Unbiased detection of CRISPR off-targets in vivo using

Science

364, 286-289

DOI: 10.1126/science.aav9023

Citation Report

#	Article	IF	Citations
1	Progress in the use of genetic methods to study insect behavior outside Drosophila. Current Opinion in Insect Science, 2019, 36, 45-56.	2.2	11
2	Battling CRISPR-Cas9 off-target genome editing. Cell Biology and Toxicology, 2019, 35, 403-406.	2.4	33
3	The Progress of CRISPR/Cas9-Mediated Gene Editing in Generating Mouse/Zebrafish Models of Human Skeletal Diseases. Computational and Structural Biotechnology Journal, 2019, 17, 954-962.	1.9	23
4	Recent advances in the CRISPR genome editing tool set. Experimental and Molecular Medicine, 2019, 51, 1-11.	3.2	120
5	CRISPR technologies for stem cell engineering and regenerative medicine. Biotechnology Advances, 2019, 37, 107447.	6.0	59
6	Cas9 has no exonuclease activity resulting in staggered cleavage with overhangs and predictable di- and tri-nucleotide CRISPR insertions without template donor. Cell Discovery, 2019, 5, 53.	3.1	29
7	Homologous Recombination-Based Genome Editing by Clade F AAVs Is Inefficient in the Absence of a Targeted DNA Break. Molecular Therapy, 2019, 27, 1726-1736.	3.7	20
8	Applications of Genome Editing Technology in Animal Disease Modeling and Gene Therapy. Computational and Structural Biotechnology Journal, 2019, 17, 689-698.	1.9	35
9	Collateral damage: benchmarking off-target effects in genome editing. Genome Biology, 2019, 20, 114.	3.8	25
10	Genome-Wide Off-Target Analysis in CRISPR-Cas9 Modified Mice and Their Offspring. G3: Genes, Genomes, Genetics, 2019, 9, 3645-3651.	0.8	26
11	Engineering guide RNA to reduce the off-target effects of CRISPR. Journal of Genetics and Genomics, 2019, 46, 523-529.	1.7	20
12	Advances in detecting and reducing off-target effects generated by CRISPR-mediated genome editing. Journal of Genetics and Genomics, 2019, 46, 513-521.	1.7	45
13	Human germline genome editing. Nature Cell Biology, 2019, 21, 1479-1489.	4.6	45
14	Genome Editing and Hematologic Malignancy. Annual Review of Medicine, 2020, 71, 71-83.	5.0	1
15	CRISPR/Cas9 for development of disease resistance in plants: recent progress, limitations and future prospects. Briefings in Functional Genomics, 2020, 19, 26-39.	1.3	87
16	Understanding off-target effects through hybridization kinetics and thermodynamics. Cell Biology and Toxicology, 2020, 36, 11-15.	2.4	10
17	Sharpening the Molecular Scissors: Advances in Gene-Editing Technology. IScience, 2020, 23, 100789.	1.9	81
18	CRISPR off-targets: a question of context. Cell Biology and Toxicology, 2020, 36, 5-9.	2.4	21

#	Article	IF	Citations
19	Expanding the editable genome and CRISPRâ€“Cas9 versatility using DNA cutting-free gene targeting based on in trans paired nicking. Nucleic Acids Research, 2020, 48, 974-995.	6.5	25
20	Advances in therapeutic application of CRISPR-Cas9. Briefings in Functional Genomics, 2020, 19, 164-174.	1.3	9
21	Immediate, multiplexed and sequential genome engineering facilitated by CRISPR/Cas9 in Saccharomyces cerevisiae. Journal of Industrial Microbiology and Biotechnology, 2020, 47, 83-96.	1.4	14
22	Anticipating and Identifying Collateral Damage in Genome Editing. Trends in Genetics, 2020, 36, 905-914.	2.9	28
23	Prediction-based highly sensitive CRISPR off-target validation using target-specific DNA enrichment. Nature Communications, 2020, 11, 3596.	5.8	41
24	From Basic Biology to Patient Mutational Spectra of GATA2 Haploinsufficiencies: What Are the Mechanisms, Hurdles, and Prospects of Genome Editing for Treatment. Frontiers in Genome Editing, 2020, 2, 602182.	2.7	5
25	Amplification-free long-read sequencing reveals unforeseen CRISPR-Cas9 off-target activity. Genome Biology, 2020, 21, 290.	3.8	35
26	Epigenome engineering: new technologies for precision medicine. Nucleic Acids Research, 2020, 48, 12453-12482.	6.5	34
27	ATF4 Regulates MYB to Increase Î³-Globin in Response to Loss of Î²-Globin. Cell Reports, 2020, 32, 107993.	2.9	19
28	GOTI, a method to identify genome-wide off-target effects of genome editing in mouse embryos. Nature Protocols, 2020, 15, 3009-3029.	5.5	24
29	Designing Safer CRISPR/Cas9 Therapeutics for HIV: Defining Factors That Regulate and Technologies Used to Detect Off-Target Editing. Frontiers in Microbiology, 2020, 11, 1872.	1.5	11
30	CRISPR GUARD protects off-target sites from Cas9 nuclease activity using short guide RNAs. Nature Communications, 2020, 11, 4132.	5.8	51
31	Benchmarking and integrating genome-wide CRISPR off-target detection and prediction. Nucleic Acids Research, 2020, 48, 11370-11379.	6.5	14
32	Genetics in Light of Transcriptional Adaptation. Trends in Genetics, 2020, 36, 926-935.	2.9	21
33	In silico Method in CRISPR/Cas System: An Expedite and Powerful Booster. Frontiers in Oncology, 2020, 10, 584404.	1.3	7
34	Multicellular systems to translate somatic cell genome editors to human. Current Opinion in Biomedical Engineering, 2020, 16, 72-81.	1.8	1
35	Unbiased investigation of specificities of prime editing systems in human cells. Nucleic Acids Research, 2020, 48, 10576-10589.	6.5	104
36	Translating CRISPR-Cas Therapeutics: Approaches and Challenges. CRISPR Journal, 2020, 3, 253-275.	1.4	19

