-86		4
791	CRISPR/Cas9 - Mediated Precise Targeted Integration In Vivo Using a Double Cut Donor with Short Homology Arms. 2017 , 20, 19-26		49
790	A lentivirus-free inducible CRISPR-Cas9 system for efficient targeting of human genes. 2017 , 530, 40-49		4
789	Treat the Patient, Not Just the Cell!. 2017 , 120, 1390-1392		2
788	Context-dependent intravital imaging of therapeutic response using intramolecular FRET biosensors. 2017 , 128, 78-94		26

787	Establishment of expanded and streamlined pipeline of PITCh knock-in - a web-based design tool for MMEJ-mediated gene knock-in, PITCh designer, and the variations of PITCh, PITCh-TG and PITCh-KIKO. 2017 , 8, 302-308	19
786	Gene therapy: In vivo gene editing in non-dividing cells. 2017 , 18, 1	6
785	Developmental history and application of CRISPR in human disease. 2017 , 19, e2963	6
784	Application of CRISPR-Cas9 in eye disease. 2017 , 161, 116-123	7
783	Homology-mediated end joining-based targeted integration using CRISPR/Cas9. 2017 , 27, 801-814	165
782	The endlessness evolution of medicine, continuous increase in life expectancy and constant role of the physician. 2017 , 58, 322-330	13
781	Genome editing for human osteoarthritis - a perspective. 2017 , 25, 1195-1198	5
780	A history of genome editing in mammals. 2017 , 28, 237-246	35
779	The contribution of homology arms to nuclease-assisted genome engineering. 2017 , 45, 8105-8115	19
778	Modeling the C9ORF72 repeat expansion mutation using human induced pluripotent stem cells. 2017 , 27, 518-524	8
777	CRISPR/Cas9 system: a powerful technology for in vivo and ex vivo gene therapy. 2017 , 60, 468-475	17
776	Engineered CRISPR Systems for Next Generation Gene Therapies. 2017 , 6, 1614-1626	24
775	The Hope and Hype of CRISPR-Cas9 Genome Editing: A Review. 2017 , 2, 914-919	30
774	Control of gene editing by manipulation of DNA repair mechanisms. 2017 , 28, 262-274	42
773	Optimizing the DNA Donor Template for Homology-Directed Repair of Double-Strand Breaks. 2017 , 7, 53-60	73
772	Refining strategies to translate genome editing to the clinic. 2017 , 23, 415-423	167
771	Functional interrogation of non-coding DNA through CRISPR genome editing. 2017 , 121-122, 118-129	19
770	Cornerstones of CRISPR-Cas in drug discovery and therapy. 2017 , 16, 89-100	274

769	Genome engineering: NHEJ and CRISPR-Cas9 improve gene therapy. 2016 , 18, 4	3
768	Genome engineering: a new approach to gene therapy for neuromuscular disorders. 2017 , 13, 647-661	45
767	Powerful tools for genetic modification: Advances in gene editing. 2017 , 52, S15-S20	6
766	Hematopoietic Stem Cell Gene Therapy: Progress and Lessons Learned. 2017 , 21, 574-590	100
765	Complement Depletion Improves Human Red Blood Cell Reconstitution in Immunodeficient Mice. 2017 , 9, 1034-1042	17
764	Ectopic expression of RAD52 and dn53BP1 improves homology-directed repair during CRISPR-Cas9 genome editing. 2017 , 1, 878-888	48
763	Virus-Mediated Genome Editing via Homology-Directed Repair in Mitotic and Postmitotic Cells in Mammalian Brain. 2017 , 96, 755-768.e5	127
762	Magic wands of CRISPR-lots of choices for gene knock-in. 2017 , 33, 501-505	17
761	Beyond editing to writing large genomes. 2017 , 18, 749-760	35
760	Biophysics of Biochemical Signaling in Dendritic Spines: Implications in Synaptic Plasticity. 2017 , 113, 2152-2159	49
759	Single nucleotide editing without DNA cleavage using CRISPR/Cas9-deaminase in the sea urchin embryo. 2017 , 246, 1036-1046	18
758	USH2A Gene Editing Using the CRISPR System. 2017 , 8, 529-541	36
757	Targeted Genome Replacement via Homology-directed Repair in Non-dividing Cardiomyocytes. 2017 , 7, 9363	24
756	Curative approaches for sickle cell disease: A review of allogeneic and autologous strategies. 2017 , 67, 155-168	7
755	CRISPR-based Gene Editing: A Guide for the Clinician. 2017 , 57, 151-164	3
754	In trans paired nicking triggers seamless genome editing without double-stranded DNA cutting. 2017 , 8, 657	51
753	Toward personalized medicine in Bardet-Biedl syndrome. 2017 , 14, 447-456	7
752	Rapidly inducible Cas9 and DSB-ddPCR to probe editing kinetics. 2017 , 14, 891-896	56

751	Xenogeneic chimera-Generated by blastocyst complementation-As a potential unlimited source of recipient-tailored organs. 2017 , 24, e12327	11
750	Generation of Genetically Modified Mice through the Microinjection of Oocytes. 2017 ,	8
749	Evaluation of ATM heterozygous mutations underlying individual differences in radiosensitivity using genome editing in human cultured cells. 2017 , 7, 5996	14
748	Epigenetic dysregulation of protocadherins in human disease. 2017 , 69, 172-182	39
747	The changing landscape of gene editing in hematopoietic stem cells: a step towards Cas9 clinical translation. 2017 , 24, 481-488	40
746	InVivo Target Gene Activation via CRISPR/Cas9-Mediated Trans-epigenetic Modulation. 2017 , 171, 1495-1507.e15	35
745	Precision genome editing using synthesis-dependent repair of Cas9-induced DNA breaks. 2017 , 114, E10745-E10754	102
744	The pigmented epithelium, a bright partner against photoreceptor degeneration. 2017 , 31, 203-215	10
743	CRISPR/Cas9-mediated genome editing via postnatal administration of AAV vector cures haemophilia B mice. 2017 , 7, 4159	78
742	Engineered AAVs for efficient noninvasive gene delivery to the central and peripheral nervous systems. 2017 , 20, 1172-1179	482
741	Genetic engineering as a tool for the generation of mouse models to understand disease phenotypes and gene function. 2017 , 48, 228-233	
740	Genome editing: the breakthrough technology for inherited retinal disease?. 2017 , 17, 1245-1254	6
739	A convenient method to pre-screen candidate guide RNAs for CRISPR/Cas9 gene editing by NHEJ-mediated integration of a 'self-cleaving' GFP-expression plasmid. 2017 , 24, 609-621	15
738	Effective gene editing by high-fidelity base editor 2 in mouse zygotes. 2017 , 8, 601-611	57
737	Advances in the delivery of RNA therapeutics: from concept to clinical reality. 2017 , 9, 60	359
736	Progress of stem/progenitor cell-based therapy for retinal degeneration. 2017 , 15, 99	42
735	Sapiens Mitochondrial DNA Genome Circular Long Range Numerical Meta Structures are Highly Correlated with Cancers and Genetic Diseases mtDNA Mutations. 2017 , 09,	8
734	Structure-guided chemical modification of guide RNA enables potent non-viral in vivo genome editing. 2017 , 35, 1179-1187	255

733	In Vitro, Ex Vivo and In Vivo Techniques to Study Neuronal Migration in the Developing Cerebral Cortex. 2017 , 7,	10
732	Rodent Models for the Analysis of Tissue Clock Function in Metabolic Rhythms Research. 2017 , 8, 27	19
731	CRISPR/Cas9-Mediated Zebrafish Knock-in as a Novel Strategy to Study Midbrain-Hindbrain Boundary Development. 2017 , 11, 52	21
730	The CRB1 Complex: Following the Trail of Crumbs to a Feasible Gene Therapy Strategy. 2017 , 11, 175	27
729	Visual Prosthesis: Interfacing Stimulating Electrodes with Retinal Neurons to Restore Vision. 2017 , 11, 620	33
728	Cellular Reprogramming, Genome Editing, and Alternative CRISPR Cas9 Technologies for Precise Gene Therapy of Duchenne Muscular Dystrophy. 2017 , 2017, 8765154	23
727	The Potential of iPSCs for the Treatment of Premature Aging Disorders. 2017 , 18,	7
726	The Rising Pillar of Genome Engineering: Crispr/Cas9 System Interesting Facts and Challenges in the Development of Gene Therapy. 2017 , 06,	
725	Applications of CRISPR/Cas9 in retinal degenerative diseases. 2017 , 10, 646-651	17
724	Strategies for In Vivo Genome Editing in Nondividing Cells. 2018 , 36, 770-786	36
723	Clustered Regularly Interspaced Short Palindromic Repeat (CRISPR)/CRISPR-Associated Endonuclease Cas9-Mediated Homology-Independent Integration for Generating Quality Control Materials for Clinical Molecular Genetic Testing. 2018 , 20, 373-380	4
722	The potential of CRISPR/Cas9 genome editing for the study and treatment of intervertebral disc pathologies. 2018 , 1, e1003	16
721	Non-viral delivery systems for CRISPR/Cas9-based genome editing: Challenges and opportunities. 2018 , 171, 207-218	180
720	Small molecules promote CRISPR-Cpf1-mediated genome editing in human pluripotent stem cells. 2018 , 9, 1303	33
719	A Dual-Targeting Delivery System for Effective Genome Editing and In Situ Detecting Related Protein Expression in Edited Cells. 2018 , 19, 2957-2968	29
718	An overview of treatment strategies for Hutchinson-Gilford Progeria syndrome. 2018 , 9, 246-257	44
717	Innovations in CRISPR technology. 2018 , 52, 95-101	14
716	Rice Genome Editing. 2018 , 523-539	1

715	CRISPR-Cas-related technologies in basic and translational liver research. 2018 , 15, 251-252	8
714	Streamlined ex vivo and in vivo genome editing in mouse embryos using recombinant adeno-associated viruses. 2018 , 9, 412	41
713	In Vivo Ovarian Cancer Gene Therapy Using CRISPR-Cas9. 2018 , 29, 223-233	36
712	Hierarchical Design of Tissue Regenerative Constructs. 2018 , 7, e1701067	52
711	Precise and efficient nucleotide substitution near genomic nick via noncanonical homology-directed repair. 2018 , 28, 223-230	29
710	The changing landscape of Lynch syndrome due to PMS2 mutations. 2018 , 94, 61-69	16
709	Development of versatile non-homologous end joining-based knock-in module for genome editing. 2018 , 8, 593	19
708	Development of an Efficient Genome Editing Tool in <i>Bacillus licheniformis</i> Using CRISPR-Cas9 Nickase. 2018 , 84,	47
707	CRISPR/Cas9: the Jedi against the dark empire of diseases. 2018 , 25, 29	14
706	RNA-guided transcriptional silencing in vivo with <i>S. aureus</i> CRISPR-Cas9 repressors. 2018 , 9, 1674	91
705	Cre-Mediated Transgene Integration in Chinese Hamster Ovary Cells Using Minicircle DNA Vectors. 2018 , 13, e1800063	7
704	Viral Strategies for Targeting the Central and Peripheral Nervous Systems. 2018 , 41, 323-348	74
703	CRISPR Gene Editing in the Kidney. 2018 , 71, 874-883	24
702	A ribonucleoprotein octamer for targeted siRNA delivery. 2018 , 2, 326-337	47
701	Off and back-on again: a tumor suppressor's tale. 2018 , 37, 3058-3069	7
700	Deconstructing the pluripotency gene regulatory network. 2018 , 20, 382-392	40
699	Mouse Embryogenesis. 2018 ,	
698	Genome Editing During Development Using the CRISPR-Cas Technology. 2018 , 1752, 177-190	

