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Biology and Applications of CRISPR Systems: Harnessing Naturels Toolbox for Genome Engineering

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821	Engineering of temperature- and light-switchable Cas9 variants. <b>2016</b> , 44, 10003-10014		70
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819	Making sense of the cause of Crohn's - a new look at an old disease. <b>2016</b> , 5, 2510		9
818	Multi-OMICs and Genome Editing Perspectives on Liver Cancer Signaling Networks. <b>2016</b> , 2016, 618628	1	6
817	Making Bunyaviruses Talk: Interrogation Tactics to Identify Host Factors Required for Infection. <b>2016</b> , 8,		3
816	Genome Engineering with TALE and CRISPR Systems in Neuroscience. 2016, 7, 47		21
815	The Influence of Copy-Number of Targeted Extrachromosomal Genetic Elements on the Outcome of CRISPR-Cas Defense. <b>2016</b> , 3, 45		21
814	Rapid Generation of Marker-Free P. falciparum Fluorescent Reporter Lines Using Modified CRISPR/Cas9 Constructs and Selection Protocol. <b>2016</b> , 11, e0168362		29
813	Engineering Plant Immunity: Using CRISPR/Cas9 to Generate Virus Resistance. <b>2016</b> , 7, 1673		109
812	CRISPR guide RNA design for research applications. <b>2016</b> , 283, 3232-8		56
811	Editorial: CRISPR in Nucleic Acids Research. <b>2016</b> , 44, 4989-90		
810	Stacking up CRISPR against RNAi for therapeutic gene inhibition. <b>2016</b> , 283, 3249-60		10
809	Long-range regulators of the lncRNA HOTAIR enhance its prognostic potential in breast cancer. <b>2016</b> , 25, 3269-3283		46
808	Using CRISPR/Cas to study gene function and model disease in vivo. <b>2016</b> , 283, 3194-203		30
807	AACR Cancer Progress Report 2016. <b>2016</b> , 22 Suppl 19, S1-S137		27
806	To CRISPR and beyond: the evolution of genome editing in stem cells. <b>2016</b> , 11, 801-816		11
805	Optimized inducible shRNA and CRISPR/Cas9 platforms for in vitro studies of human development using hPSCs. <b>2016</b> , 143, 4405-4418		38

## (2016-2016)

804	Efficient CRISPR-Mediated Post-Transcriptional Gene Silencing in a Hyperthermophilic Archaeon Using Multiplexed crRNA Expression. <b>2016</b> , 6, 3161-3168		18
803	PAM-Dependent Target DNA Recognition and Cleavage by C2c1 CRISPR-Cas Endonuclease. <i>Cell</i> , <b>2016</b> , 167, 1814-1828.e12	56.2	130
802	Bibliography. 414-430		
801	Genome-Wide Approaches to Defining Macrophage Identity and Function. <b>2016</b> , 4,		8
800	Mathematical and computational analysis of CRISPR Cas9 sgRNA off-target homologies. <b>2016</b> ,		1
799	CRISPR Double Cutting through the Labyrinthine Architecture of 3D Genomes. <b>2016</b> , 43, 273-88		14
798	The crystal structure of Cpf1 in complex with CRISPR RNA. <b>2016</b> , 532, 522-6		196
797	The Properties of Long Noncoding RNAs That Regulate Chromatin. <b>2016</b> , 17, 69-94		61
796	Real-Time Imaging of Translation on Single mRNA Transcripts in Live Cells. <i>Cell</i> , <b>2016</b> , 165, 990-1001	56.2	224
795	Crystal Structure of Cpf1 in Complex with Guide RNA and Target DNA. Cell, <b>2016</b> , 165, 949-62	56.2	362
794	Protecting genome integrity during CRISPR immune adaptation. <b>2016</b> , 23, 876-883		49
793	Two distinct RNase activities of CRISPR-C2c2 enable guide-RNA processing and RNA detection. <b>2016</b> , 538, 270-273		527
792	Investigation of septin biology in vivo using zebrafish. <b>2016</b> , 136, 221-41		5
791	Somatic Genome Editing for Health: Disease Treatments and Beyond. <b>2016</b> , 2, 313-320		1
790	CRISPR-Cas9 gene editing: Delivery aspects and therapeutic potential. <b>2016</b> , 244, 139-148		37
789	Methods for Optimizing CRISPR-Cas9 Genome Editing Specificity. <b>2016</b> , 63, 355-70		190
788	Is there a future for genome-editing technologies in conservation?. <b>2016</b> , 19, 97-101		34
787	Form follows function, function follows form: how lymphoid tissues enable and constrain immune reactions. <b>2016</b> , 271, 4-9		3