#	Article	IF	Citations
37	Rapid, precise quantification of large DNA excisions and inversions by ddPCR. Scientific Reports, 2020, 10, 14896.	1.6	9
38	The road ahead in genetics and genomics. Nature Reviews Genetics, 2020, 21, 581-596.	7.7	118
39	Genome-Wide Analysis of Off-Target CRISPR/Cas9 Activity in Single-Cell-Derived Human Hematopoietic Stem and Progenitor Cell Clones. Genes, 2020, 11, 1501.	1.0	14
40	Gene Editing and Genotoxicity: Targeting the Off-Targets. Frontiers in Genome Editing, 2020, 2, 613252.	2.7	31
41	Targeting DNA repair pathways: mechanisms and potential applications in cancer therapy. Genome Instability & Disease, 2020, 1, 318-338.	0.5	3
42	Disease modeling and stem cell immunoengineering in regenerative medicine using CRISPR/Cas9 systems. Computational and Structural Biotechnology Journal, 2020, 18, 3649-3665.	1.9	7
43	Genome editing in plants using CRISPR type I-D nuclease. Communications Biology, 2020, 3, 648.	2.0	53
44	CRISPR-Cas Tools and Their Application in Genetic Engineering of Human Stem Cells and Organoids. Cell Stem Cell, 2020, 27, 705-731.	5.2	95
45	CRISPR-Cas System: An Approach With Potentials for COVID-19 Diagnosis and Therapeutics. Frontiers in Cellular and Infection Microbiology, 2020, 10, 576875.	1.8	39
46	Emerging functions of Fanconi anemia genes in replication fork protection pathways. Human Molecular Genetics, 2020, 29, R158-R164.	1.4	17
47	Molecular mechanisms, offâ€target activities, and clinical potentials of genome editing systems. Clinical and Translational Medicine, 2020, 10, 412-426.	1.7	31
48	Increasing CRISPR Efficiency and Measuring Its Specificity in HSPCs Using a Clinically Relevant System. Molecular Therapy - Methods and Clinical Development, 2020, 17, 1097-1107.	1.8	46
49	CRISPR in medicine: applications and challenges. Briefings in Functional Genomics, 2020, 19, 151-153.	1.3	4
50	Precision genome editing in plants: state-of-the-art in CRISPR/Cas9-based genome engineering. BMC Plant Biology, 2020, 20, 234.	1.6	152
51	Very fast CRISPR on demand. Science, 2020, 368, 1265-1269.	6.0	129
52	CHANGE-seq reveals genetic and epigenetic effects on CRISPRâ€“Cas9 genome-wide activity. Nature Biotechnology, 2020, 38, 1317-1327.	9.4	149
53	Position of Deltaproteobacteria Cas12e nuclease cleavage sites depends on spacer length of guide RNA. RNA Biology, 2020, 17, 1472-1479.	1.5	10
54	Recent developments with advancing gene therapy to treat chronic infection with hepatitis B virus. Current Opinion in HIV and AIDS, 2020, 15, 200-207.	1.5	6