697	CRISPR/Cas9-mediated Targeted Integration In Vivo Using a Homology-mediated End Joining-based Strategy. 2018 ,	9
696	Inducible Genome Editing with Conditional CRISPR/Cas9 Mice. 2018 , 8, 1627-1635	11
695	Exploration of genetic basis underlying individual differences in radiosensitivity within human populations using genome editing technology. 2018 , 59, ii75-ii82	7
694	CRISPR-engineered genome editing for the next generation neurological disease modeling. 2018 , 81, 459-467	8
693	Gene therapy and editing: Novel potential treatments for neuronal channelopathies. 2018 , 132, 108-117	20
692	Recent Advances in CRISPR-Cas9 Genome Editing Technology for Biological and Biomedical Investigations. 2018 , 119, 81-94	56
691	CRISPR Editing in Biological and Biomedical Investigation. 2018 , 119, 52-61	15
690	Immunity to CRISPR Cas9 and Cas12a therapeutics. 2018 , 10, e1408	66
689	Stem cells and genome editing: approaches to tissue regeneration and regenerative medicine. 2018 , 63, 165-178	13
688	Updated summary of genome editing technology in human cultured cells linked to human genetics studies. 2018 , 63, 133-143	3
687	Long non-coding RNA tagging and expression manipulation via CRISPR/Cas9-mediated targeted insertion. 2018 , 9, 820-825	4
686	Rheostatic Control of Cas9-Mediated DNA Double Strand Break (DSB) Generation and Genome Editing. 2018 , 13, 438-442	8
685	Gene editing & stem cells. 2018 , 17, 10-16	9
684	Emerging Approaches for Spatiotemporal Control of Targeted Genome with Inducible CRISPR-Cas9. 2018 , 90, 429-439	26
683	Insulin-Degrading Enzyme in the Fight against Alzheimer's Disease. 2018 , 39, 49-58	84
682	In vivo genome editing via the HITI method as a tool for gene therapy. 2018 , 63, 157-164	56
681	CRISPR editing in biological and biomedical investigation. 2018 , 233, 3875-3891	15
680	Adaptive hindlimb split-belt treadmill walking in rats by controlling basic muscle activation patterns via phase resetting. 2018 , 8, 17341	10

679	Progress Toward Precise Genetic Repair in Neurons. 2018 , 18, 121-122	
678	The road less traveled: strategies to enhance the frequency of homology-directed repair (HDR) for increased efficiency of CRISPR/Cas-mediated transgenesis. 2018 , 51, 437-443	33
677	CRISPR/Cas9 Knockout Strategies to Ablate lncRNA Gene in Cancer Cells. 2018 , 20, 21	25
676	Intra-embryo Gene Cassette Knockin by CRISPR/Cas9-Mediated Genome Editing with Adeno-Associated Viral Vector. 2018 , 9, 286-297	34
675	ARRIGE: Toward a Responsible Use of Genome Editing. 2018 , 115-127	
674	CRISPR Craft: DNA Editing the Reconstructive Ladder. 2018 , 142, 1355-1364	16
673	Ribonucleoproteins Mediated Efficient In Vivo Gene Editing in Skin Stem Cells. 2019 , 1879, 75-86	1
672	Predictable and precise template-free CRISPR editing of pathogenic variants. <i>Nature</i> , 2018 , 563, 646-651	250
671	Congenital hypofibrinogenemia associated with R232T. 2018 , 38, 43-48	1
670	Xenotransplantation: Progress Along Paths Uncertain from Models to Application. 2018 , 59, 286-308	8
669	Repairing the Brain: Gene Therapy. 2018 , 8, S123-S130	3
668	New Developments in CRISPR Technology: Improvements in Specificity and Efficiency. 2017 , 18, 1038-1054	9
667	Genetically Encoded Fluorescent Biosensors Illuminate the Spatiotemporal Regulation of Signaling Networks. 2018 , 118, 11707-11794	186
666	Efficient labeling and imaging of protein-coding genes in living cells using CRISPR-Tag. 2018 , 9, 5065	43
665	Revolution in Gene Medicine Therapy and Genome Surgery. 2018 , 9,	17
664	DNA, RNA, and Protein Tools for Editing the Genetic Information in Human Cells. 2018 , 6, 247-263	19
663	Aptamer Chimeras for Therapeutic Delivery: The Challenging Perspectives. 2018 , 9,	15
662	Base editing: precision chemistry on the genome and transcriptome of living cells. 2018 , 19, 770-788	635

661	The Development of an AAV-Based CRISPR SaCas9 Genome Editing System That Can Be Delivered to Neurons and Regulated via Doxycycline and Cre-Recombinase. 2018 , 11, 413	32
660	Quantitative evaluation of incomplete preweaning lethality in mice by using the CRISPR/Cas9 system. 2018 , 8, 16025	1
659	Inherited Retinal Degenerations: Current Landscape and Knowledge Gaps. 2018 , 7, 6	87
658	Functional Genetic Variants Revealed by Massively Parallel Precise Genome Editing. 2018 , 175, 544-557.e16	89
657	All-in-one adeno-associated virus delivery and genome editing by Neisseria meningitidis Cas9 in vivo. 2018 , 19, 137	58
656	Application of CRISPR/Cas9 technologies combined with iPSCs in the study and treatment of retinal degenerative diseases. 2018 , 137, 679-688	13
655	Increasing the precision of gene editing , and. 2018 , 7, 83-90	5
654	Unraveling of Central Nervous System Disease Mechanisms Using CRISPR Genome Manipulation. 2018 , 10, 1179573518787469	6
653	Adeno-associated virus-mediated delivery of CRISPR-Cas9 for genome editing in the central nervous system. 2018 , 7, 33-41	2
652	Technological advances in integrating multi-kilobase DNA sequences into genomes. 2018 , 7, 16-23	0
651	Improving cytidine and adenine base editors by expression optimization and ancestral reconstruction. 2018 , 36, 843-846	348
650	Genetic-Driven Druggable Target Identification and Validation. 2018 , 34, 558-570	25
649	Tild-CRISPR Allows for Efficient and Precise Gene Knockin in Mouse and Human Cells. 2018 , 45, 526-536.e5	76
648	CRISPR/Cas9 mediated targeting of multiple genes in Dictyostelium. 2018 , 8, 8471	35
647	Versatile High-Throughput Fluorescence Assay for Monitoring Cas9 Activity. 2018 , 90, 6913-6921	12
646	In vivo genome editing targeted towards the female reproductive system. 2018 , 41, 898-910	7
645	Genome Editing Redefines Precision Medicine in the Cardiovascular Field. 2018 , 2018, 4136473	7
644	DMSO increases efficiency of genome editing at two non-coding loci. 2018 , 13, e0198637	5

643	Progress in Gene Therapy to Prevent Retinal Ganglion Cell Loss in Glaucoma and Leber's Hereditary Optic Neuropathy. 2018 , 2018, 7108948	22
642	Clinical applications of retinal gene therapies. 2018 , 1, 5-20	9
641	Generation of the Adenovirus Vector-Mediated CRISPR/Cpf1 System and the Application for Primary Human Hepatocytes Prepared from Humanized Mice with Chimeric Liver. 2018 , 41, 1089-1095	8
640	How to create state-of-the-art genetic model systems: strategies for optimal CRISPR-mediated genome editing. 2018 , 46, 6435-6454	22
639	Guiding Lights in Genome Editing for Inherited Retinal Disorders: Implications for Gene and Cell Therapy. 2018 , 2018, 5056279	25
638	CRISPR/Cas9 genome surgery for retinal diseases. 2018 , 28, 23-32	7
637	Myoediting: Toward Prevention of Muscular Dystrophy by Therapeutic Genome Editing. 2018 , 98, 1205-1240	18
636	New Turns for High Efficiency Knock-In of Large DNA in Human Pluripotent Stem Cells. 2018 , 2018, 9465028	5
635	Time Matters: Gene Editing at the Mouse 2-Cell Embryo Stage Boosts Knockin Efficiency. 2018 , 23, 155-157	5
634	CRISPR/Cas9-based genome engineering of zebrafish using a seamless integration strategy. 2018 , 32, 5132-5142	17
633	Reprogramming human T cell function and specificity with non-viral genome targeting. <i>Nature</i> , 2018 , 559, 405-409	50.4 367
632	Decoding non-random mutational signatures at Cas9 targeted sites. 2018 , 46, 8417-8434	57
631	Efficient homology-directed gene editing by CRISPR/Cas9 in human stem and primary cells using tube electroporation. 2018 , 8, 11649	34
630	Detection of DNA Double Strand Breaks by H2AX Does Not Result in 53bp1 Recruitment in Mouse Retinal Tissues. 2018 , 12, 286	8
629	Recapitulating X-Linked Juvenile Retinoschisis in Mouse Model by Knock-In Patient-Specific Novel Mutation. 2017 , 10, 453	10
628	SALM/Lrfr Family Synaptic Adhesion Molecules. 2018 , 11, 105	20
627	At the Heart of Genome Editing and Cardiovascular Diseases. 2018 , 123, 221-223	3
626	Seeing the Light after 25 Years of Retinal Gene Therapy. 2018 , 24, 669-681	65

625	Making ends meet: targeted integration of DNA fragments by genome editing. 2018 , 127, 405-420	19
624	Translation of CRISPR Genome Surgery to the Bedside for Retinal Diseases. 2018 , 6, 46	15
623	Applications of CRISPR-Based Genome Editing in the Retina. 2018 , 6, 53	20
622	Genetic therapies for sickle cell disease. 2018 , 55, 76-86	27
621	CRISPR GENOME SURGERY IN THE RETINA IN LIGHT OF OFF-TARGETING. 2018 , 38, 1443-1455	9
620	Targeted Gene Knock Out Using Nuclease-Assisted Vector Integration: Hemi- and Homozygous Deletion of JAG1. 2018 , 1772, 233-248	3
619	Clustered Regularly Interspaced Short Palindromic Repeats-Based Genome Surgery for the Treatment of Autosomal Dominant Retinitis Pigmentosa. 2018 , 125, 1421-1430	65
618	Specific targeting of point mutations in EGFR L858R-positive lung cancer by CRISPR/Cas9. 2018 , 98, 968-976	20
617	Pompe Disease: From Basic Science to Therapy. 2018 , 15, 928-942	68
616	Biased genome editing using the local accumulation of DSB repair molecules system. 2018 , 9, 3270	15
615	Endogenous HIF2A reporter systems for high-throughput functional screening. 2018 , 8, 12063	0
614	Gene therapy for neurological disorders: progress and prospects. 2018 , 17, 641-659	143
613	iKA-CRISPR hESCs for inducible and multiplex orthogonal gene knockout and activation. 2018 , 592, 2238-2247	4
612	Targeting repair pathways with small molecules increases precise genome editing in pluripotent stem cells. 2018 , 9, 2164	79
611	Practical Recommendations for Improving Efficiency and Accuracy of the CRISPR/Cas9 Genome Editing System. 2018 , 83, 629-642	7
610	From Identification to Function: Current Strategies to Prioritise and Follow-Up GWAS Results. 2018 , 1793, 259-275	0
609	Ocular gene therapy for choroideremia: clinical trials and future perspectives. 2018 , 13, 129-138	10
608	CRISPR therapeutic tools for complex genetic disorders and cancer (Review). 2018 , 53, 443-468	21

607	CRISPR/Cas9 Gene Editing: From Basic Mechanisms to Improved Strategies for Enhanced Genome Engineering In Vivo. 2017 , 17, 263-274	9
606	Alternative Splicing in Genetic Diseases: Improved Diagnosis and Novel Treatment Options. 2018 , 335, 85-141	19
605	Genome editing by natural and engineered CRISPR-associated nucleases. 2018 , 14, 642-651	71
604	Genome editing in the mammalian brain using the CRISPR-Cas system. 2019 , 141, 4-12	14
603	Gene therapy strategies in the treatment of hypertrophic cardiomyopathy. 2019 , 471, 807-815	25
602	Strategies for the Enrichment and Selection of Genetically Modified Cells. 2019 , 37, 56-71	19
601	CRISPR for Neuromuscular Disorders: Gene Editing and Beyond. 2019 , 34, 341-353	9
600	Formulation Strategies for Folate-Targeted Liposomes and Their Biomedical Applications. 2019 , 11,	40
599	Improving Editing Efficiency for the Sequences with NGH PAM Using xCas9-Derived Base Editors. 2019 , 17, 626-635	7
598	Prospects for the Use of Genome-Editing Technology to Correct Neurodegenerative Diseases. 2019 , 9, 154-163	1
597	Niche stiffness underlies the ageing of central nervous system progenitor cells. <i>Nature</i> , 2019 , 573, 130-134	144
596	A split CRISPR-Cpf1 platform for inducible genome editing and gene activation. 2019 , 15, 882-888	38
595	Modern Trends in Plant Genome Editing: An Inclusive Review of the CRISPR/Cas9 Toolbox. 2019 , 20,	89
594	A transient reporter for editing enrichment (TREE) in human cells. 2019 , 47, e120	21
593	The Problem of the Low Rates of CRISPR/Cas9-Mediated Knock-ins in Plants: Approaches and Solutions. 2019 , 20,	19
592	CRISPR Craze to Transform Cardiac Biology. 2019 , 25, 791-802	9
591	Advances in gene therapy for cystic fibrosis lung disease. 2019 , 28, R88-R94	33
590	Stabilizing heterochromatin by DGCR8 alleviates senescence and osteoarthritis. 2019 , 10, 3329	41