786	System-level genome editing in microbes. <b>2016</b> , 33, 113-122	18
785	DNA Targeting by a Minimal CRISPR RNA-Guided Cascade. <b>2016</b> , 63, 840-51	49
7 <sup>8</sup> 4	Evolution and Ecology of CRISPR. <b>2016</b> , 47, 307-331	48
783	Somatic Engineering of Oncogenic Chromosomal Rearrangements: A Perspective. <b>2016</b> , 76, 4918-23	6
782	Novel Functional Genomics Approaches: A Promising Future in the Combat Against Plant Viruses. <b>2016</b> , 106, 1231-1239	14
781	CRISPR/Cas9: a historical and chemical biology perspective of targeted genome engineering. <b>2016</b> , 45, 6666-6684	19
78o	Analysis of C. elegans muscle transcriptome using trans-splicing-based RNA tagging (SRT). <b>2016</b> , 44, e156	12
779	Striking Plasticity of CRISPR-Cas9 and Key Role of Non-target DNA, as Revealed by Molecular Simulations. <b>2016</b> , 2, 756-763	67
778	Right on Q: genetics begin to unravel Coxiella burnetii host cell interactions. <b>2016</b> , 11, 919-39	49
777	Conjugation and Evaluation of Triazole-Linked Single Guide RNA for CRISPR-Cas9 Gene Editing. <b>2016</b> , 17, 1809-1812	12
776	Astrocytes are key but indirect contributors to the development of the symptomatology and pathophysiology of Huntington's disease. <b>2016</b> , 64, 1841-56	23
775	Type V CRISPR-Cas Cpf1 endonuclease employs a unique mechanism for crRNA-mediated target DNA recognition. <b>2016</b> , 26, 901-13	131
774	Investigating essential gene function in Mycobacterium tuberculosis using an efficient CRISPR interference system. <b>2016</b> , 44, e143	75
773	Organization and function of the 3D genome. <b>2016</b> , 17, 661-678	493
772	Coping with Loss: Cell Adaptation to Cytoskeleton Disruption. <b>2016</b> , 39, 3-4	4
771	Engineering hematopoietic stem cells toward a functional cure of human immunodeficiency virus infection. <b>2016</b> , 18, 1370-1381	9
77°	Quorum Sensing Controls Adaptive Immunity through the Regulation of Multiple CRISPR-Cas Systems. <b>2016</b> , 64, 1102-1108	121
769	Structural and functional consequences of a disease mutation in the telomere protein TPP1. <b>2016</b> , 113, 13021-13026	27

#### (2016-2016)

The diverse and expanding role of mass spectrometry in structural and molecular biology. 2016, 35, 2634-2657<sub>160</sub> 768 CRISPR/Cas9-Mediated Immunity to Geminiviruses: Differential Interference and Evasion. 2016, 6, 26912 146 766 Synthetic lethality between PAXX and XLF in mammalian development. 2016, 30, 2152-2157 51 Zebrafish Genome Engineering Using the CRISPR-Cas9 System. 2016, 32, 815-827 765 93 Real-time observation of DNA recognition and rejection by the RNA-guided endonuclease Cas9. 764 157 2016, 7, 12778 Activation of Fetal Eglobin Gene Expression via Direct Protein Delivery of Synthetic Zinc-finger 7 DNA-Binding Domains. 2016, 5, e378 762 Simple and Efficient Targeting of Multiple Genes Through CRISPR-Cas9 in. 2016, 6, 3647-3653 58 761 The appeasement of Doug: a synthetic approach to enhancer biology. 2016, 8, 475-84 21 Developing genetically engineered mouse models using engineered nucleases: Current status, 760 3 challenges, and the way forward. 2016, 20, 13-20 Plasmodium meets AAV-the (un)likely marriage of parasitology and virology, and how to make the 759 match. 2016, 590, 2027-45 Striated muscle function, regeneration, and repair. 2016, 73, 4175-4202 758 48 Peptides for nucleic acid delivery. 2016, 106, 172-182 136 757 Genome-wide specificities of CRISPR-Cas Cpf1 nucleases in human cells. 2016, 34, 869-74 756 415 Towards synthesis of monoterpenes and derivatives using synthetic biology. 2016, 34, 37-43 66 755 Use of genome-editing tools to treat sickle cell disease. 2016, 135, 1011-28 18 754 C2c2 is a single-component programmable RNA-guided RNA-targeting CRISPR effector. 2016, 353, aaf5573 1037 753 Smash and DASH with Cas9. 2016, 17, 42 752 1 DNA motifs determining the accuracy of repeat duplication during CRISPR adaptation in Haloarcula 751 32 hispanica. 2016, 44, 4266-77