#	Article	IF	Citations
55	Prevention of infection in xenotransplantation: Designated pathogenâ€free swine in the safety equation. Xenotransplantation, 2020, 27, e12595.	1.6	37
56	Highly Parallel Profiling of Cas9 Variant Specificity. Molecular Cell, 2020, 78, 794-800.e8.	4.5	134
57	Next-generation stem cells â€" ushering in a new era of cell-based therapies. Nature Reviews Drug Discovery, 2020, 19, 463-479.	21.5	161
58	Technologies and Computational Analysis Strategies for CRISPR Applications. Molecular Cell, 2020, 79, 11-29.	4.5	28
59	Evaluation of the CRISPR/Cas9 Genetic Constructs in Efficient Disruption of Porcine Genes for Xenotransplantation Purposes Along with an Assessment of the Off-Target Mutation Formation. Genes, 2020, 11, 713.	1.0	7
60	Latest Developed Strategies to Minimize the Off-Target Effects in CRISPR-Cas-Mediated Genome Editing. Cells, 2020, 9, 1608.	1.8	257
61	Cas9 Cuts and Consequences; Detecting, Predicting, and Mitigating CRISPR/Cas9 Onâ€and Offâ€Target Damage. BioEssays, 2020, 42, e2000047.	1.2	9
62	The novel insight into the outcomes of CRISPR/Cas9 editing intra- and inter-species. International Journal of Biological Macromolecules, 2020, 163, 711-717.	3.6	7
63	Correcting CFTR: New Gene Editing Strategies for Rescuing CFTR Function ExÂVivo. Cell Stem Cell, 2020, 26, 476-478.	5.2	3
64	A roadmap for neurodevelopmental disease modeling for nonâ€stem cell biologists. Stem Cells Translational Medicine, 2020, 9, 567-574.	1.6	6
65	The clinical potential of gene editing as a tool to engineer cellâ€based therapeutics. Clinical and Translational Medicine, 2020, 9, 15.	1.7	56
66	Factors Impacting Efficacy of AAV-Mediated CRISPR-Based Genome Editing for Treatment of Choroidal Neovascularization. Molecular Therapy - Methods and Clinical Development, 2020, 17, 409-417.	1.8	26
67	CRISPR/Cas Systems in Genome Editing: Methodologies and Tools for sgRNA Design, Offâ€Target Evaluation, and Strategies to Mitigate Offâ€Target Effects. Advanced Science, 2020, 7, 1902312.	5.6	162
68	CRISPR/Cas Derivatives as Novel Gene Modulating Tools: Possibilities and In Vivo Applications. International Journal of Molecular Sciences, 2020, 21, 3038.	1.8	27
69	Grand Challenges in Gene and Epigenetic Editing for Neurologic Disease. Frontiers in Genome Editing, 2020, 1, 1.	2.7	2
70	From traditional pharmacological towards nucleic acid-based therapies for cardiovascular diseases. European Heart Journal, 2020, 41, 3884-3899.	1.0	58
71	CRISPR-Based Therapeutic Genome Editing: Strategies and InÂVivo Delivery by AAV Vectors. Cell, 2020, 181, 136-150.	13.5	289
72	CRISPR off-target detection with DISCOVER-seq. Nature Protocols, 2020, 15, 1775-1799.	5.5	45

#	Article	IF	Citations
73	Systematic in vitro profiling of off-target affinity, cleavage and efficiency for CRISPR enzymes. Nucleic Acids Research, 2020, 48, 5037-5053.	6.5	26
74	The CRISPR/Cas system in zebrafish. , 2020, , 293-307.		2
75	In vitro transcribed mRNA for expression of designer nucleases: Advantages as a novel therapeutic for the management of chronic HBV infection. Advanced Drug Delivery Reviews, 2021, 168, 134-146.	6.6	11
76	Therapeutic genome editing in cardiovascular diseases. Advanced Drug Delivery Reviews, 2021, 168, 147-157.	6.6	23
77	The ubiquitination machinery of the Fanconi Anemia DNA repair pathway. Progress in Biophysics and Molecular Biology, 2021, 163, 5-13.	1.4	4
78	Moving genome edited crops forward from the laboratory bench to the kitchen table. Food Control, 2021, 122, 107790.	2.8	4
79	Tools for experimental and computational analyses of off-target editing by programmable nucleases. Nature Protocols, 2021, 16, 10-26.	5.5	52
80	An unbiased method for evaluating the genome-wide specificity of base editors in rice. Nature Protocols, 2021, 16, 431-457.	5.5	11
81	Gene Editing for the Treatment of Primary Immunodeficiency Diseases. Human Gene Therapy, 2021, 32, 43-51.	1.4	23
82	Necessity for Validation of Effectiveness of Selected Guide RNA In Silico for Application of CRISPR/Cas9. Molecular Biotechnology, 2021, 63, 140-149.	1.3	6
83	Assessing for off-target mutagenesis. , 2021, , 81-100.		1
84	CRISPR genome engineering for retinal diseases. Progress in Molecular Biology and Translational Science, 2021, 182, 29-79.	0.9	13
85	Cas12a target search and cleavage on force-stretched DNA. Physical Chemistry Chemical Physics, 2021, 23, 26640-26644.	1.3	10
86	Gene Editing Correction of a Urea Cycle Defect in Organoid Stem Cell Derived Hepatocyte-like Cells. International Journal of Molecular Sciences, 2021, 22, 1217.	1.8	15
87	Genome-wide detection and analysis of CRISPR-Cas off-targets. Progress in Molecular Biology and Translational Science, 2021, 181, 31-43.	0.9	11
88	Identifying genome-wide off-target sites of CRISPR RNAâ€“guided nucleases and deaminases with Digenome-seq. Nature Protocols, 2021, 16, 1170-1192.	5.5	16
89	Therapeutic gene editing strategies using CRISPR-Cas9 for the Î²-hemoglobinopathies. Journal of Biomedical Research, 2021, 35, 115.	0.7	6
90	A Small Key for a Heavy Door: Genetic Therapies for the Treatment of Hemoglobinopathies. Frontiers in Genome Editing, 2020, 2, 617780.	2.7	7