589	In situ repurposing of dendritic cells with CRISPR/Cas9-based nanomedicine to induce transplant tolerance. 2019 , 217, 119302	34
588	The photoreceptor cilium and its diseases. 2019 , 56, 22-33	21
587	Plug-and-Play Protein Modification Using Homology-Independent Universal Genome Engineering. 2019 , 103, 583-597.e8	32
586	CRISPR Toolbox for Mammalian Cell Engineering. 2019 , 185-206	0
585	. 2019 ,	1
584	Lorentz TEM Imaging of Topological Magnetic Features in Asymmetric [Pt/(Co/Ni)M/Ir]N based Multi-Layers. 2019 , 25, 24-25	
583	Using CRISPR/Cas9 to model human liver disease. 2019 , 1, 392-402	10
582	CRISPR-Cas9-mediated therapeutic editing of ameliorates the disease phenotypes in a mouse model of Leber congenital amaurosis. 2019 , 5, eaax1210	44
581	Recent advances in the CRISPR genome editing tool set. 2019 , 51, 1-11	67
580	Novel peptides screened by phage display peptide library can mimic epitopes of the FnBPA-A protein and induce protective immunity against Staphylococcus aureus in mice. 2019 , 8, e910	4
579	Fast and cloning-free CRISPR/Cas9-mediated genomic editing in mammalian cells. 2019 , 20, 974-982	6
578	RNA-Guided Recombinase-Cas9 Fusion Targets Genomic DNA Deletion and Integration. 2019 , 2, 209-222	6
577	Precise in vivo genome editing via single homology arm donor mediated intron-targeting gene integration for genetic disease correction. 2019 , 29, 804-819	26
576	Antibody discovery and engineering by enhanced CRISPR-Cas9 integration of variable gene cassette libraries in mammalian cells. 2019 , 11, 1367-1380	17
575	Molecular Therapies for Inherited Retinal Diseases-Current Standing, Opportunities and Challenges. 2019 , 10,	33
574	CRISPR-Cas9-Mediated Genome Editing Increases Lifespan and Improves Motor Deficits in a Huntington's Disease Mouse Model. 2019 , 17, 829-839	41
573	Identification of Glyceraldehyde-3-Phosphate Dehydrogenase Gene as an Alternative Safe Harbor Locus in Pig Genome. 2019 , 10,	4
572	Endogenous Fluorescence Tagging by CRISPR. 2019 , 29, 912-928	23

571	Current Status on Clinical Development of Adeno-Associated Virus-Mediated Liver-Directed Gene Therapy for Inborn Errors of Metabolism. 2019 , 30, 1204-1210	9
570	Applications of CRISPR/Cas9 tools in deciphering the mechanisms of HIV-1 persistence. 2019 , 38, 63-69	4
569	CRISPR technologies for stem cell engineering and regenerative medicine. 2019 , 37, 107447	34
568	Identification of the Sex of Pre-implantation Mouse Embryos Using a Marked Y Chromosome and CRISPR/Cas9. 2019 , 9, 14315	5
567	Principle and Application of Fluorescence Lifetime Imaging for Neuroscience. 2019 , 53-64	3
566	CRISPR-Cas: a tool for cancer research and therapeutics. 2019 , 16, 281-295	83
565	Gene editing in plants: progress and challenges. 2019 , 6, 421-437	102
564	Identification of preexisting adaptive immunity to Cas9 proteins in humans. 2019 , 25, 249-254	374
563	CRISPR-Based Tools in Immunity. 2019 , 37, 571-597	31
562	Adeno-associated virus vector as a platform for gene therapy delivery. 2019 , 18, 358-378	555
561	In vivo proximity proteomics of nascent synapses reveals a novel regulator of cytoskeleton-mediated synaptic maturation. 2019 , 10, 386	44
560	CRISPR/Cas9-Mediated Hitchhike Expression of Functional shRNAs at the Porcine Cluster. 2019 , 8,	3
559	Gene and Base Editing as a Therapeutic Option for Cystic Fibrosis-Learning from Other Diseases. 2019 , 10,	19
558	Editing the Central Nervous System Through CRISPR/Cas9 Systems. 2019 , 12, 110	20
557	Progress and Challenges: Development and Implementation of CRISPR/Cas9 Technology in Filamentous Fungi. 2019 , 17, 761-769	34
556	Emerging gene therapies for cystic fibrosis. 2019 , 13, 709-725	12
555	Plasticity of dendritic spines: Molecular function and dysfunction in neurodevelopmental disorders. 2019 , 73, 541-550	35
554	CRISPR-Cas system: Toward a more efficient technology for genome editing and beyond. 2019 , 120, 16379-16392	302

553	Has retinal gene therapy come of age? From bench to bedside and back to bench. 2019 , 28, R108-R118	28
552	Efficient and flexible tagging of endogenous genes by homology-independent intron targeting. 2019 , 29, 1322-1328	11
551	CRISPR-READI: Efficient Generation of Knockin Mice by CRISPR RNP Electroporation and AAV Donor Infection. 2019 , 27, 3780-3789.e4	39
550	Development of CRISPR-Cas systems for genome editing and beyond. 2019 , 52,	57
549	RNA-guided DNA insertion with CRISPR-associated transposases. 2019 , 365, 48-53	232
548	Orthotopic replacement of T-cell receptor α and β chains with preservation of near-physiological T-cell function. 2019 , 3, 974-984	54
547	Design Approaches for Generating Organ Constructs. 2019 , 24, 877-894	13
546	Genome Editing as a Treatment for the Most Prevalent Causative Genes of Autosomal Dominant Retinitis Pigmentosa. 2019 , 20,	25
545	The next generation of CRISPR-Cas technologies and applications. 2019 , 20, 490-507	498
544	CHOPCHOP v3: expanding the CRISPR web toolbox beyond genome editing. 2019 , 47, W171-W174	410
543	Evaluation and Reduction of CRISPR Off-Target Cleavage Events. 2019 , 29, 167-174	39
542	CRISPR/Cas9 Delivery Mediated with Hydroxyl-Rich Nanosystems for Gene Editing in Aorta. 2019 , 6, 1900386	14
541	Therapeutic Potential of Wnt and Notch Signaling and Epigenetic Regulation in Mammalian Sensory Hair Cell Regeneration. 2019 , 27, 904-911	30
540	Genome Editing for Duchenne Muscular Dystrophy. 2019 , 383-403	1
539	CRISPR-SONIC: targeted somatic oncogene knock-in enables rapid in vivo cancer modeling. 2019 , 11, 21	4
538	Adeno-Associated Viral Vectors as a Tool for Large Gene Delivery to the Retina. 2019 , 10,	33
537	In vivo genome editing rescues photoreceptor degeneration via a Cas9/RecA-mediated homology-directed repair pathway. 2019 , 5, eaav3335	33
536	Pick a Tag and Explore the Functions of Your Pet Protein. 2019 , 37, 1078-1090	20

535	Exogenous Cytokine-Free Differentiation of Human Pluripotent Stem Cells into Classical Brown Adipocytes. 2019 , 8,	7
534	Establishment of gene-edited pigs expressing human blood-coagulation factor VII and albumin for bioartificial liver use. 2019 , 34, 1851-1859	9
533	Enhanced Cas12a editing in mammalian cells and zebrafish. 2019 , 47, 4169-4180	41
532	A New Class of Medicines through DNA Editing. 2019 , 380, 947-959	100
531	Delivering on the promise of gene editing for cystic fibrosis. 2019 , 6, 97-108	27
530	CRISPR-Cas: Converting A Bacterial Defence Mechanism into A State-of-the-Art Genetic Manipulation Tool. 2019 , 8,	20
529	CRISPR/Cas-Mediated Base Editing: Technical Considerations and Practical Applications. 2019 , 37, 1121-1142	158
528	Multiplexed and tunable transcriptional activation by promoter insertion using nuclease-assisted vector integration. 2019 , 47, e67	7
527	Precise therapeutic gene correction by a simple nuclease-induced double-stranded break. <i>Nature</i> , 2019 , 568, 561-565	50.4 55
526	Rare Opportunities: CRISPR/Cas-Based Therapy Development for Rare Genetic Diseases. 2019 , 23, 201-222	21
525	CRISPR/Cas9-mediated generic protein tagging in mammalian cells. 2019 , 164-165, 59-66	3
524	Building Potent Chimeric Antigen Receptor T Cells With CRISPR Genome Editing. 2019 , 10, 456	43
523	New Human Chromosomal Sites with "Safe Harbor" Potential for Targeted Transgene Insertion. 2019 , 30, 814-828	17
522	Gene therapies in canine models for Duchenne muscular dystrophy. 2019 , 138, 483-489	16
521	Highly Efficient Transgenesis in Ferrets Using CRISPR/Cas9-Mediated Homology-Independent Insertion at the ROSA26 Locus. 2019 , 9, 1971	10
520	Neuron-Specific Genome Modification in the Adult Rat Brain Using CRISPR-Cas9 Transgenic Rats. 2019 , 102, 105-119.e8	34
519	CRISPR/Cas9-mediated endogenous gene tagging in <i>Fusarium oxysporum</i> . 2019 , 126, 17-24	18
518	Creating cell and animal models of human disease by genome editing using CRISPR/Cas9. 2019 , 21, e3082	22

517	Use of AAV Vectors for CRISPR-Mediated In Vivo Genome Editing in the Retina. 2019 , 1950, 123-139	8
516	Beyond classic editing: innovative CRISPR approaches for functional studies of long non-coding RNA. 2019 , 4, bpz017	7
515	New Genetic Approaches to Treating Diseases of the Skin. 2019 , 2301-2309	
514	Gene Therapy in Retinal Dystrophies. 2019 , 20,	45
513	Uncut but Primed for Change. 2019 , 2, 352-354	
512	Advances in genome editing through control of DNA repair pathways. 2019 , 21, 1468-1478	146
511	CRISPR Jumps in New Directions. 2019 , 2, 354-356	
510	HMEJ-mediated efficient site-specific gene integration in chicken cells. 2019 , 13, 90	8
509	Curing hemophilia A by NHEJ-mediated ectopic F8 insertion in the mouse. 2019 , 20, 276	23
508	CRISPR: a promising tool for lipid physiology and therapeutics. 2019 , 30, 172-176	4
507	CRISPR-Cas3 induces broad and unidirectional genome editing in human cells. 2019 , 10, 5302	66
506	Genetic Modification of Brain Organoids. 2019 , 13, 558	14
505	Gene therapy for visual loss: Opportunities and concerns. 2019 , 68, 31-53	46
504	Basic and Clinical Application of Adeno-Associated Virus-Mediated Genome Editing. 2019 , 30, 673-681	4
503	Ways of improving precise knock-in by genome-editing technologies. 2019 , 138, 1-19	21
502	Homology-independent genome integration enables rapid library construction for enzyme expression and pathway optimization in <i>Yarrowia lipolytica</i> . 2019 , 116, 354-363	24
501	Long-Term Effects of In Vivo Genome Editing in the Mouse Retina Using <i>Campylobacter jejuni</i> Cas9 Expressed via Adeno-Associated Virus. 2019 , 27, 130-136	32
500	FOXO3-Engineered Human ESC-Derived Vascular Cells Promote Vascular Protection and Regeneration. 2019 , 24, 447-461.e8	39