75°	Expanding CRISPR/Cas9 Genome Editing Capacity in Zebrafish Using SaCas9. <b>2016</b> , 6, 2517-21		11
749	The Heroes of CRISPR. <i>Cell</i> , <b>2016</b> , 164, 18-28	56.2	266
748	Engineering Plants for Geminivirus Resistance with CRISPR/Cas9 System. <b>2016</b> , 21, 279-281		47
747	Selective Manipulation of Neural Circuits. <b>2016</b> , 13, 311-24		19
746	Using synthetic biology to make cells tomorrow's test tubes. <b>2016</b> , 8, 431-50		4
745	Expanding the genetic toolkit in Xenopus: Approaches and opportunities for human disease modeling. <b>2017</b> , 426, 325-335		72
744	A non-viral CRISPR/Cas9 delivery system for therapeutically targeting HBV DNA and pcsk9 in vivo. <b>2017</b> , 27, 440-443		182
743	REVIEW: Epistasis and dominance in the emergence of catalytic function as exemplified by the evolution of plant terpene synthases. <b>2017</b> , 255, 29-38		9
742	CRISPR-Cas type II-based Synthetic Biology applications in eukaryotic cells. <b>2017</b> , 14, 1286-1293		8
741	Application of the CRISPR gene-editing technique in insect functional genome studies <b>(b)</b> review. <b>2017</b> , 162, 124-132		15
740	New CRISPR-Cas systems discovered. <b>2017</b> , 27, 313-314		3
739	Targeting a CAR to the TRAC locus with CRISPR/Cas9 enhances tumour rejection. <b>2017</b> , 543, 113-117		852
738	Efficient precise knockin with a double cut HDR donor after CRISPR/Cas9-mediated double-stranded DNA cleavage. <b>2017</b> , 18, 35		223
737	The neurogenetics of group behavior in Drosophila melanogaster. <b>2017</b> , 220, 35-41		34
736	Genome editing using FACS enrichment of nuclease-expressing cells and indel detection by amplicon analysis. <b>2017</b> , 12, 581-603		69
735	Programmable transcriptional repression in mycobacteria using an orthogonal CRISPR interference platform. <b>2017</b> , 2, 16274		204
734	PPR-SMR protein SOT1 has RNA endonuclease activity. <b>2017</b> , 114, E1554-E1563		40
733	Visualizing biological reaction intermediates with DNA curtains. <b>2017</b> , 50, 153001		5

732	Dual-targeting by CRISPR/Cas9 for precise excision of transgenes from rice genome. <b>2017</b> , 129, 153-160	32
731	Biochemie 2016: Crispr-Cas: bakterielle Immunsysteme und ihre Anwendung. <b>2017</b> , 65, 313-315	
730	An efficient system for deletion of large DNA fragments in Escherichia coli via introduction of both Cas9 and the non-homologous end joining system from Mycobacterium smegmatis. <b>2017</b> , 485, 768-774	31
729	Emerging threats of begomoviruses to the cultivation of medicinal and aromatic crops and their management strategies. <b>2017</b> , 28, 1-17	14
728	Patterned cell and matrix dynamics in branching morphogenesis. <b>2017</b> , 216, 559-570	57
727	Enhancing coupled enzymatic activity by conjugating one enzyme to a nanoparticle. <b>2017</b> , 9, 5172-5187	30
726	Molecular Biology, Genomics, Proteomics, and Mouse Models of Human Cancer. <b>2017</b> , 1-31	
725	The spacer size of I-B CRISPR is modulated by the terminal sequence of the protospacer. <b>2017</b> , 45, 4642-4654	17
724	A Single-Molecule View of Genome Editing Proteins: Biophysical Mechanisms for TALEs and CRISPR/Cas9. <b>2017</b> , 8, 577-597	9
723	A lentivirus-free inducible CRISPR-Cas9 system for efficient targeting of human genes. <b>2017</b> , 530, 40-49	4
722	Towards mastering CRISPR-induced gene knock-in in plants: Survey of key features and focus on the model Physcomitrella patens. <b>2017</b> , 121-122, 103-117	31
721	CRISPR Editing Technology in Biological and Biomedical Investigation. <b>2017</b> , 118, 3586-3594	18
720	RNA Targeting by Functionally Orthogonal Type VI-A CRISPR-Cas Enzymes. 2017, 66, 373-383.e3	139
719	Switchable Cas9. <b>2017</b> , 48, 119-126	32
718	Chimeric Antigen Receptors: A Cell and Gene Therapy Perspective. <b>2017</b> , 25, 1117-1124	70
717	Structures and mechanisms of CRISPR RNA-guided effector nucleases. <b>2017</b> , 43, 68-78	46
716	The CRISPR-Cas app goes viral. <b>2017</b> , 37, 103-109	6
715	Antiviral Goes Viral: Harnessing CRISPR/Cas9 to Combat Viruses in Humans. <b>2017</b> , 25, 833-850	50

714	Asymmetric positioning of Cas1-2 complex and Integration Host Factor induced DNA bending guide the unidirectional homing of protospacer in CRISPR-Cas type I-E system. <b>2017</b> , 45, 367-381	38
713	A Genome-Wide CRISPR Screen Identifies Genes Critical for Resistance to FLT3 Inhibitor AC220. <b>2017</b> , 77, 4402-4413	37
712	Conformational regulation of CRISPR-associated nucleases. <b>2017</b> , 37, 110-119	31
711	Structural Basis for the Altered PAM Recognition by Engineered CRISPR-Cpf1. <b>2017</b> , 67, 139-147.e2	49
710	Multiplex gene regulation by CRISPR-ddCpf1. <b>2017</b> , 3, 17018	109
709	Human gene editing: revisiting Canadian policy. <b>2017</b> , 2, 3	13
708	The genetics revolution in rheumatology: large scale genomic arrays and genetic mapping. <b>2017</b> , 13, 421-432	18
707	Diversity, classification and evolution of CRISPR-Cas systems. <b>2017</b> , 37, 67-78	720
706	How to Increase Brightness of Near-Infrared Fluorescent Proteins in Mammalian Cells. <b>2017</b> , 24, 758-766.e3	37
705	Inhibition Mechanism of an Anti-CRISPR Suppressor AcrIIA4 Targeting SpyCas9. <b>2017</b> , 67, 117-127.e5	103
704	The CRISPR-Cas9 system in Neisseria spp. <b>2017</b> , 75,	9
703	Structural basis of stringent PAM recognition by CRISPR-C2c1 in complex with sgRNA. <b>2017</b> , 27, 705-708	21
702	Genome-scale CRISPR-Cas9 knockout and transcriptional activation screening. 2017, 12, 828-863	459
701	CRISPR-Cas: Adapting to change. <b>2017</b> , 356,	223
700	Engineering and In Vivo Applications of Riboswitches. <b>2017</b> , 86, 515-539	87
699	Regulation of CRISPR-Cas adaptive immune systems. <b>2017</b> , 37, 1-7	43
698	High-throughput system-wide engineering and screening for microbial biotechnology. <b>2017</b> , 46, 120-125	33
697	Mechanisms of precise genome editing using oligonucleotide donors. <b>2017</b> , 27, 1099-1111	55