#	Article	IF	Citations
91	Evolving AAV-delivered therapeutics towards ultimate cures. Journal of Molecular Medicine, 2021, 99, 593-617.	1.7	41
92	RNAâ€Cleaving DNA Thresholder Controlled by Concentrations of miRNA Cancer Marker. ChemBioChem, 2021, 22, 1750-1754.	1.3	5
93	CRISPR Gene-Editing Models Geared Toward Therapy for Hereditary and Developmental Neurological Disorders. Frontiers in Pediatrics, 2021, 9, 592571.	0.9	4
94	When the genome bluffs: a tandem duplication event during generation of a novel Agmo knockout mouse model fools routine genotyping. Cell and Bioscience, 2021, 11, 54.	2.1	12
95	Genome editing using CRISPR/Cas9 to treat hereditary hematological disorders. Gene Therapy, 2022, 29, 207-216.	2.3	10
96	The Promise and the Hope of Gene Therapy. Frontiers in Genome Editing, 2021, 3, 618346.	2.7	38
97	Cas9 deactivation with photocleavable guide RNAs. Molecular Cell, 2021, 81, 1553-1565.e8.	4.5	30
98	Analysis of off-target effects in CRISPR-based gene drives in the human malaria mosquito. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	27
101	The NIH Somatic Cell Genome Editing program. Nature, 2021, 592, 195-204.	13.7	84
102	Transcription factor overexpression drives reliable differentiation of retinal pigment epithelium from human induced pluripotent stem cells. Stem Cell Research, 2021, 53, 102368.	0.3	7
103	CRISPECTOR provides accurate estimation of genome editing translocation and off-target activity from comparative NGS data. Nature Communications, 2021, 12, 3042.	5.8	23
105	A Review: Computational Approaches to Design sgRNA of CRISPR-Cas9. Current Bioinformatics, 2022, 17, 2-18.	0.7	3
106	Cell and Gene Therapy for Anemia: Hematopoietic Stem Cells and Gene Editing. International Journal of Molecular Sciences, 2021, 22, 6275.	1.8	14
107	Detect-seq reveals out-of-protospacer editing and target-strand editing by cytosine base editors. Nature Methods, 2021, 18, 643-651.	9.0	36
109	Accurate genomic variant detection in single cells with primary template-directed amplification. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	69
110	Quantitative evaluation of chromosomal rearrangements in gene-edited human stem cells by CAST-Seq. Cell Stem Cell, 2021, 28, 1136-1147.e5.	5.2	95
111	CRISPAltRations: A validated cloud-based approach for interrogation of double-strand break repair mediated by CRISPR genome editing. Molecular Therapy - Methods and Clinical Development, 2021, 21, 478-491.	1.8	18
112	Precise CAG repeat contraction in a Huntingtonâ€™s Disease mouse model is enabled by gene editing with SpCas9-NG. Communications Biology, 2021, 4, 771.	2.0	20