499	Plant DNA Repair Pathways and Their Applications in Genome Engineering. 2019 , 1917, 3-24	7
498	CRISPR-DT: designing gRNAs for the CRISPR-Cpf1 system with improved target efficiency and specificity. 2019 , 35, 2783-2789	29
497	Material solutions for delivery of CRISPR/Cas-based genome editing tools: Current status and future outlook. 2019 , 26, 40-66	58
496	CRISPR Correction of Duchenne Muscular Dystrophy. 2019 , 70, 239-255	78
495	Creating Genetically Modified Marmosets. 2019 , 335-353	3
494	Harnessing genomic information for livestock improvement. 2019 , 20, 135-156	128
493	Non-Viral Delivery To Enable Genome Editing. 2019 , 37, 281-293	62
492	Quantitative Rodent Brain Receptor Imaging. 2020 , 22, 223-244	13
491	Genome editing-based approaches for imaging protein localization and dynamics in the mammalian brain. 2020 , 150, 2-7	4
490	Tailored chromatin modulation to promote tissue regeneration. 2020 , 97, 3-15	5
489	Rescue of premature aging defects in Cockayne syndrome stem cells by CRISPR/Cas9-mediated gene correction. 2020 , 11, 1-22	29
488	Kidney organoids in translational medicine: Disease modeling and regenerative medicine. 2020 , 249, 34-45	23
487	Advances in gene therapy for hemophilia: basis, current status, and future perspectives. 2020 , 111, 31-41	19
486	Targeted knock-in into the OVA locus of chicken cells using CRISPR/Cas9 system with homology-independent targeted integration. 2020 , 129, 363-370	2
485	Understanding the role of calcium-mediated cell death in high-frequency irreversible electroporation. 2020 , 131, 107369	20
484	Applications of genome editing technology in the targeted therapy of human diseases: mechanisms, advances and prospects. 2020 , 5, 1	579
483	Gene Knock-Ins in Using Homology-Independent Insertion of Universal Donor Plasmids. 2020 , 214, 75-89	12
482	Sharpening the Molecular Scissors: Advances in Gene-Editing Technology. 2020 , 23, 100789	58

481	Cas12a mediates efficient and precise endogenous gene tagging via MITI: microhomology-dependent targeted integrations. 2020 , 77, 3875-3884	10
480	New frontiers to cure Alport syndrome: COL4A3 and COL4A5 gene editing in podocyte-lineage cells. 2020 , 28, 480-490	10
479	Genome Editing in Patient iPSCs Corrects the Most Prevalent Mutations and Reveals Intriguing Mutant mRNA Expression Profiles. 2020 , 17, 156-173	35
478	ExVivo/InVivo Gene Editing in Hepatocytes Using "All-in-One" CRISPR-Adeno-Associated Virus Vectors with a Self-Linearizing Repair Template. 2020 , 23, 100764	16
477	Recent advances in CRISPR/Cas9-mediated knock-ins in mammalian cells. 2020 , 308, 1-9	23
476	Gene editing prospects for treating inherited retinal diseases. 2020 , 57, 437-444	11
475	An Improved CRISPR/dCas9 Interference Tool for Neuronal Gene Suppression. 2020 , 2, 9	4
474	CHO Cell Line Development and Engineering via Site-specific Integration: Challenges and Opportunities. 2020 , 25, 633-645	6
473	Synthetic regulation of multicellular systems for regenerative engineering. 2020 , 16, 42-51	1
472	Therapy in Rhodopsin-Mediated Autosomal Dominant Retinitis Pigmentosa. 2020 , 28, 2139-2149	8
471	Enhancing site-specific DNA integration by a Cas9 nuclease fused with a DNA donor-binding domain. 2020 , 48, 10590-10601	10
470	Transmembrane protein 45A regulates the proliferation, migration, and invasion of glioma cells through nuclear factor kappa-B. 2020 , 31, 900-907	2
469	AMPA receptor trafficking in the developing and mature glutamatergic synapse. 2020 , 507-525	
468	Genome Editing for CNS Disorders. 2020 , 14, 579062	5
467	Caspase-7 deficiency in Chinese hamster ovary cells reduces cell proliferation and viability. 2020 , 53, 52	2
466	Aspects of Gene Therapy Products Using Current Genome-Editing Technology in Japan. 2020 , 31, 1043-1053	3
465	Correction of Airway Stem Cells: Genome Editing Approaches for the Treatment of Cystic Fibrosis. 2020 , 31, 956-972	6
464	Yeast Cell wall Particle mediated Nanotube-RNA delivery system loaded with miR365 Antagomir for Post-traumatic Osteoarthritis Therapy via Oral Route. 2020 , 10, 8479-8493	10

463	An effective vaginal gel to deliver CRISPR/Cas9 system encapsulated in poly (E) amino ester) nanoparticles for vaginal gene therapy. 2020 , 58, 102897	7
462	Inhibitors of DNA double-strand break repair at the crossroads of cancer therapy and genome editing. 2020 , 182, 114195	5
461	Dendritic Spine Plasticity: Function and Mechanisms. 2020 , 12, 36	25
460	Harnessing endogenous repair mechanisms for targeted gene knock-in of bovine embryos. 2020 , 10, 16031	5
459	Modulation of DNA double-strand break repair as a strategy to improve precise genome editing. 2020 , 39, 6393-6405	19
458	A non-viral genome editing platform for site-specific insertion of large transgenes. 2020 , 11, 380	1
457	Adeno-associated virus-mediated gene delivery promotes S-phase entry-independent precise targeted integration in cardiomyocytes. 2020 , 10, 15348	10
456	Intron with transgenic marker (InTraM) facilitates high-throughput screening of endogenous gene reporter lines. 2020 , 58, e23391	
455	Synthetic Virus-Derived Nanosystems (SVNs) for Delivery and Precision Docking of Large Multifunctional DNA Circuitry in Mammalian Cells. 2020 , 12,	6
454	Genome editing with the donor plasmid equipped with synthetic crRNA-target sequence. 2020 , 10, 14120	0
453	Use of Customizable Nucleases for Gene Editing and Other Novel Applications. 2020 , 11,	5
452	Suppression of Improves In Vitro and In Vivo Gene Integration by Promoting Homology-Directed Repair. 2020 , 21,	3
451	Novel Therapeutic Approaches for the Treatment of Retinal Degenerative Diseases: Focus on CRISPR/Cas-Based Gene Editing. 2020 , 14, 838	8
450	Methods Favoring Homology-Directed Repair Choice in Response to CRISPR/Cas9 Induced-Double Strand Breaks. 2020 , 21,	27
449	Methodologies and Challenges for CRISPR/Cas9 Mediated Genome Editing of the Mammalian Brain. 2020 , 2, 602970	7
448	Viral Vectors as Gene Therapy Agents for Treatment of Glioblastoma. 2020 , 12,	3
447	Targeted Protein Degradation Phenotypic Studies Using HaloTag CRISPR/Cas9 Endogenous Tagging Coupled with HaloPROTAC3. 2020 , 91, e81	5
446	A Simple and Efficient CRISPR Technique for Protein Tagging. 2020 , 9,	1

445	LncRNAs in Cancer: From garbage to Junk. 2020 , 12,	16
444	A CRISPR-Cas9, Cre-, and Flp- Cascade Strategy for the Precise and Efficient Integration of Exogenous DNA into Cellular Genomes. 2020 , 3, 470-486	2
443	CRISPR-Cas Tools and Their Application in Genetic Engineering of Human Stem Cells and Organoids. 2020 , 27, 705-731	29
442	NT-4 attenuates neuroinflammation via TrkB/PI3K/FoxO1 pathway after germinal matrix hemorrhage in neonatal rats. 2020 , 17, 158	15
441	ZKSCAN3 counteracts cellular senescence by stabilizing heterochromatin. 2020 , 48, 6001-6018	19
440	Diurnal Control of Blood Pressure Is Uncoupled From Sodium Excretion. 2020 , 75, 1624-1634	11
439	Pipeline for the Generation and Characterization of Transgenic Human Pluripotent Stem Cells Using the CRISPR/Cas9 Technology. 2020 , 9,	4
438	Improving Precise CRISPR Genome Editing by Small Molecules: Is there a Magic Potion?. 2020 , 9,	17
437	Knockout of cytidine monophosphate-N-acetylneuraminic acid hydroxylase in Chinese hamster ovary cells by CRISPR/Cas9-based gene-editing technology. 2020 , 161, 107663	5
436	Retinal Dystrophies and the Road to Treatment: Clinical Requirements and Considerations. 2020 , 9, 159-179	9
435	Valproic Acid Significantly Improves CRISPR/Cas9-Mediated Gene Editing. 2020 , 9,	4
434	Genome editing with CRISPR-Cas nucleases, base editors, transposases and prime editors. 2020 , 38, 824-844	466
433	Development of Cellular Models to Study Efficiency and Safety of Gene Edition by Homologous Directed Recombination Using the CRISPR/Cas9 System. 2020 , 9,	0
432	Development of Highly Efficient Dual-AAV Split Adenosine Base Editor for In Vivo Gene Therapy. 2020 , 4, 2000309	12
431	Recent Advances in CRISPR/Cas9 Delivery Strategies. 2020 , 10,	53
430	Gene Therapy for Cystic Fibrosis: Progress and Challenges of Genome Editing. 2020 , 21,	15
429	Animal Models of Cardiomyopathies. 2020 ,	1
428	SIRT7 antagonizes human stem cell aging as a heterochromatin stabilizer. 2020 , 11, 483-504	37

427	Orthotopic T-Cell Receptor Replacement-An "Enabler" for TCR-Based Therapies. 2020 , 9,	9
426	A Site-Specific Integration Reporter System That Enables Rapid Evaluation of CRISPR/Cas9-Mediated Genome Editing Strategies in CHO Cells. 2020 , 15, e2000057	0
425	Various strategies of effector accumulation to improve the efficiency of genome editing and derivative methodologies. 2020 , 56, 359-366	4
424	In Vivo Genome Engineering for the Treatment of Muscular Dystrophies. 2020 , 6, 52-66	
423	The evolutionary origin of developmental enhancers in vertebrates: Insights from non-model species. 2020 , 62, 326-333	3
422	In vivo CRISPRa decreases seizures and rescues cognitive deficits in a rodent model of epilepsy. 2020 , 143, 891-905	40
421	Overcoming bottlenecks in plant gene editing. 2020 , 54, 79-84	50
420	Mitigating off-target effects in CRISPR/Cas9-mediated in vivo gene editing. 2020 , 98, 615-632	31
419	Unconstrained genome targeting with near-PAMless engineered CRISPR-Cas9 variants. 2020 , 368, 290-296	325
418	RS-1 enhances CRISPR-mediated targeted knock-in in bovine embryos. 2020 , 87, 542-549	11
417	Metabolic and Redox Signaling of the Nucleoredoxin-Like-1 Gene for the Treatment of Genetic Retinal Diseases. 2020 , 21,	11
416	The therapeutic potential of exogenous adult stem cells for the injured central nervous system. 2020 , 147-258	1
415	The Histone Chaperone FACT Induces Cas9 Multi-turnover Behavior and Modifies Genome Manipulation in Human Cells. 2020 , 79, 221-233.e5	12
414	The delivery challenge: fulfilling the promise of therapeutic genome editing. 2020 , 38, 845-855	69
413	Volume Microscopy. 2020 ,	
412	Mechanisms of axon polarization in pyramidal neurons. 2020 , 107, 103522	1
411	Direct Readout of Neural Stem Cell Transgenesis with an Integration-Coupled Gene Expression Switch. 2020 , 107, 617-630.e6	10
410	Current trends in gene recovery mediated by the CRISPR-Cas system. 2020 , 52, 1016-1027	14