696	CRISPR-Cas9 Structures and Mechanisms. 2017, 46, 505-529	732
695	Crystal Structure of the Minimal Cas9 from Campylobacter jejuni Reveals the Molecular Diversity in the CRISPR-Cas9 Systems. <b>2017</b> , 65, 1109-1121.e3	88
694	CRISPR/Cas9-mediated genome editing in plants. <b>2017</b> , 121-122, 94-102	39
693	Genome engineering for breaking barriers in lignocellulosic bioethanol production. <b>2017</b> , 74, 1080-1107	26
692	Introduction to Telomeres and Telomerase. <b>2017</b> , 1587, 1-13	
691	Using CRISPR-Cas9 to Study ERK Signaling in Drosophila. <b>2017</b> , 1487, 353-365	2
690	Cornerstones of CRISPR-Cas in drug discovery and therapy. <b>2017</b> , 16, 89-100	274
689	Inhibition of CRISPR-Cas9 with Bacteriophage Proteins. <i>Cell</i> , <b>2017</b> , 168, 150-158.e10 56.2	310
688	Probing the structural dynamics of the CRISPR-Cas9 RNA-guided DNA-cleavage system by coarse-grained modeling. <b>2017</b> , 85, 342-353	14
687	Cas13b Is a Type VI-B CRISPR-Associated RNA-Guided RNase Differentially Regulated by Accessory Proteins Csx27 and Csx28. <b>2017</b> , 65, 618-630.e7	294
686	Mobile Genetic Elements and Evolution of CRISPR-Cas Systems: All the Way There and Back. <b>2017</b> , 9, 2812-2825	83
685	Inducible and multiplex gene regulation using CRISPR-Cpf1-based transcription factors. <b>2017</b> , 14, 1163-1166	132
684	Systematic analysis of human telomeric dysfunction using inducible telosome/shelterin CRISPR/Cas9 knockout cells. <b>2017</b> , 3, 17034	31
683	Mathematical and computational analysis of CRISPR Cas9 sgRNA off-target homologies. <b>2017</b> , 10, 1750085	1
682	CRISPR-mediated Ophthalmic Genome Surgery. <b>2017</b> , 5, 199-206	10
681	Hematopoietic Stem Cell Gene Therapy: Progress and Lessons Learned. <b>2017</b> , 21, 574-590	100
<b>6</b> 80	Cryo-EM Structures Reveal Mechanism and Inhibition of DNA Targeting by a CRISPR-Cas Surveillance Complex. <i>Cell</i> , <b>2017</b> , 171, 414-426.e12	101
679	Gene Editing and Human Pluripotent Stem Cells: Tools for Advancing Diabetes Disease Modeling and Beta-Cell Development. <b>2017</b> , 17, 116	9

678	Engineering nucleic acid structures for programmable molecular circuitry and intracellular biocomputation. <b>2017</b> , 9, 1056-1067	186
677	Non-canonical reader modules of BAZ1A promote recovery from DNA damage. <b>2017</b> , 8, 862	9
676	Hypothesis: RNA and DNA Viral Sequence Integration into the Mammalian Host Genome Supports Long-Term B Cell and T Cell Adaptive Immunity. <b>2017</b> , 30, 628-632	11
675	Class 2 CRISPR-Cas RNA-guided endonucleases: Swiss Army knives of genome editing. <b>2017</b> , 24, 882-892	39
674	Advancing the design and delivery of CRISPR antimicrobials. <b>2017</b> , 4, 57-64	16
673	Assembly of Francisella novicida Cpf1 endonuclease in complex with guide RNA and target DNA. <b>2017</b> , 73, 409-415	5
672	Structural basis underlying complex assembly and conformational transition of the type I R-M system. <b>2017</b> , 114, 11151-11156	11
671	Live cell imaging of genomic loci using dCas9-SunTag system and a bright fluorescent protein. <b>2017</b> , 8, 853-855	27
670	Sleeper cells: the stringent response and persistence in the Borreliella (Borrelia) burgdorferi enzootic cycle. <b>2017</b> , 19, 3846-3862	19
669	The Chromatin Structure Differentially Impacts High-Specificity CRISPR-Cas9 Nuclease Strategies. <b>2017</b> , 8, 558-563	24
668	The CRISPR Spacer Space Is Dominated by Sequences from Species-Specific Mobilomes. <b>2017</b> , 8,	122
667	Regulating Bacterial Virulence with RNA. <b>2017</b> , 71, 263-280	34
666	Guide-bound structures of an RNA-targeting A-cleaving CRISPR-Cas13a enzyme. 2017, 24, 825-833	63
665	Advances in the application of genetic manipulation methods to apicomplexan parasites. <b>2017</b> , 47, 701-710	34
664	In trans paired nicking triggers seamless genome editing without double-stranded DNA cutting. <b>2017</b> , 8, 657	51
663	Delivery of large transgene cassettes by foamy virus vector. <b>2017</b> , 7, 8085	7
662	Mathematical Grammar of Biology. <b>2017</b> ,	1
661	Engineering Molecular Immunity Against Plant Viruses. <b>2017</b> , 149, 167-186	12