#	Article	IF	Citations
113	A more efficient CRISPR-Cas12a variant derived from Lachnospiraceae bacterium MA2020. Molecular Therapy - Nucleic Acids, 2021, 24, 40-53.	2.3	19
115	Applications and challenges of CRISPR-Cas gene-editing to disease treatment in clinics. Precision Clinical Medicine, 2021, 4, 179-191.	1.3	40
116	Tag-seq: a convenient and scalable method for genome-wide specificity assessment of CRISPR/Cas nucleases. Communications Biology, 2021, 4, 830.	2.0	10
117	Paving the way towards precise and safe CRISPR genome editing. Biotechnology Advances, 2021, 49, 107737.	6.0	19
118	CRISPR/ Cas9 Off-targets: Computational Analysis of Causes, Prediction, Detection, and Overcoming Strategies. Current Bioinformatics, 2022, 17, 119-132.	0.7	3
119	Applications and Potential of Genome-Editing Systems in Rice Improvement: Current and Future Perspectives. Agronomy, 2021, 11, 1359.	1.3	35
120	InÂvivo delivery of CRISPR-Cas9 therapeutics: Progress and challenges. Acta Pharmaceutica Sinica B, 2021, 11, 2150-2171.	5.7	97
121	Allele-Specific Gene Editing Rescues Pathology in a Human Model of Charcot-Marie-Tooth Disease Type 2E. Frontiers in Cell and Developmental Biology, 2021, 9, 723023.	1.8	10
124	Current advances in overcoming obstacles of CRISPR/Cas9 off-target genome editing. Molecular Genetics and Metabolism, 2021, 134, 77-86.	0.5	15
125	TALENsâ€”an indispensable tool in the era of CRISPR: a mini review. Journal of Genetic Engineering and Biotechnology, 2021, 19, 125.	1.5	41
126	CRISPR/Cas9 revitalizes adoptive T-cell therapy for cancer immunotherapy. Journal of Experimental and Clinical Cancer Research, 2021, 40, 269.	3.5	32
127	Global detection of DNA repair outcomes induced by CRISPRâ€“Cas9. Nucleic Acids Research, 2021, 49, 8732-8742.	6.5	52
128	Will Plant Genome Editing Play a Decisive Role in â€œQuantum-Leapâ€•Improvements in Crop Yield to Feed an Increasing Global Human Population?. Plants, 2021, 10, 1667.	1.6	10
129	Off-Target Analysis in Gene Editing and Applications for Clinical Translation of CRISPR/Cas9 in HIV-1 Therapy. Frontiers in Genome Editing, 2021, 3, 673022.	2.7	28
130	Conformational control of Cas9 by CRISPR hybrid RNA-DNA guides mitigates off-target activity in TÂcells. Molecular Cell, 2021, 81, 3637-3649.e5.	4.5	27
131	Perfecting Targeting in CRISPR. Annual Review of Genetics, 2021, 55, 453-477.	3.2	10
132	CRISPR-Cas Gene Perturbation and Editing in Human Induced Pluripotent Stem Cells. CRISPR Journal, 2021, 4, 634-655.	1.4	5
133	Tissue Engineering Techniques for Induced Pluripotent Stem Cell Derived Three-Dimensional Cardiac Constructs. Tissue Engineering - Part B: Reviews, 2022, 28, 891-911.	2.5	8

#	Article	IF	Citations
134	The Off-Targets of Clustered Regularly Interspaced Short Palindromic Repeats Gene Editing. Frontiers in Cell and Developmental Biology, 2021, 9, 718466.	1.8	11
135	Gene Therapy in Cellular Immunodeficiencies. Rare Diseases of the Immune System, 2021, , 473-497.	0.1	0
136	DGK and DZHK position paper on genome editing: basic science applications and future perspective. Basic Research in Cardiology, 2021, 116, 2.	2.5	5
137	Improved analysis of CRISPR fitness screens and reduced off-target effects with the BAGEL2 gene essentiality classifier. Genome Medicine, 2021, 13, 2.	3.6	60
138	RNA and CRISPR Interferences: Past, Present, and Future Perspectives. Methods in Molecular Biology, 2020, 2115, 1-22.	0.4	6
139	Methods for Measuring CRISPR/Cas9 DNA Cleavage in Cells. Methods in Molecular Biology, 2021, 2162, 197-213.	0.4	2
140	Therapeutic Gene Editing with CRISPR. Clinics in Laboratory Medicine, 2020, 40, 205-219.	0.7	3
141	Gene editing and CRISPR in the clinic: current and future perspectives. Bioscience Reports, 2020, 40, .	1.1	122
142	Structural insight into FANCIâ€“FANCD2 monoubiquitination. Essays in Biochemistry, 2020, 64, 807-817.	2.1	11
143	Evaluation of Homology-Independent CRISPR-Cas9 Off-Target Assessment Methods. CRISPR Journal, 2020, 3, 440-453.	1.4	32
144	Toward precise CRISPR DNA fragment editing and predictable 3D genome engineering. Journal of Molecular Cell Biology, 2021, 12, 828-856.	1.5	9
150	When genome editing goes off-target. Science, 2019, 364, 234-236.	6.0	18
151	Sequencing data from Massachusetts General Hospital shows Cas9 integration into the genome, highlighting a serious hazard in gene-editing therapeutics. F1000Research, 0, 8, 1846.	0.8	9
152	Computational Tools and Resources Supporting CRISPR-Cas Experiments. Cells, 2020, 9, 1288.	1.8	38
153	Advancing How We Learn from Biodesign to Mitigate Risks with Next-Generation Genome Engineering. Biodesign Research, 2020, 2020, .	0.8	4
154	Monoubiquitination by the human Fanconi anemia core complex clamps FANCI:FANCD2 on DNA in filamentous arrays. ELife, 2020, 9, .	2.8	52
158	CRISPR-Cas9 Genome Editing in Human Cell Lines with Donor Vector Made by Gibson Assembly. Methods in Molecular Biology, 2020, 2115, 365-383.	0.4	1
162	Genome-wide Cas9 binding specificity in Saccharomyces cerevisiae. PeerJ, 2020, 8, e9442.	0.9	3