409	Poly(Beta-Amino Ester) Nanoparticles Enable Nonviral Delivery of CRISPR-Cas9 Plasmids for Gene Knockout and Gene Deletion. 2020 , 20, 661-672	17
408	Cell-cell contact-induced gene editing/activation in mammalian cells using a synNotch-CRISPR/Cas9 system. 2020 , 11, 299-303	7
407	CRISPR-Cas12a: Functional overview and applications. 2020 , 43, 8-17	46
406	Characterisation of endogenous Claudin-1 expression, motility and susceptibility to hepatitis C virus in CRISPR knock-in cells. 2020 , 112, 140-151	2
405	Fast and efficient generation of knock-in human organoids using homology-independent CRISPR-Cas9 precision genome editing. 2020 , 22, 321-331	87
404	Microtubule Minus-End Binding Protein CAMSAP2 and Kinesin-14 Motor KIFC3 Control Dendritic Microtubule Organization. 2020 , 30, 899-908.e6	14
403	The rapidly advancing Class 2 CRISPR-Cas technologies: A customizable toolbox for molecular manipulations. 2020 , 24, 3256-3270	22
402	A mutation-independent CRISPR-Cas9-mediated gene targeting approach to treat a murine model of ornithine transcarbamylase deficiency. 2020 , 6, eaax5701	21
401	Applications and explorations of CRISPR/Cas9 in CAR T-cell therapy. 2020 , 19, 175-182	33
400	Single AAV-mediated mutation replacement genome editing in limited number of photoreceptors restores vision in mice. 2020 , 11, 482	17
399	Genome Editing for the Understanding and Treatment of Inherited Cardiomyopathies. 2020 , 21,	9
398	RNA editing as a therapeutic approach for retinal gene therapy requiring long coding sequences. 2020 , 21,	33
397	Challenges associated with homologous directed repair using CRISPR-Cas9 and TALEN to edit the DMD genetic mutation in canine Duchenne muscular dystrophy. 2020 , 15, e0228072	12
396	Efficient and risk-reduced genome editing using double nicks enhanced by bacterial recombination factors in multiple species. 2020 , 48, e57	1
395	CRISPR-Based Therapeutic Genome Editing: Strategies and In Vivo Delivery by AAV Vectors. 2020 , 181, 136-150	137
394	A Highly Efficacious PS Gene Editing System Corrects Metabolic and Neurological Complications of Mucopolysaccharidosis Type I. 2020 , 28, 1442-1454	19
393	Methodological approaches to understand the molecular mechanism of structural plasticity of dendritic spines. 2021 , 54, 6902-6911	2
392	In Vivo CRISPR/Cas9-Mediated Genome Editing Mitigates Photoreceptor Degeneration in a Mouse Model of X-Linked Retinitis Pigmentosa. 2020 , 61, 31	12

391	Correcting visual loss by genetics and prosthetics. 2020 , 16, 1-7	1
390	Dual Supramolecular Nanoparticle Vectors Enable CRISPR/Cas9-Mediated Knockin of Retinoschisin 1 Gene-A Potential Nonviral Therapeutic Solution for X-Linked Juvenile Retinoschisis. 2020 , 7, 1903432	17
389	ORANGE: A CRISPR/Cas9-based genome editing toolbox for epitope tagging of endogenous proteins in neurons. 2020 , 18, e3000665	48
388	Neuroprotective Strategies for Retinal Ganglion Cell Degeneration: Current Status and Challenges Ahead. 2020 , 21,	34
387	CRISPR Interference-Potential Application in Retinal Disease. 2020 , 21,	12
386	Clinical Genetics and Genomics of Aging. 2020 ,	1
385	Efficient production of large deletion and gene fragment knock-in mice mediated by genome editing with Cas9-mouse Cdt1 in mouse zygotes. 2021 , 191, 23-31	5
384	Retinal gene therapy: an eye-opener of the 21st century. 2021 , 28, 209-216	7
383	Combi-CRISPR: combination of NHEJ and HDR provides efficient and precise plasmid-based knock-ins in mice and rats. 2021 , 140, 277-287	8
382	Ocular delivery of CRISPR/Cas genome editing components for treatment of eye diseases. 2021 , 168, 181-195	6
381	Therapeutic genome editing in cardiovascular diseases. 2021 , 168, 147-157	6
380	Bi-FoRe: an efficient bidirectional knockin strategy to generate pairwise conditional alleles with fluorescent indicators. 2021 , 12, 39-56	2
379	Imaging dendritic spines: molecular organization and signaling for plasticity. 2021 , 67, 66-74	4
378	Non-viral strategies for delivering genome editing enzymes. 2021 , 168, 99-117	20
377	Rod photoreceptor clearance due to misfolded rhodopsin is linked to a DAMP-immune checkpoint switch. 2021 , 296, 100102	1
376	Revisiting gene delivery to the brain: silencing and editing. 2021 , 9, 1065-1087	5
375	Strategies in the delivery of Cas9 ribonucleoprotein for CRISPR/Cas9 genome editing. 2021 , 11, 614-648	66
374	Establishment of human fetal hepatocyte organoids and CRISPR-Cas9-based gene knockin and knockout in organoid cultures from human liver. 2021 , 16, 182-217	24

373	Genome editing in human hematopoietic stem and progenitor cells via CRISPR-Cas9-mediated homology-independent targeted integration. 2021 , 29, 1611-1624	5
372	Current Status of and Perspectives on the Application of Marmosets in Neurobiology. 2021 , 44, 27-48	15
371	Quantification of Cellular Drug Biodistribution Addresses Challenges in Evaluating and Encapsulated Drug Delivery. 2021 , 4, 2000125	2
370	Recent advances in gene therapy for neurodevelopmental disorders with epilepsy. 2021 , 157, 229-262	12
369	A hypomorphic variant in EYS detected by genome-wide association study contributes toward retinitis pigmentosa. 2021 , 4, 140	1
368	Targeted Knock-in of Transgenes into the CHO Cell Genome Using CRISPR-mediated Integration Systems. 2021 , 333, 07001	1
367	Novel mutation in autosomal recessive bestrophinopathy in Japanese siblings. 2021 , 11, 71-76	1
366	Optimization and Validation of CAR Transduction into Human Primary NK Cells Using CRISPR and AAV.	1
365	CRISPR-Cas9 based genome editing for defective gene correction in humans and other mammals. 2021 , 181, 185-229	2
364	Generation of Mouse Model (KI and CKO) via Easi-CRISPR. 2021 , 2224, 1-27	4
363	Genetic glycoengineering in mammalian cells. 2021 , 296, 100448	18
362	CRISPR genome engineering for retinal diseases. 2021 , 182, 29-79	5
361	CRISPR-mediated Labeling of Cells in Chick Embryos Based on Selectively Expressed Genes. 2021 , 11, e4105	0
360	Genome Editing to Develop Disease Resistance in Crops. 2021 , 224-252	0
359	Knock-in of Labeled Proteins into 5'UTR Enables Highly Efficient Generation of Stable Cell Lines. 2021 , 46, 21-35	1
358	Epigenetic silencing directs expression heterogeneity of stably integrated multi-transcript unit genetic circuits. 2021 , 11, 2424	2
357	CRISPR/dCas9 as a Therapeutic Approach for Neurodevelopmental Disorders: Innovations and Limitations Compared to Traditional Strategies. 2021 , 43, 253-261	2
356	CRISPR-Cas9 in cancer therapeutics. 2021 , 181, 129-163	1

355	Approach for in vivo delivery of CRISPR/Cas system: a recent update and future prospect. 2021 , 78, 2683-2708	14
354	Using CRISPR-Cas9-based genome engineering tools in <i>Drosophila melanogaster</i> . 2021 , 180, 85-121	
353	Gene editing and modulation for Duchenne muscular dystrophy. 2021 , 182, 225-255	3
352	A homology independent sequence replacement strategy in human cells using a CRISPR nuclease. 2021 , 11, 200283	2
351	Application of CRISPR-Cas systems in neuroscience. 2021 , 178, 231-264	2
350	Safe harbor-targeted CRISPR-Cas9 homology-independent targeted integration for multimodality reporter gene-based cell tracking. 2021 , 7,	3
349	Universal toxin-based selection for precise genome engineering in human cells. 2021 , 12, 497	12
348	Targeted Gene Delivery: Where to Land. 2020 , 2, 609650	3
347	Efficient Human Cell Coexpression System and Its Application to the Production of Multiple Coronavirus Antigens. 2021 , 5, e2000154	1
346	One-step generation of a targeted knock-in calf using the CRISPR-Cas9 system in bovine zygotes. 2021 , 22, 118	7
345	Gene Correction Recovers Phagocytosis in Retinal Pigment Epithelium Derived from Retinitis Pigmentosa-Human-Induced Pluripotent Stem Cells. 2021 , 22,	6
344	Evolving AAV-delivered therapeutics towards ultimate cures. 2021 , 99, 593-617	9
343	Breaking Boundaries in the Brain-Advances in Editing Tools for Neurogenetic Disorders. 2021 , 3, 623519	
342	Advances and Obstacles in Homology-Mediated Gene Editing of Hematopoietic Stem Cells. 2021 , 10,	4
341	Genome Editing Therapeutic Approaches for Neurological Disorders: Where Are We in the Translational Pipeline?. 2021 , 15, 632522	4
340	A CRISPR/Cas9-Mediated, Homology-Independent Tool Developed for Targeted Genome Integration in <i>Yarrowia lipolytica</i> . 2021 , 87,	11
339	Expanding the Potential of Mammalian Genome Engineering Targeted DNA Integration. 2021 , 10, 429-446	1
338	CRISPR-Cas9: A Preclinical and Clinical Perspective for the Treatment of Human Diseases. 2021 , 29, 571-586	37

337	CRISPR/Cas9 gene editing therapies for cystic fibrosis. 2021 , 21, 767-780	2
336	Molecular classification of zebrafish retinal ganglion cells links genes to cell types to behavior. 2021 , 109, 645-662.e9	22
335	CRISPR-Targeted CAR Gene Insertion Using Cas9/RNP and AAV6 Enhances Anti-AML Activity of Primary NK Cells.	4
334	Amelioration of hemophilia B through CRISPR/Cas9 induced homology-independent targeted integration.	1
333	Genome-Editing Strategies for Treating Human Retinal Degenerations. 2021 , 32, 247-259	8
332	CRISPR/Cas-Dependent and Nuclease-Free Therapeutic Gene Editing. 2021 , 32, 275-293	8
331	Analysis of Pathogenic Variants Correctable With CRISPR Base Editing Among Patients With Recessive Inherited Retinal Degeneration. 2021 , 139, 319-328	12
330	An optimized CRISPR/Cas9 approach for precise genome editing in neurons. 2021 , 10,	11
329	Non-viral genome-editing in mouse bona fide hematopoietic stem cells with CRISPR/Cas9. 2021 , 20, 451-462	2
328	Advanced imaging and labelling methods to decipher brain cell organization and function. 2021 , 22, 237-255	28
327	Inducing lateralized phosphenes over the occipital lobe using transcranial magnetic stimulation to navigate a virtual environment. 2021 , 16, e0249996	
326	Improved prime editors enable pathogenic allele correction and cancer modelling in adult mice. 2021 , 12, 2121	45
325	A HIT-trapping strategy for rapid generation of reversible and conditional alleles using a universal donor. 2021 , 31, 900-909	0
324	Co-opting regulation bypass repair as a gene-correction strategy for monogenic diseases. 2021 , 29, 3274-3292	1
323	Chromosome-level genome reference and genome editing of the tea geometrid. 2021 , 21, 2034-2049	4
322	Electroporation-Mediated Genome Editing of Livestock Zygotes. 2021 , 12, 648482	7
321	Distinct in vivo dynamics of excitatory synapses onto cortical pyramidal neurons and inhibitory interneurons.	0
320	Addressing the dark matter of gene therapy: technical and ethical barriers to clinical application. 2021 , 1	1