660	The Molecular Architecture for RNA-Guided RNA Cleavage by Cas13a. <i>Cell</i> , <b>2017</b> , 170, 714-726.e10 56.2	194
659	Spatial gene drives and pushed genetic waves. <b>2017</b> , 114, 8452-8457	37
658	Engineered Epidermal Progenitor Cells Can Correct Diet-Induced Obesity and Diabetes. <b>2017</b> , 21, 256-263.e4	25
657	A conformational checkpoint between DNA binding and cleavage by CRISPR-Cas9. <b>2017</b> , 3, eaao0027	142
656	Expansion of the ISWI chromatin remodeler family with new active complexes. 2017, 18, 1697-1706	37
655	Structural Basis for the Canonical and Non-canonical PAM Recognition by CRISPR-Cpf1. <b>2017</b> , 67, 633-645.e3	119
654	Defining key concepts of intestinal and epithelial cancer biology through the use of mouse models. <b>2017</b> , 38, 953-965	4
653	Programmable DNA looping using engineered bivalent dCas9 complexes. <b>2017</b> , 8, 1628	43
652	Characterizing a thermostable Cas9 for bacterial genome editing and silencing. <b>2017</b> , 8, 1647	74
651	Real-space and real-time dynamics of CRISPR-Cas9 visualized by high-speed atomic force microscopy. <b>2017</b> , 8, 1430	119
650	Precision Medicine, CRISPR, and Genome Engineering. 2017,	O
649	CRISPR: From Prokaryotic Immune Systems to Plant Genome Editing Tools. <b>2017</b> , 1016, 101-120	1
648	Protocols for C-Brick DNA Standard Assembly Using Cpf1. <b>2017</b> ,	2
647	Structural insights into DNA cleavage activation of CRISPR-Cas9 system. <b>2017</b> , 8, 1375	63
646	CRISPR-Cas12a-Assisted Recombineering in Bacteria. <b>2017</b> , 83,	88
645	Enabling Graded and Large-Scale Multiplex of Desired Genes Using a Dual-Mode dCas9 Activator in Saccharomyces cerevisiae. <b>2017</b> , 6, 1931-1943	42
644	Massively Parallel Biophysical Analysis of CRISPR-Cas Complexes on Next Generation Sequencing Chips. <i>Cell</i> , <b>2017</b> , 170, 35-47.e13	62
643	CRISPR/Cas9, a universal tool for genomic engineering. <b>2017</b> , 7, 440-458	3

642	CRISPR/Cas9 in zebrafish: an efficient combination for human genetic diseases modeling. <b>2017</b> , 136, 1-12	68
641	Floral Organogenesis: When Knowing Your ABCs Is Not Enough. <b>2017</b> , 173, 56-64	23
640	CRISPR/Cas9, a powerful tool to target human herpesviruses. <b>2017</b> , 19, e12694	35
639	Epigenetic Treatment of Persistent Viral Infections. <b>2017</b> , 78, 24-36	15
638	Type III CRISPR-Cas Immunity: Major Differences Brushed Aside. <b>2017</b> , 25, 49-61	88
637	Gene editing for cell engineering: trends and applications. <b>2017</b> , 37, 672-684	71
636	CRISPR: express delivery to any DNA address. <b>2017</b> , 23, 5-11	5
635	Advances in the genomics and metabolomics of dairy lactobacilli: A review. 2017, 61, 33-49	81
634	Genome editing in cardiovascular diseases. <b>2017</b> , 14, 11-20	57
633	Ethics and Genetics: Examining a Crossroads in Nursing Through a Case Study?. <b>2017</b> , 21, 730-737	2
632	CRISPR/Cas9-based genome editing for simultaneous interference with gene expression and protein stability. <b>2017</b> , 45, e171	13
631	RNA Interference and RNA Editing. <b>2017</b> , 345-376	
630	Oncogenic Human Papillomavirus: Application of CRISPR/Cas9 Therapeutic Strategies for Cervical Cancer. <b>2017</b> , 44, 2455-2466	21
629	Role of the CRISPR system in controlling gene transcription and monitoring cell fate (Review). <b>2018</b> , 17, 1421-1427	12
628	RNA-Independent DNA Cleavage Activities of Cas9 and Cas12a. <b>2017</b> , 21, 3728-3739	52
627	Progress in Genome Editing Technology and Its Application in Plants. <b>2017</b> , 8, 177	54
626	The Search for Resistance to Cassava Mosaic Geminiviruses: How Much We Have Accomplished, and What Lies Ahead. <b>2017</b> , 8, 408	29
625	Viral Vectors for Plant Genome Engineering. <b>2017</b> , 8, 539	66