#	Article	IF	Citations
163	Intracellular RNase activity dampens zinc finger nuclease-mediated gene editing in hematopoietic stem and progenitor cells. Molecular Therapy - Methods and Clinical Development, 2022, 24, 30-39.	1.8	4
164	Defining genome-wide CRISPRâ€“Cas genome-editing nuclease activity with GUIDE-seq. Nature Protocols, 2021, 16, 5592-5615.	5.5	27
165	R-CRISPR: A Deep Learning Network to Predict Off-Target Activities with Mismatch, Insertion and Deletion in CRISPR-Cas9 System. Genes, 2021, 12, 1878.	1.0	8
166	Light activation and deactivation of Cas9 for DNA repair studies. Methods in Enzymology, 2021, 661, 219-249.	0.4	0
167	A one-step platform for screening high-efficient and minimal off-target CRISPR/Cas13 crRNAs to eradicate SARS-CoV-2 virus for treatment of COVID-19 patients. Medical Hypotheses, 2022, 159, 110754.	0.8	5
169	High-throughput methods for genome editing: the more the better. Plant Physiology, 2022, 188, 1731-1745.	2.3	10
170	UdgX-Mediated Uracil Sequencing at Single-Nucleotide Resolution. Journal of the American Chemical Society, 2022, 144, 1323-1331.	6.6	8
171	ON-Target Adverse Events of CRISPR-Cas9 Nuclease: More Chaotic than Expected. CRISPR Journal, 2022, 5, 19-30.	1.4	27
172	Observing Mesoscopic Nucleic Acid Capacitance Effect and Mismatch Impact via Graphene Transistors. Small, 2022, 18, e2105890.	5.2	5
174	Genome-wide detection of CRISPR editing in vivo using GUIDE-tag. Nature Communications, 2022, 13, 437.	5.8	20
175	High-Throughput Imaging of CRISPR- and Recombinant Adeno-Associated Virusâ€“Induced DNA Damage Response in Human Hematopoietic Stem and Progenitor Cells. CRISPR Journal, 2022, 5, 80-94.	1.4	16
176	Systematic decomposition of sequence determinants governing CRISPR/Cas9 specificity. Nature Communications, 2022, 13, 474.	5.8	23
177	Maybe you can turn me on: CRISPRa-based strategies for therapeutic applications. Cellular and Molecular Life Sciences, 2022, 79, 130.	2.4	14
179	Strategies for Optimization of the Clustered Regularly Interspaced Short Palindromic Repeat-Based Genome Editing System for Enhanced Editing Specificity. Human Gene Therapy, 2022, 33, 358-370.	1.4	2
180	CRISPR/Cas-Based Gene Editing Strategies for DOCK8 Immunodeficiency Syndrome. Frontiers in Genome Editing, 2022, 4, 793010.	2.7	2
182	CRISPR-Mediated Synergistic Epigenetic and Transcriptional Control. CRISPR Journal, 2022, 5, 264-275.	1.4	13
183	Computational Tools and Resources for CRISPR/Cas Genome Editing. Genomics, Proteomics and Bioinformatics, 2023, 21, 108-126.	3.0	51
185	Breaking Yield Ceiling in Wheat: Progress and Future Prospects. , 0, , .		10