319	The Z-Disk Final Common Pathway in Cardiomyopathies.	1
318	CRISPR Genome Editing Made Easy Through the CHOPCHOP Website. 2021 , 1, e46	5
317	Comparative Analysis of Patient-Matched PDOs Revealed a Reduction in OLFM4-Associated Clusters in Metastatic Lesions in Colorectal Cancer. 2021 , 16, 954-967	4
316	Somatic genetics analysis of sleep in adult mice.	0
315	CRISPR Screens in Toxicology Research: An Overview. 2021 , 1, e136	2
314	Early and late stage gene therapy interventions for inherited retinal degenerations. 2021 , 86, 100975	18
313	CRISPR-Based Genome Editing as a New Therapeutic Tool in Retinal Diseases. 2021 , 63, 768-779	0
312	Efficient biallelic knock-in in mouse embryonic stem cells by in vivo-linearization of donor and transient inhibition of DNA Polymerase β /DNA-PK.	0
311	Homology-based repair induced by CRISPR-Cas nucleases in mammalian embryo genome editing. 2021 , 1	3
310	Single-cell transcriptome analysis defines heterogeneity of the murine pancreatic ductal tree. 2021 , 10,	7
309	In vivo gene editing via homology-independent targeted integration for adrenoleukodystrophy treatment. 2021 ,	1
308	Streamlined Human Cell-Based Recombinase-Mediated Cassette Exchange Platform Enables Multigene Expression for the Production of Therapeutic Proteins. 2021 , 10, 1715-1727	0
307	A cleavage-based surrogate reporter for the evaluation of CRISPR-Cas9 cleavage efficiency. 2021 , 49, e85	1
306	High-fidelity, efficient, and reversible labeling of endogenous proteins using CRISPR-based designer exon insertion. 2021 , 10,	4
305	Exploiting DNA Endonucleases to Advance Mechanisms of DNA Repair. 2021 , 10,	1
304	Analysis of NHEJ-Based DNA Repair after CRISPR-Mediated DNA Cleavage. 2021 , 22,	2
303	Identification of cis-HOX-HOXC10 axis as a therapeutic target for colorectal tumor-initiating cells without APC mutations. 2021 , 36, 109431	3
302	Targeted mutagenesis in human iPSCs using CRISPR genome-editing tools. 2021 , 191, 44-58	1

301	IgSF11 homophilic adhesion proteins promote layer-specific synaptic assembly of the cortical interneuron subtype. 2021 , 7,	5
300	Applications and challenges of CRISPR-Cas gene-editing to disease treatment in clinics. 2021 , 4, 179-191	5
299	Cav1.4 dysfunction and congenital stationary night blindness type 2. 2021 , 473, 1437-1454	5
298	Gene therapy for Fabry disease: Progress, challenges, and outlooks on gene-editing. 2021 , 134, 117-131	3
297	Targeted CRISPR-Cas9-based gene knockouts in the model brown alga Ectocarpus. 2021 , 231, 2077-2091	7
296	Gene Editing and Modulation: the Holy Grail for the Genetic Epilepsies?. 2021 , 18, 1515-1523	0
295	The method of choice to knock-in large inserts via CRISPR.	0
294	RIPK1 regulates cell function and death mediated by UVB radiation and TNF- α . 2021 , 135, 304-311	2
293	Tissue specificity of DNA repair: the CRISPR compass. 2021 , 37, 958-962	2
292	delivery of CRISPR-Cas9 therapeutics: Progress and challenges. 2021 , 11, 2150-2171	17
291	Recent advancements in CRISPR-Cas toolbox for imaging applications. 2021 , 1-24	3
290	CRISPR/Cas9-Mediated Genetic Correction in a Mouse Model of Hemophilia A. 2021 , 9, 672564	2
289	Harnessing DSB repair to promote efficient homology-dependent and -independent prime editing.	
288	CRISPR/Cas9 mediated somatic gene therapy for insertional mutations: the vibrator mouse model. 2021 , 4, 168-175	0
287	Embryo-Engineered Nonhuman Primate Models: Progress and Gap to Translational Medicine. 2021 , 2021, 9898769	0
286	Efficient single copy integration via homology-directed repair (schDR) by 5' modification of large DNA donor fragments in mice.	
285	Full-length dystrophin restoration via targeted exon integration by AAV-CRISPR in a humanized mouse model of Duchenne muscular dystrophy. 2021 , 29, 3243-3257	3
284	Synaptotagmin 7 is targeted to the axonal plasma membrane through β -secretase processing to promote synaptic vesicle docking in mouse hippocampal neurons. 2021 , 10,	4

283	In vivo somatic cell base editing and prime editing. 2021 , 29, 3107-3124	20
282	CRISPR-Cas12a induced DNA double-strand breaks are repaired by locus-dependent and error-prone pathways in a fungal pathogen.	0
281	Nanometer-Scale Imaging of Compartment-Specific Localization and Dynamics of Voltage-Gated Sodium Channels.	0
280	Fast and reliable sgRNA efficiency testing using HIREff.	
279	Points of View on the Tools for Genome/Gene Editing. 2021 , 22,	2
278	Efficient biallelic knock-in in mouse embryonic stem cells by in vivo-linearization of donor and transient inhibition of DNA polymerase β /DNA-PK. 2021 , 11, 18132	0
277	Genome edited B cells: a new frontier in immune cell therapies. 2021 , 29, 3192-3204	0
276	Myc determines the functional age state of oligodendrocyte progenitor cells. 2021 , 1, 826-837	0
275	Toward the Treatment of Inherited Diseases of the Retina Using CRISPR-Based Gene Editing. 2021 , 8, 698521	1
274	CRISPR/Cas correction of muscular dystrophies. 2021 , 408, 112844	1
273	A protocol for efficient CRISPR-Cas9-mediated knock-in in colorectal cancer patient-derived organoids. 2021 , 2, 100780	1
272	Comparison of promoter, DNA vector, and cationic carrier for efficient transfection of hMSCs from multiple donors and tissue sources. 2021 , 26, 81-93	0
271	Improvements in Gene Editing Technology Boost Its Applications in Livestock. 2020 , 11, 614688	6
270	Choosing a genome editing strategy and target site. 2021 , 21-39	
269	Endogenous zebrafish proneural Cre drivers generated by CRISPR/Cas9 short homology directed targeted integration. 2021 , 11, 1732	3
268	Dynamics and competition of CRISPR-Cas9 ribonucleoproteins and AAV donor-mediated NHEJ, MMEJ and HDR editing. 2021 , 49, 969-985	19
267	Imaging Neuronal Signal Transduction Using Multiphoton FRET-FLIM. 2019 , 111-130	1
266	Applications of CRISPR-Cas in Ageing Research. 2020 , 213-230	1

265	Novel Advanced Nanomaterials and Devices for Nanoelectronics and Photonics. 2017 , 243-263	4
264	Efficient editing of OTC-deficient patient-derived primary human hepatocytes. 2020 , 2, 100065	8
263	CREATED viruses go global. 2017 , 20, 1041-1042	2
262	Synthetic biology for improving cell fate decisions and tissue engineering outcomes. 2019 , 3, 631-643	5
261	CRISPR-Cas12a-assisted PCR tagging of mammalian genes. 2020 , 219,	19
260	Critical review on where CRISPR meets molecular diagnostics. 2021 , 3, 012001	11
259	Toward precise CRISPR DNA fragment editing and predictable 3D genome engineering. 2021 , 12, 828-856	1
258	High-efficiency nonhomologous insertion of a foreign gene into the herpes simplex virus genome. 2020 , 101, 982-996	5
257	Precision genome editing using synthesis-dependent repair of Cas9-induced DNA breaks.	1
256	Reprogramming human T cell function and specificity with non-viral genome targeting.	3
255	Exon 13-skipped USH2A protein retains functional integrity in mice, suggesting an exo-skipping therapeutic approach to treat USH2A-associated disease.	2
254	A Safe Harbor-Targeted CRISPR/Cas9 Homology Independent Targeted Integration (HITI) System for Multi-Modality Reporter Gene-Based Cell Tracking.	2
253	Fluorescent in vivo editing reporter (FIVER): A novel multispectral reporter of in vivo genome editing.	2
252	An Optimized CRISPR/Cas9 Approach for Precise Genome Editing in Neurons.	1
251	Improved prime editors enable pathogenic allele correction and cancer modelling in adult mice.	0
250	Identification of Pre-Existing Adaptive Immunity to Cas9 Proteins in Humans.	58
249	In vivo CRISPR-Cas gene editing with no detectable genome-wide off-target mutations.	5
248	CRISPR-Cas12a-assisted PCR tagging of mammalian genes.	6

247	ORANGE: A CRISPR/Cas9-based genome editing toolbox for epitope tagging of endogenous proteins in neurons.	1
246	Highly efficient site-directed gene insertion in primary human natural killer cells using homologous recombination and CRISPaint delivered by AAV.	3
245	Pancreatic cancer cells assemble a CXCL12-keratin 19 coating to resist immunotherapy.	3
244	Deep profiling reveals substantial heterogeneity of integration outcomes in CRISPR knock-in experiments.	19
243	A most formidable arsenal: genetic technologies for building a better mouse. 2020 , 34, 1256-1286	10
242	Correction of muscular dystrophies by CRISPR gene editing. 2020 , 130, 2766-2776	25
241	CRISPR-based strategies for targeted transgene knock-in and gene correction. 2020 , 9, 20	1
240	CRISPR and Target-Specific DNA Endonucleases for Efficient DNA Knock-in in Eukaryotic Genomes. 2018 , 41, 943-952	16
239	Embryo-mediated genome editing for accelerated genetic improvement of livestock. 2020 , 7, 148	11
238	CRISPR Technology Challenge Facing the Numerical Integrity of Whole Human Genome DNA. 2017 , 1,	3
237	Pompe disease: pathogenesis, molecular genetics and diagnosis. 2020 , 12, 15856-15874	6
236	Gene editing of the extra domain A positive fibronectin in various tumors, amplified the effects of CRISPR/Cas system on the inhibition of tumor progression. 2017 , 8, 105020-105036	6
235	CRISPR-Cas9 HDR system enhances AQP1 gene expression. 2017 , 8, 111683-111696	7
234	The transformational impact of site-specific DNA modifiers on biomedicine and agriculture. 2018 , 15, 171-179	1
233	genome editing thrives with diversified CRISPR technologies. 2018 , 39, 58-71	8
232	Gene editing enables T-cell engineering to redirect antigen specificity for potent tumor rejection. 2019 , 2,	15
231	Quinidine Trial in a Patient with Epilepsy of Infancy with Migrating Focal Seizure and KCNT1 Mutation. 2017 , 25, 169-173	1
230	Multiplex Genome Editing in Chinese Hamster Ovary Cell Line Using All-in-One and HITI CRISPR Technology. 2021 , 11, 343-350	2

229	One-step efficient generation of dual-function conditional knockout and geno-tagging alleles in zebrafish. 2019 , 8,	14
228	Essential role for InSyn1 in dystroglycan complex integrity and cognitive behaviors in mice. 2019 , 8,	7
227	An efficient CRISPR-based strategy to insert small and large fragments of DNA using short homology arms. 2019 , 8,	41
226	Efficient targeted integration directed by short homology in zebrafish and mammalian cells. 2020 , 9,	34
225	Enhancement of homology-directed repair with chromatin donor templates in cells. 2020 , 9,	13
224	Genetically engineered birds; pre-CRISPR and CRISPR era. 2021 ,	
223	The Role of Long Non-coding RNAs in Human Imprinting Disorders: Prospective Therapeutic Targets. 2021 , 9, 730014	2
222	Heading towards a dead end: The role of DND1 in germ line differentiation of human iPSCs. 2021 , 16, e0258427	0
221	Gene Therapy in Inherited Retinal Diseases: An Update on Current State of the Art. 2021 , 8, 750586	3
220	Recent Advances in CRISPR/Cas9-Based Genome Editing Tools for Cardiac Diseases. 2021 , 22,	0
219	Moderate the MAOA-L Allele Expression with CRISPR/Cas9 System.	
218	Targeting repair pathways with small molecules increases precise genome editing in pluripotent stem cells.	
217	Alexander Disease:A Guide for Patients and Families. 2017 , 4, i-96	0
216	Engineering of Human-Induced Pluripotent Stem Cells for Precise Disease Modeling. 2018 , 369-411	
215	Visual prostheses, optogenetics, stem cell and gene therapies: splitting the cake. 2018 , 13, 805-806	2
214	All-in-One Adeno-associated Virus Delivery and Genome Editing by Neisseria meningitidis Cas9 in vivo.	
213	New human chromosomal safe harbor sites for genome engineering with CRISPR/Cas9, TAL effector and homing endonucleases.	2
212	Scalable tagging of endogenous genes by homology-independent intron targeting.	