624	How to Train a Cell-Cutting-Edge Molecular Tools. <b>2017</b> , 5, 12	7
623	Whole genome analysis of CRISPR Cas9 sgRNA off-target homologies via an efficient computational algorithm. <b>2017</b> , 18, 826	8
622	Receptor Tyrosine Kinases and Phosphatases in Neuronal Wiring: Insights From Drosophila. <b>2017</b> , 123, 399-432	4
621	Growth condition dependency is the major cause of non-responsiveness upon genetic perturbation. <b>2017</b> , 12, e0173432	2
620	Programmable type III-A CRISPR-Cas DNA targeting modules. <b>2017</b> , 12, e0176221	23
619	Frameshift indels introduced by genome editing can lead to in-frame exon skipping. <b>2017</b> , 12, e0178700	53
618	Current status and perspectives of genome editing technology for microalgae. <b>2017</b> , 10, 267	65
617	Deep mutational scanning of S. pyogenes Cas9 reveals important functional domains. 2017, 7, 16836	11
616	. <b>2017</b> , 6,	44
615	CRISPR-Cas9: a promising tool for gene editing on induced pluripotent stem cells. <b>2017</b> , 32, 42-61	35
614	Circular RNAs Expression, Function, and Regulation in Neural Systems. <b>2017</b> , 247-263	1
614	Circular RNAs Expression, Function, and Regulation in Neural Systems. <b>2017</b> , 247-263  Rearrangements ?. <b>2017</b> ,	1
		2
613	Rearrangements ?. 2017,  Future Perspectives of Computational Biology: Demanding Shifts in Analytical Thinking to Unfold	
613	Rearrangements ?. 2017,  Future Perspectives of Computational Biology: Demanding Shifts in Analytical Thinking to Unfold Biological Complexities. 2018, 283-293	2
613	Rearrangements?. 2017,  Future Perspectives of Computational Biology: Demanding Shifts in Analytical Thinking to Unfold Biological Complexities. 2018, 283-293  Soft Computing for Biological Systems. 2018,  New and emerging uses of CRISPR/Cas9 to genetically manipulate apicomplexan parasites. 2018, 145, 1119-1126	2
613 612 611	Rearrangements?. 2017,  Future Perspectives of Computational Biology: Demanding Shifts in Analytical Thinking to Unfold Biological Complexities. 2018, 283-293  Soft Computing for Biological Systems. 2018,  New and emerging uses of CRISPR/Cas9 to genetically manipulate apicomplexan parasites. 2018, 145, 1119-1126	2 2 20

606	RNA Interference (RNAi) Screening in. 2018, 208, 853-874	53
605	Engineering Introns to Express RNA Guides for Cas9- and Cpf1-Mediated Multiplex Genome Editing. <b>2018</b> , 11, 542-552	65
604	Genomics and Genetic Manipulation of Protozoan Parasites Affecting Farm Animals. 2018, 413-438	2
603	Modular Ligation Extension of Guide RNA Operons (LEGO) for Multiplexed dCas9 Regulation of Metabolic Pathways in Saccharomyces cerevisiae. <b>2018</b> , 13, e1700582	16
602	Single-Molecule Dynamics and Localization of DNA Repair Proteins in Cells. 2018, 600, 375-406	2
601	High GC Content Cas9-Mediated Genome-Editing and Biosynthetic Gene Cluster Activation in Saccharopolyspora erythraea. <b>2018</b> , 7, 1338-1348	19
600	Genome-wide CRISPR/Cas9 Screen Identifies Host Factors Essential for Influenza Virus Replication. <b>2018</b> , 23, 596-607	119
599	Programmable RNA Cleavage and Recognition by a Natural CRISPR-Cas9 System from Neisseria meningitidis. <b>2018</b> , 69, 906-914.e4	59
598	Spontaneous CRISPR loci generation in vivo by non-canonical spacer integration. <b>2018</b> , 3, 310-318	15
597	New models to study vascular mural cell embryonic origin: implications in vascular diseases. <b>2018</b> , 114, 481-491	19
596	Genome editing of bread wheat using biolistic delivery of CRISPR/Cas9 in vitro transcripts or ribonucleoproteins. <b>2018</b> , 13, 413-430	116
595	CRISPR/Cas9-Mediated Genome Editing in Epstein-Barr Virus-Transformed Lymphoblastoid B-Cell Lines. <b>2018</b> , 121, 31.12.1-31.12.23	17
594	Genomic tools for behavioural ecologists to understand repeatable individual differences in behaviour. <b>2018</b> , 2, 944-955	77
593	Tuning CRISPR-Cas9 Gene Drives in. <b>2018</b> , 8, 999-1018	28
592	The Conformational Dynamics of Cas9 Governing DNA Cleavage Are Revealed by Single-Molecule FRET. <b>2018</b> , 22, 372-382	59
591	CRISPR Approaches to Small Molecule Target Identification. <b>2018</b> , 13, 366-375	41
590	Dual gene activation and knockout screen reveals directional dependencies in genetic networks. <b>2018</b> , 36, 170-178	87
589	Astrovirology: Viruses at Large in the Universe. <b>2018</b> , 18, 207-223	26