#	Article	IF	Citations
186	CRISPR/Cas-based Human T cell Engineering: Basic Research and Clinical Application. Immunology Letters, 2022, 245, 18-28.	1.1	5
187	RGEN-seq for highly sensitive amplification-free screen of off-target sites of gene editors. Scientific Reports, 2021, 11, 23600.	1.6	1
188	Genome Editing as a Vehicle to Drive Successful Chimeric Antigen Receptor T Cell Therapies to the Clinic. European Medical Journal (Chelmsford, England), 0, , .	3.0	0
189	Clustered regularly interspaced short palindromic repeats, a glimpseÂâ€“ impacts in molecular biology, trends and highlights. Hormone Molecular Biology and Clinical Investigation, 2022, 43, 105-112.	0.3	0
190	Engineered Cas12a-Plus nuclease enables gene editing with enhanced activity and specificity. BMC Biology, 2022, 20, 91.	1.7	15
191	Mre11-Rad50 oligomerization promotes DNA double-strand break repair. Nature Communications, 2022, 13, 2374.	5.8	15
192	Targeting double-strand break indel byproducts with secondary guide RNAs improves Cas9 HDR-mediated genome editing efficiencies. Nature Communications, 2022, 13, 2351.	5.8	11
193	The origin of unwanted editing byproducts in gene editing. Acta Biochimica Et Biophysica Sinica, 2022, 54, 767-781.	0.9	6
194	Validation of a Novel Double Control Quantitative Copy Number PCR Method to Quantify Off-Target Transgene Integration after CRISPR-Induced DNA Modification. Methods and Protocols, 2022, 5, 43.	0.9	1
195	Muscular Dystrophy Therapy Using Viral Vector-based CRISPR/Cas. , 2022, , 61-83.		1
197	Genome-wide specificity of plant genome editing by both CRISPRâ€“Cas9 and TALEN. Scientific Reports, 2022, 12, .	1.6	9
198	CRISPR Modeling and Correction of Cardiovascular Disease. Circulation Research, 2022, 130, 1827-1850.	2.0	32
199	CRISPR/Cas- and Topical RNAi-Based Technologies for Crop Management and Improvement: Reviewing the Risk Assessment and Challenges Towards a More Sustainable Agriculture. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	7
200	<scp>GATA2</scp> deficiency and <scp>MDS</scp>/<scp>AML</scp>: Experimental strategies for disease modelling and future therapeutic prospects. British Journal of Haematology, 2022, 199, 482-495.	1.2	9
201	Precision digital mapping of endogenous and induced genomic DNA breaks by INDUCE-seq. Nature Communications, 2022, 13, .	5.8	11
202	Massively targeted evaluation of therapeutic CRISPR off-targets in cells. Nature Communications, 2022, 13, .	5.8	11
203	Genome editing for primary immunodeficiencies: A therapeutic perspective on Wiskott-Aldrich syndrome. Frontiers in Immunology, 0, 13, .	2.2	6
204	Ultra-deep sequencing validates safety of CRISPR/Cas9 genome editing in human hematopoietic stem and progenitor cells. Nature Communications, 2022, 13, .	5.8	22

#	Article	IF	Citations
205	Recursive Editing improves homology-directed repair through retargeting of undesired outcomes. Nature Communications, 2022, 13, .	5.8	7
206	Genetics of Dravet Syndrome and its Targeted Therapy by Nanomedicine: A Roadmap for Future Treatment of Drug Resistant Seizures. Current Molecular Pharmacology, 2023, 16, 475-493.	0.7	1
208	A Machine Learning Approach to Identify the Importance of Novel Features for CRISPR/Cas9 Activity Prediction. Biomolecules, 2022, 12, 1123.	1.8	2
209	From fluorescent foci to sequence: Illuminating DNA double strand break repair by high-throughput sequencing technologies. DNA Repair, 2022, 118, 103388.	1.3	1
211	Genome editing in cancer: Challenges and potential opportunities. Bioactive Materials, 2023, 21, 394-402.	8.6	3
212	Off-Target Effects of Crop Genome Editing and Its Minimization. , 2022, , 185-208.		0
213	CRISPR/Cas9 On- and Off-Target Activity Using Correlative Force and Fluorescence Single-Molecule Microscopy. Methods in Molecular Biology, 2022, , 349-378.	0.4	0
214	Negative DNA Supercoiling Induces Genome Wide Cas9 Off-Target Activity. SSRN Electronic Journal, 0, , .	0.4	0
215	Massively parallel genomic perturbations with multi-target CRISPR interrogates Cas9 activity and DNA repair at endogenous sites. Nature Cell Biology, 2022, 24, 1433-1444.	4.6	14
216	CRISPR/Cas9 mediated genome editing tools and their possible role in disease resistance mechanism. Molecular Biology Reports, 2022, 49, 11587-11600.	1.0	1
217	Choice of template delivery mitigates the genotoxic risk and adverse impact of editing in human hematopoietic stem cells. Cell Stem Cell, 2022, 29, 1428-1444.e9.	5.2	46
218	In vivo correction of cystic fibrosis mediated by PNA nanoparticles. Science Advances, 2022, 8, .	4.7	16
219	Unbiased prediction of offâ€target sites in genomeâ€edited rice using SITEâ€Seq analysis on a webâ€based platform. Genes To Cells, 0, , .	0.5	1
220	CRISPR-KRISPR: a method to identify on-target and random insertion of donor DNAs and their characterization in knock-in mice. Genome Biology, 2022, 23, .	3.8	4
222	CRISPR Gene Editing of Hematopoietic Stem and Progenitor Cells. Methods in Molecular Biology, 2023, , 39-62.	0.4	1
223	CRISPR nuclease off-target activity and mitigation strategies. Frontiers in Genome Editing, 0, 4, .	2.7	14
224	Digital Counting of Breaks Labeling In Situ: A Fast and Absolute Quantification Method for Measurement of DNA Double-Strand Breaks Based on Digital Polymerase Chain Reaction. Analytical Chemistry, 2022, 94, 16871-16876.	3.2	3
226	Plant Genome Editing. , 2022, , 205-216.		0