211	In vivo CRISPRa decreases seizures and rescues cognitive deficits in a rodent model of epilepsy.	0
210	Clinical Genetics of Vitelliform Macular Dystrophy: An Asian Perspective. 2019 , 255-271	
209	CHAPTER 17:CRISPR-based Technologies for Genome Engineering: Properties, Current Improvements and Applications in Medicine. 2019 , 400-433	1
208	Single AAV-mediated scarless genome editing in dysfunctional retinal neurons mediates robust visual restoration in mice.	0
207	A simple and efficient CRISPR technique for protein tagging.	
206	Fast and cloning-free CRISPR/Cas9-mediated genomic editing in mammalian cells.	1
205	Gene knock-ins in Drosophila using homology-independent insertion of universal donor plasmids.	2
204	The histone chaperone FACT induces Cas9 multi-turnover behavior and modifies genome manipulation in human cells.	
203	An efficient CRISPR-based strategy to insert small and large fragments of DNA using short homology arms.	
202	Direct readout of neural stem cell transgenesis with an integration-coupled gene expression switch.	
201	Systematic detection of Mendelian and non-Mendelian variants associated with retinitis pigmentosa by genome-wide association study.	
200	A Homology Independent Sequence Replacement Strategy in Human Cells Using a CRISPR Nuclease.	
199	An improved CRISPR/dCas9 interference tool for neuronal gene suppression.	0
198	Harnessing endogenous repair mechanisms for targeted gene knock-in of bovine embryos.	
197	Endogenous zebrafish proneural Cre drivers generated by CRISPR/Cas9 short homology directed targeted integration.	
196	Baculovirus-vectored precision delivery of large DNA cargoes in human genomes.	
195	Knock-in of labeled proteins into 5'UTR enables highly efficient generation of stable cell lines.	
194	Progress in Gene Editing Tools and Their Potential for Correcting Mutations Underlying Hearing and Vision Loss. 2021 , 3, 737632	4

193	Drag-and-drop genome insertion without DNA cleavage with CRISPR-directed integrases.	6
192	Self-inactivating, all-in-one AAV vectors for precision Cas9 genome editing via homology-directed repair in vivo. 2021 , 12, 6267	5
191	Fast and efficient generation of knock-in human organoids using homology-independent CRISPR/Cas9 precision genome editing.	0
190	Efficient replacement of long DNA fragments via non-homologous end joining at non-doding regions.	
189	Chromatin remodeler Arid1a regulates subplate neuron identity and wiring of cortical connectivity.	
188	High-fidelity, efficient, and reversible labeling of endogenous proteins using CRISPR-based designer exon insertion.	0
187	Homology-directed repair in mouse cells increased by CasRx-mediated knockdown or co-expressing Kaposi's sarcoma-associated herpesvirus ORF52. 2019 , 39,	2
186	RPE and Gene Therapy. 2020 , 265-279	
185	Correlative Ultrastructural Analysis of Functionally Modulated Synapses Using Automated Tape-Collecting Ultramicrotome and SEM Array Tomography. 2020 , 121-149	
184	Retinal Gene Therapy. 2020 , 487-515	
183	Successful Correction of ALD Patient-derived iPSCs Using CRISPR/Cas9.	
182	Programmable large DNA deletion, replacement, integration, and inversion with twin prime editing and site-specific recombinases.	1
181	Molecular classification of zebrafish retinal ganglion cells links genes to cell types to behavior.	3
180	Cas9 fusions for precision in vivo editing.	2
179	Single cell transcriptome analysis defines heterogeneity of the murine pancreatic ductal tree.	
178	Template-independent genome editing and repairing correct frameshift disease in vivo.	
177	The Application of CRISPR/Cas9 for the Treatment of Retinal Diseases. 2017 , 90, 533-541	13
176	Gene Therapy, Diet and Drug Approaches to Treating Inherited Retinal Disease. 2021 ,	

175	CRISPR-Cas Technology: Emerging Applications in Clinical Microbiology and Infectious Diseases. 2021 , 14,	2
174	A cis-acting mechanism mediates transcriptional memory at Polycomb target genes in mammals. 2021 , 53, 1686-1697	2
173	Distinct in vivo dynamics of excitatory synapses onto cortical pyramidal neurons and parvalbumin-positive interneurons. 2021 , 37, 109972	0
172	Modulating CRISPR/Cas9 genome-editing activity by small molecules. 2021 ,	1
171	Inherited retinal diseases: Linking genes, disease-causing variants, and relevant therapeutic modalities. 2021 , 101029	6
170	Find and cut-and-transfer (FiCAT) mammalian genome engineering. 2021 , 12, 7071	2
169	Multiplex labeling and manipulation of endogenous neuronal proteins using sequential CRISPR/Cas9 gene editing.	0
168	Rejuvenation of Tissue Stem Cells by Intrinsic and Extrinsic Factors.. 2022 , 11, 231-238	0
167	Designer organs: The future of personalized transplantation.. 2022 , 46, 180-190	0
166	Delivery of CRISPR-Cas tools for in vivo genome editing therapy: Trends and challenges.. 2022 , 342, 345-361	7
165	CRISPR/Cas9 Ribonucleoprotein-Mediated Genome and Epigenome Editing in Mammalian Cells.. 2021 , 114087	1
164	A comparison of DNA repair pathways to achieve a site-specific gene modification of the Bruton's tyrosine kinase gene.. 2022 , 27, 505-516	0
163	Gene knock-out chain reaction enables high disruption efficiency of HPV18 / genes in cervical cancer cells.. 2022 , 24, 171-179	3
162	Efficient and error-free fluorescent gene tagging in human organoids without double-strand DNA cleavage.. 2022 , 20, e3001527	1
161	The CRISPR-Cas toolbox and gene editing technologies.. 2021 ,	15
160	AAV-mediated gene editing lights up the lung.. 2021 ,	0
159	Towards a Comprehensive Optical Connectome at Single Synapse Resolution Expansion Microscopy.. 2021 , 13, 754814	1
158	AAV11 permits efficient retrograde targeting of projection neurons.	2

157	An effective double gene knock-in strategy using small-molecule L755507 in the medaka fish (<i>Oryzias latipes</i>).. 2022 , e23465	
156	CRISPR-based genome editing through the lens of DNA repair.. 2022 , 82, 348-388	5
155	Carcinomas assemble a filamentous CXCL12-keratin-19 coating that suppresses T cell-mediated immune attack.. 2022 , 119,	1
154	Genome-wide detection of CRISPR editing in vivo using GUIDE-tag.. 2022 , 13, 437	1
153	Strategies to overcome the side effects of chimeric antigen receptor T cell therapy.. 2022 ,	
152	Breasi-CRISPR: an efficient genome editing method to interrogate protein localization and protein-protein interactions in the embryonic mouse cortex.	1
151	Vitelliform Macular Dystrophy. 2022 , 125-149	
150	Retinitis Pigmentosa. 2022 , 69-97	
149	CRISPR Therapeutics for Duchenne Muscular Dystrophy.. 2022 , 23,	2
148	Reactivation of β globin expression using a minicircle DNA system to treat β thalassemia.. 2022 , 820, 146289	2
147	Programmable deletion, replacement, integration and inversion of large DNA sequences with twin prime editing. 2021 ,	18
146	Dissecting chicken germ cell dynamics by combining a germ cell tracing transgenic chicken model with single-cell RNA sequencing.. 2022 , 20, 1654-1669	4
145	Efficient targeted insertion of large DNA fragments without DNA donors.. 2022 ,	2
144	Treating Cardiovascular Disease with Liver Genome Engineering.. 2022 , 24, 75	
143	DNA Repair Pathways in the Context of Therapeutic Genome Editing. 2022 , 177-192	
142	Historical Overview of Genome Editing from Bacteria to Higher Eukaryotes. 2022 , 9-17	
141	Transposase-CRISPR mediated targeted integration (TransCRISTI) in the human genome.. 2022 , 12, 3390	0
140	CRISPR-Cas9 gene editing induced complex on-target outcomes in human cells.. 2022 ,	0

- 139 Harnessing DSB repair to promote efficient homology-dependent and -independent prime editing.. **2022**, 13, 1240 0
- 138 Target residence of Cas9: challenges and opportunities in genome editing. **2022**, 3, 57-69
- 137 Targeted Gene Insertion for Functional CFTR Restoration in Airway Epithelium.. **2022**, 4, 847645
- 136 Carrier strategies boost the application of CRISPR/Cas system in gene therapy. 20210081 3
- 135 Seamless Gene Correction in the Human Cystic Fibrosis Transmembrane Conductance Regulator Locus by Vector Replacement and Vector Insertion Events.. **2022**, 4, 843885
- 134 From DNA break repair pathways to CRISPR/Cas-mediated gene knock-in methods.. **2022**, 120409 1
- 133 CRISPR/Cas proteins are secreted virulence factors that trigger cellular immune responses. **2021**, 12, 3032-3044 1
- 132 Enhancing targeted transgene knock-in by donor recruitment. **2021**, e13163 1
- 131 Therapeutic Applications of CRISPR/Cas9 Technology for Infectious Diseases. **2022**, 557-573
- 130 Therapeutic homology-independent targeted integration in retina and liver.. **2022**, 13, 1963 0
- 129 Nano-vectors for CRISPR/Cas9-mediated genome editing. **2022**, 44, 101482 2
- 128 Data_Sheet_1.DOCX. **2020**,
- 127 Table_1.XLSX. **2020**,
- 126 Image_1.JPEG. **2018**,
- 125 Image_2.JPEG. **2018**,
- 124 Table_1.DOC. **2018**,
- 123 Image_1.pdf. **2018**,
- 122 Retinitis Pigmentosa: Progress in Molecular Pathology and Biotherapeutical Strategies.. **2022**, 23, 2

121	Gene-independent therapeutic interventions to maintain and restore light sensitivity in degenerating photoreceptors.. 2022 , 101065	1
120	Mitochondrial base editor induces substantial nuclear off-target mutations.. <i>Nature</i> , 2022 , 504	5
119	New Editing Tools for Gene Therapy in Inherited Retinal Dystrophies.. 2022 ,	1
118	Gelatin nanofiber mats with Lipofectamine/plasmid DNA complexes for in vitro genome editing.. 2022 , 216, 112561	0
117	From Bench to Bed: The Current Genome Editing Therapies for Glaucoma. 2022 , 10,	0
116	Production of AAVs and Injection into the Spinal Cord. 2022 , 375-415	
115	Gene Therapy for Acquired and Genetic Cholestasis. 2022 , 10, 1238	1
114	The origin of unwanted editing byproducts in gene editing. 2022 ,	0
113	Identification of the CKM Gene as a Potential Muscle-Specific Safe Harbor Locus in Pig Genome. 2022 , 13, 921	0
112	CRISPR-Cas-Based Gene Therapy to Target Viral Infections. 2022 , 85-125	0
111	Plasticity-induced actin polymerization in the dendritic shaft regulates intracellular AMPA receptor trafficking.	
110	Speciation and adaptation research meets genome editing. 2022 , 377,	0
109	INSERT-seq enables high resolution mapping of genomically integrated DNA using nanopore sequencing.	1
108	Gene therapy to terminate tachyarrhythmias.	
107	Establishment of mouse model of inherited PIGO deficiency and therapeutic potential of AAV-based gene therapy. 2022 , 13,	0
106	Tools for Efficient Genome Editing; ZFN, TALEN, and CRISPR. 2022 , 29-46	2
105	Small-molecule enhancers of CRISPR-induced homology-directed repair in gene therapy: A medicinal chemist's perspective. 2022 ,	
104	Long-term correction of haemophilia B through CRISPR/Cas9 induced homology-independent targeted integration. 2022 ,	1