### (2018-2018)

588	Multi-Envelope HIV-1 Vaccine Development: Two Targeted Immune Pathways, One Desired Protective Outcome. <b>2018</b> , 31, 124-132	3
587	Comparative genomic and metabolic analysis of three Lactobacillus paracasei cheese isolates reveals considerable genomic differences in strains from the same niche. <b>2018</b> , 19, 205	20
586	A protocol for custom CRISPR Cas9 donor vector construction to truncate genes in mammalian cells using pcDNA3 backbone. <b>2018</b> , 19, 3	3
585	CRISPR/Cas9: the Jedi against the dark empire of diseases. <b>2018</b> , 25, 29	14
584	enChIP systems using different CRISPR orthologues and epitope tags. 2018, 11, 154	8
583	Harnessing "A Billion Years of Experimentation": The Ongoing Exploration and Exploitation of CRISPR-Cas Immune Systems. <b>2018</b> , 1, 141-158	32
582	New CRISPR Mutagenesis Strategies Reveal Variation in Repair Mechanisms among Fungi. 2018, 3,	44
581	Comparison and optimization of CRISPR/dCas9/gRNA genome-labeling systems for live cell imaging. <b>2018</b> , 19, 39	35
580	Differences between immunodeficient mice generated by classical gene targeting and CRISPR/Cas9-mediated gene knockout. <b>2018</b> , 27, 241-251	11
579	Structural insights into the apo-structure of Cpf1 protein from Francisella novicida. <b>2018</b> , 498, 775-781	4
578	Cas13d Is a Compact RNA-Targeting Type VI CRISPR Effector Positively Modulated by a WYL-Domain-Containing Accessory Protein. <b>2018</b> , 70, 327-339.e5	215
577	Solution structure and dynamics of anti-CRISPR AcrIIA4, the Cas9 inhibitor. <b>2018</b> , 8, 3883	20
576	Gene therapy and editing: Novel potential treatments for neuronal channelopathies. 2018, 132, 108-117	20
575	Regulatory Mechanisms and Novel Therapeutic Targeting Strategies for Protein Tyrosine Phosphatases. <b>2018</b> , 118, 1069-1091	58
574	Application of the gene editing tool, CRISPR-Cas9, for treating neurodegenerative diseases. <b>2018</b> , 112, 187-196	21
573	A technological and regulatory outlook on CRISPR crop editing. <b>2018</b> , 119, 1291-1298	37
572	Anti-CRISPR: discovery, mechanism and function. <b>2018</b> , 16, 12-17	200
571	Comparison of Zinc Finger Nucleases Versus CRISPR-Specific Nucleases for Genome Editing of the Wiskott-Aldrich Syndrome Locus. <b>2018</b> , 29, 366-380	22

570	Tools to Measure Autophagy Using High Content Imaging and Analysis. 2018, 1683, 59-71	1
569	Genomes in Focus: Development and Applications of CRISPR-Cas9 Imaging Technologies. <b>2018</b> , 57, 4329-4337	' 46
568	Immunity to CRISPR Cas9 and Cas12a therapeutics. <b>2018</b> , 10, e1408	66
567	Studying Kidney Disease Using Tissue and Genome Engineering in Human Pluripotent Stem Cells. <b>2018</b> , 138, 48-59	8
566	Two-Color 810 nm STED Nanoscopy of Living Cells with Endogenous SNAP-Tagged Fusion Proteins. <b>2018</b> , 13, 475-480	42
565	Harnessing CRISPR/Cas systems for programmable transcriptional and post-transcriptional regulation. <b>2018</b> , 36, 295-310	60
564	SaCas9 Requires 5'-NNGRRT-3' PAM for Sufficient Cleavage and Possesses Higher Cleavage Activity than SpCas9 or FnCpf1 in Human Cells. <b>2018</b> , 13, e1700561	27
563	Second-Shell Basic Residues Expand the Two-Metal-Ion Architecture of DNA and RNA Processing Enzymes. <b>2018</b> , 26, 40-50.e2	21
562	Genome im Fokus: Entwicklung und Anwendungen von CRISPR-Cas9-Bildgebungstechnologien. <b>2018</b> , 130, 4412-4420	2
561	GenomverEderungenERISPR/Cas9 als Methode der Wahl oder Qual?. <b>2018</b> , 24, 701-703	1
560	Application of the CRISPR/Cas System for Generation of Pathogen-Resistant Plants. 2018, 83, 1552-1562	8
559	BECN1-knockout impairs tumor growth, migration and invasion by suppressing the cell cycle and partially suppressing the epithelial-mesenchymal transition of human triple-negative breast cancer cells. <b>2018</b> , 53, 1301-1312	6
558	History, Current State, and Emerging Applications of Industrial Biotechnology. <b>2020</b> , 173, 13-51	1
557	Identification of on-target mutagenesis during correction of a beta-thalassemia splice mutation in iPS cells with optimised CRISPR/Cas9-double nickase reveals potential safety concerns. <b>2018</b> , 2, 046103	11
556	Disruption of the gene in mice using CRISPR/Cas9 promotes body weight reduction and gastric tumorigenesis. <b>2018</b> , 34, 257-263	7
555	Bibliography. 425-441	
554	Live imaging and tracking of genome regions in CRISPR/dCas9 knock-in mice. <b>2018</b> , 19, 192	26
553	Repurposing CRISPR-Cas12b for mammalian genome engineering. <b>2018</b> , 4, 63	110