#	Article	IF	Citations
227	CRISPR/Cas Genome Editing Technologies for Plant Improvement against Biotic and Abiotic Stresses: Advances, Limitations, and Future Perspectives. Cells, 2022, 11, 3928.	1.8	16
228	Gene Editing and Human iPSCs in Cardiovascular and Metabolic Diseases. Advances in Experimental Medicine and Biology, 2023, , 275-298.	0.8	0
229	Online Databases of Genome Editing in Cardiovascular and Metabolic Diseases. Advances in Experimental Medicine and Biology, 2023, , 19-33.	0.8	0
230	PEAC-seq adopts Prime Editor to detect CRISPR off-target and DNA translocation. Nature Communications, 2022, 13, .	5.8	7
231	A quantitative model for the dynamics of target recognition and off-target rejection by the CRISPR-Cas Cascade complex. Nature Communications, 2022, 13, .	5.8	6
232	Advances in off-target detection for CRISPR-based genome editing. Human Gene Therapy, 0, , .	1.4	0
233	Assessing and advancing the safety of CRISPR-Cas tools: from DNA to RNA editing. Nature Communications, 2023, 14, .	5.8	36
234	Clinical genome editing to treat sickle cell diseaseâ€"A brief update. Frontiers in Medicine, 0, 9, .	1.2	5
235	Extru-seq: a method for predicting genome-wide Cas9 off-target sites with advantages of both cell-based and in vitro approaches. Genome Biology, 2023, 24, .	3.8	3
236	Nascent DNA sequencing and its diverse applications in genome integrity research. Methods in Cell Biology, 2024, , 67-81.	0.5	0
237	Determining Onâ€Target, Offâ€Target, and Copy Number Status of Transgenic Events After CRISPR/Cas9 Targeted AAVS1 Safeâ€Harbor Modification of iPSCs Using Doubleâ€Control Quantitative Copy Number PCR. Current Protocols, 2023, 3, .	1.3	0
238	CRISPR/Cas9 therapeutics: progress and prospects. Signal Transduction and Targeted Therapy, 2023, 8, .	7.1	73
239	TAPE-seq is a cell-based method for predicting genome-wide off-target effects of prime editor. Nature Communications, 2022, 13, .	5.8	9
240	Improving the sensitivity of in vivo CRISPR off-target detection with DISCOVER-Seq+. Nature Methods, 2023, 20, 706-713.	9.0	5
241	Discovering CRISPRâ€"Cas off-target breaks. Nature Methods, 0, , .	9.0	0
242	Non-viral chimeric antigen receptor (CAR) T cells going viral. Immuno-Oncology Technology, 2023, 18, 100375.	0.2	8
244	Chemical and Biological Approaches to Interrogate off-Target Effects of Genome Editing Tools. ACS Chemical Biology, 2023, 18, 205-217.	1.6	4
245	CRISPR/Cas genome editing in triple negative breast cancer: Current situation and future directions. Biochemical Pharmacology, 2023, 209, 115449.	2.0	3

#	Article	IF	Citations
246	Genome Editing: Moving Toward a New Era of Innovation, Development, and Approval. Human Gene Therapy, 2023, 34, 171-176.	1.4	0
247	Comparative analysis of CRISPR off-target discovery tools following exÂvivo editing of CD34+ hematopoietic stem and progenitor cells. Molecular Therapy, 2023, 31, 1074-1087.	3.7	4
248	A NPAS4â€“NuA4 complex couples synaptic activity to DNA repair. Nature, 2023, 614, 732-741.	13.7	36
249	T-CAST: An optimized CAST-Seq pipeline for TALEN confirms superior safety and efficacy of obligate-heterodimeric scaffolds. Frontiers in Genome Editing, 0, 5, .	2.7	7
251	Off-target effects in CRISPR/Cas9 gene editing. Frontiers in Bioengineering and Biotechnology, 0, 11, .	2.0	53
252	Advanced Therapies for Patients with COVID-19. , 2023, , 77-92.		0
253	Excess of guide RNA reduces knockin efficiency and drastically increases on-target large deletions. IScience, 2023, 26, 106399.	1.9	1
255	CasKAS: direct profiling of genome-wide dCas9 and Cas9 specificity using ssDNA mapping. Genome Biology, 2023, 24, .	3.8	2
274	Identification and evaluation of machine learning classification algorithm to predict the efficacy of gRNA in CRISPR/Cas9 genome editing system using WEKA. AIP Conference Proceedings, 2023, , .	0.3	0
278	Gene Editing Approaches for Haematological Disorders. , 2024, , .		0
279	Molecular Genetic Therapies in the Muscular Dystrophies. Current Clinical Neurology, 2023, , 281-302.	0.1	0
280	CRISPR/Cas techniques used in plant disease management. , 2024, , 331-351.		0