103	CRISPR Modeling and Correction of Cardiovascular Disease. 2022 , 130, 1827-1850	4
102	Optimization and validation of CAR transduction into human primary NK cells using CRISPR and AAV. 2022 , 2, 100236	3
101	A novel dual-targeting delivery system for specific delivery of CRISPR/Cas9 using hyaluronic acid, chitosan and AS1411. 2022 , 292, 119691	0
100	Protocol to study sufficiency of cis-regulatory elements in mouse embryonic stem cells using a CRISPR-mediated knockin approach. 2022 , 3, 101492	
99	Template-independent genome editing in the Pcdh15 mouse, a model of human DFNB23 nonsyndromic deafness. 2022 , 40, 111061	1
98	Massively targeted evaluation of therapeutic CRISPR off-targets in cells. 2022 , 13,	1
97	Large-scale genome editing based on high-capacity adenovectors and CRISPR-Cas9 nucleases rescues full-length dystrophin synthesis in DMD muscle cells.	0
96	Highly efficient CRISPR-mediated large DNA docking and multiplexed prime editing using a single baculovirus.	3
95	Duplex Labeling and Manipulation of Neuronal Proteins Using Sequential CRISPR/Cas9 Gene Editing. ENEURO.0056-22.2022	0
94	Gene Editing and Rett Syndrome: Does It Make the Cut?.	
93	Advance trends in targeting homology-directed repair for accurate gene editing: An inclusive review of small molecules and modified CRISPR-Cas9 systems. 2022 , 12, 371-391	1
92	From Bench to Bedside Delivering Gene Therapy for Leber Hereditary Optic Neuropathy. 2022 , 12, a041282	0
91	Reprogramming of Human B Cells from Secreting IgG to IgM by Genome Editing.	
90	CRISPR applications for Duchenne muscular dystrophy: From animal models to potential therapies.	0
89	The application and progression of CRISPR/Cas9 technology in ophthalmological diseases.	
88	Breasi-CRISPR: an efficient genome editing method to interrogate protein localization and protein-protein interactions in the embryonic mouse cortex.	0
87	PIWI-Interacting RNA (piRNA) and Epigenetic Editing in Environmental Health Sciences.	1
86	Genome editing-mediated knock-in of therapeutic genes ameliorates the disease phenotype in a model of hemophilia. 2022 , 29, 551-562	1

85	Genetics behind Cerebral Disease with Ocular Comorbidity: Finding Parallels between the Brain and Eye Molecular Pathology. 2022 , 23, 9707	o
84	Modifying organs with gene therapy and gene modulation in the age of machine perfusion. 2022 , 27, 474-480	o
83	Nonviral Delivery of CRISPR/Cas Systems in mRNA Format. 2200082	o
82	CRISPR-Based Therapeutic Gene Editing for Duchenne Muscular Dystrophy: Advances, Challenges and Perspectives. 2022 , 11, 2964	o
81	Precision genome editing in the eye. 2022 , 119,	1
80	Deciphering spatial protein-protein interactions in brain using proximity labeling. 2022 , 100422	o
79	Generation of genetically engineered mice for lung cancer with mutant EGFR. 2022 , 632, 85-91	o
78	Automated identification of sequence-tailored Cas9 proteins using massive metagenomic data. 2022 , 13,	o
77	INSERT-seq enables high-resolution mapping of genomically integrated DNA using Nanopore sequencing. 2022 , 23,	o
76	The Power of Gene Technologies: 1001 Ways to Create a Cell Model. 2022 , 11, 3235	o
75	In vivo application of base and prime editing to treat inherited retinal diseases. 2022 , 101132	o
74	Development of an in vivo cleavable donor plasmid for targeted transgene integration by CRISPR-Cas9 and CRISPR-Cas12a. 2022 , 12,	o
73	Efficient and rapid fluorescent protein knock-in with universal donors in mammalian stem cells.	o
72	Implications of Neural Plasticity in Retinal Prosthesis. 2022 , 63, 11	1
71	Gene therapy for cystic fibrosis: Challenges and prospects. 13,	1
70	Real-time imaging of RNA polymerase I activity in living human cells. 2023 , 222,	o
69	Gene regulatory and gene editing tools and their applications for retinal diseases and neuroprotection: From proof-of-concept to clinical trial. 16,	o
68	Therapeutic modulation of gene expression in the disease state: Treatment strategies and approaches for the development of next-generation of the epigenetic drugs. 10,	o

67	A New Strategy for Increasing Knock-in Efficiency: Multiple Elongase and Desaturase Transgenes Knock-in by Targeting Long Repeated Sequences.	0
66	In vivo delivery of CRISPR-Cas9 genome editing components for therapeutic applications. 2022 , 291, 121876	1
65	Challenges and opportunities in gene editing of B cells. 2022 , 206, 115285	0
64	Sequential verification of exogenous protein production in OVA gene-targeted chicken bioreactors. 2023 , 102, 102247	1
63	Prime editing for precise and highly versatile genome manipulation.	3
62	Gelatin-Based Electrospun Nanofibers Cross-Linked Using Horseradish Peroxidase for Plasmid DNA Delivery. 2022 , 12, 1638	1
61	An Optimized Enzyme-Nucleobase Pair Enables In Vivo RNA Metabolic Labeling with Improved Cell-Specificity.	1
60	Gene editing strategies to treat lysosomal disorders: The example of mucopolysaccharidoses. 2022 , 191, 114616	0
59	From nuclease-based gene knock-in to prime editing Promising technologies of precision gene engineering. 2022 , 3-4, 100017	0
58	Cas9-mediated tagging of endogenous loci using HITAG.	0
57	Applications and challenges for CRISPR/Cas9-mediated gene editing. 2022 ,	0
56	CRISPR-Cas12a induced DNA double-strand breaks are repaired by multiple pathways with different mutation profiles in <i>Magnaporthe oryzae</i> . 2022 , 13,	2
55	Drag-and-drop genome insertion of large sequences without double-strand DNA cleavage using CRISPR-directed integrases.	2
54	Low-dose AAV-CRISPR-mediated liver-specific knock-in restored hemostasis in neonatal hemophilia B mice with subtle antibody response. 2022 , 13,	0
53	Efficient single copy integration via homology-directed repair (sHDR) by 5' modification of large DNA donor fragments in mice.	0
52	Superior Fidelity and Distinct Editing Outcomes of SaCas9 Compared to SpCas9 in Genome Editing. 2022 ,	0
51	Potential therapeutic strategies for photoreceptor degeneration: the path to restore vision. 2022 , 20,	1
50	Genome Editing and Pathological Cardiac Hypertrophy. 2023 , 87-101	0

- 49 Nanoparticles-mediated CRISPR-Cas9 gene therapy in inherited retinal diseases: applications, challenges, and emerging opportunities. **2022**, 20, 3
- 48 Highly Efficient One-Step Tagging of Endogenous Genes in Primary Cells Using CRISPR-Cas Ribonucleoproteins. **2022**, 5, 843-853 0
- 47 Simultaneous inhibition of DNA-PK and Pol δ improves integration efficiency and precision of genome editing. 0
- 46 A Tet-Inducible CRISPR Platform for High-Fidelity Editing of Human Pluripotent Stem Cells. **2022**, 13, 2363 0
- 45 Gene therapy for liver diseases | progress and challenges. 0
- 44 MDM2 antagonists promote CRISPR/Cas9-mediated precise genome editing in sheep primary cells. **2023**, 0
- 43 CRISPR-interceded CHO cell line development approaches. 0
- 42 Future Directions for Adrenal Insufficiency: Cellular Transplantation and Genetic Therapies. 0
- 41 CRISPR/Cas9-based genome editing for multimodal synergistic cancer nanotherapy. **2023**, 48, 101734 0
- 40 TAXI-peptide targeted Cas12a ribonuclease protein nanoformulations increase genome editing in hippocampal neurons. **2023**, 354, 188-195 0
- 39 Nucleic acid nanostructure for delivery of CRISPR/Cas9-based gene editing system. 0
- 38 Viruses for Systemic Delivery. **2023**, 125-152 0
- 37 Nonviral Ex Vivo Genome Editing in Mouse Bona Fide Hematopoietic Stem Cells with CRISPR/Cas9. **2023**, 213-221 0
- 36 KIF1A-Associated Neurological Disorder: An Overview of a Rare Mutational Disease. **2023**, 16, 147 0
- 35 Marine-Derived Natural Product HDYL-GQQ-495 Targets P62 to Inhibit Autophagy. **2023**, 21, 68 0
- 34 PASTE: The Way Forward for Large DNA Insertions. 1
- 33 GEARBOCS: An Adeno Associated Virus Tool for In Vivo Gene Editing in Astrocytes. 0
- 32 A Comprehensive Review of Dilated Cardiomyopathy in Pre-clinical Animal Models in Addition to Herbal Treatment Options and Multi-modality Imaging Strategies. **2022**, 22, 207-225 0

- 31 Genome Editing Using CRISPR. **2023**, 1-26 ○
- 30 Gene Therapy for Paediatric Homozygous Familial Hypercholesterolaemia. **2023**, ○
- 29 Improving recombinant protein production in CHO cells using the CRISPR-Cas system. **2023**, 64, 108115 ○
- 28 New advancements in CRISPR based gene therapy of Duchenne muscular dystrophy. **2023**, 867, 147358 ○
- 27 Genome editing, a superior therapy for inherited retinal diseases. **2023**, 206, 108192 ○
- 26 Precise homology-directed installation of large genomic edits in human cells with cleaving and nicking high-specificity Cas9 variants. ○
- 25 Viral Vectors, Exosomes, and Vexosomes: Potential Armamentarium for Delivering CRISPR/Cas to Cancer Cells. **2023**, 115555 ○
- 24 Unique progerin C-terminal peptide ameliorates Hutchinson Gilford progeria syndrome phenotype by rescuing BUBR1. **2023**, 3, 185-201 ○
- 23 Increased On-Target Rate and Risk of Concatemerization after CRISPR-Enhanced Targeting in ES Cells. **2023**, 14, 401 ○
- 22 Lipid nanoparticle-based ribonucleoprotein delivery for in vivo genome editing. **2023**, 355, 406-416 ○
- 21 Delivery challenges for CRISPR/Cas9 genome editing for Duchenne muscular dystrophy. **2023**, 4, 011307 ○
- 20 In search of an ideal template for therapeutic genome editing: A review of current developments for structure optimization. 5, ○
- 19 Applications of CRISPR/Cas9 in the field of microbiology. **2023**, ○
- 18 Silk-Gel Powered Adenoviral Vector Enables Robust Genome Editing of PD-L1 to Augment Immunotherapy across Multiple Tumor Models. 2206399 ○
- 17 Viral vectors and extracellular vesicles: innate delivery systems utilized in CRISPR/Cas-mediated cancer therapy. ○
- 16 A CRISPR/Cas-Based Method for Precise DNA Integration in *Xenopus laevis* Oocytes Followed by Intracytoplasmic Sperm Injection (ICSI) Fertilization. **2023**, 131-143 ○
- 15 Long-read sequence analysis of MMEJ-mediated CRISPR genome editing reveals complex on-target vector insertions that may escape standard PCR-based quality control. ○
- 14 Antibody-directed extracellular proximity biotinylation reveals Contactin-1 regulates axo-axonic innervation of axon initial segments. ○

- 13 Implementation of ubiquitous chromatin opening elements as artificial integration sites for CRISPR/Cas9-mediated knock-in in mammalian cells. **2023**, 23, ○
- 12 Shaping the future from the small scale: dry powder inhalation of CRISPR-Cas9 lipid nanoparticles for the treatment of lung diseases. 1-17 ○
- 11 Genome-engineering technologies for modeling and treatment of cystic fibrosis. **2023**, 68, 111-120 ○
- 10 Establishment, optimization, and application of genetic technology in *Aspergillus* spp.. 14, ○
- 9 One-step generation of auxin-inducible degron cells with high-efficiency homozygous tagging. ○
- 8 CRISPR-mediated optogene expression from a cell-specific endogenous promoter in retinal ON-bipolar cells to restore vision. 3, ○
- 7 A CRISPR/Cas9-Based Assay for High-Throughput Studies of Cancer-Induced Innervation. **2023**, 15, 2026 ○
- 6 Gene Editing in Mouse Zygotes Using the CRISPR/Cas9 System. **2023**, 207-230 ○
- 5 Mutation-independent gene knock-in therapy targeting 5'UTR for autosomal dominant retinitis pigmentosa. **2023**, 8, ○
- 4 Gene therapy for urea cycle defects: An update from historical perspectives to future prospects. ○
- 3 Therapeutic strategy for spinal muscular atrophy by combining gene supplementation and genome editing. ○
- 2 High-efficiency and multilocus targeted integration in CHO cells using CRISPR-mediated donor nicking and DNA repair inhibitors. ○
- 1 CRISPR-EDITING THERAPY FOR DUCHENNE MUSCULAR DYSTROPHY. ○