### (2018-2018)

552	Phosphate Lock Residues of Acidothermus cellulolyticus Cas9 Are Critical to Its Substrate Specificity. <b>2018</b> , 7, 2908-2917	3
551	Pinning beetles, biobanking futures: practices of archiving life in a time of extinction. <b>2018</b> , 37, 387-410	O
550	Multifactorial control of the expression of a CRISPR-Cas system by an extracytoplasmic function [anti-pair and a global regulatory complex. 2018, 46, 6726-6745]	9
549	Applications of CRISPR-Cas in Bioengineering, Biotechnology, and Translational Research. <b>2018</b> , 1, 379-404	7
548	New Developments in CRISPR Technology: Improvements in Specificity and Efficiency. 2017, 18, 1038-1054	9
547	Extensive CRISPR RNA modification reveals chemical compatibility and structure-activity relationships for Cas9 biochemical activity. <b>2019</b> , 47, 546-558	21
546	CRISPR-Cas9 ribonucleoprotein-mediated co-editing and counterselection in the rice blast fungus. <b>2018</b> , 8, 14355	81
545	Recent Biotechnological Advances in the Improvement of Cassava. 2018,	4
544	Fluorinated Acid-Labile Branched Hydroxyl-Rich Nanosystems for Flexible and Robust Delivery of Plasmids. <b>2018</b> , 14, e1803061	41
543	Cell type-specific expression profiling unravels the development and evolution of stinging cells in sea anemone. <b>2018</b> , 16, 108	30
542	In vivo epigenome editing and transcriptional modulation using CRISPR technology. <b>2018</b> , 27, 489-509	17
541	Converging pathways in neurodegeneration, from genetics to mechanisms. <b>2018</b> , 21, 1300-1309	183
540	Editing the genome of Aphanomyces invadans using CRISPR/Cas9. 2018, 11, 554	8
539	Viable Mice with Extensive Gene Humanization (25-kbp) Created Using Embryonic Stem Cell/Blastocyst and CRISPR/Zygote Injection Approaches. <b>2018</b> , 8, 15028	10
538	Molecular mechanisms of III-B CRISPR-Cas systems in archaea. <b>2018</b> , 2, 483-491	4
537	CRISPR/Cas9 System: A Bacterial Tailor for Genomic Engineering. <b>2018</b> , 2018, 3797214	12
536	CRISPR-Based Technologies: Impact of RNA-Targeting Systems. <b>2018</b> , 72, 404-412	80
535	Genome-wide CRISPR-Cas9 Interrogation of Splicing Networks Reveals a Mechanism for Recognition of Autism-Misregulated Neuronal Microexons. <b>2018</b> , 72, 510-524.e12	51

534	Gene drive inhibition by the anti-CRISPR proteins AcrIIA2 and AcrIIA4 in Saccharomyces cerevisiae. <b>2018</b> , 164, 464-474	63
533	Diverse target gene modifications in Plasmodium falciparum using Bxb1 integrase and an intronic attB. <b>2018</b> , 11, 548	
532	Systematic discovery of natural CRISPR-Cas12a inhibitors. <b>2018</b> , 362, 236-239	109
531	A Type III-B Cmr effector complex catalyzes the synthesis of cyclic oligoadenylate second messengers by cooperative substrate binding. <b>2018</b> , 46, 10319-10330	36
530	Genetic Renal Diseases: The Emerging Role of Zebrafish Models. 2018, 7,	23
529	Delivering CRISPR: a review of the challenges and approaches. <b>2018</b> , 25, 1234-1257	452
528	CircRNA accumulation: A new hallmark of aging?. <b>2018</b> , 173, 71-79	47
527	Systematic prediction of genes functionally linked to CRISPR-Cas systems by gene neighborhood analysis. <b>2018</b> , 115, E5307-E5316	80
526	CRISPR/Cas9 editing of carotenoid genes in tomato. <b>2018</b> , 27, 367-378	40
525	High-Level Precise Knockin of iPSCs by Simultaneous Reprogramming and Genome Editing of Human Peripheral Blood Mononuclear Cells. <b>2018</b> , 10, 1821-1834	11
524	Carry on editing. <b>2018</b> , 127, 23-31	8
523	Platforms for Investigating LncRNA Functions. <b>2018</b> , 23, 493-506	83
522	The role of neutrophils in the pathogenesis of Crohn's disease. <b>2018</b> , 48 Suppl 2, e12983	18
521	RNA-dependent RNA targeting by CRISPR-Cas9. <b>2018</b> , 7,	115
520	Myoediting: Toward Prevention of Muscular Dystrophy by Therapeutic Genome Editing. 2018, 98, 1205-1240	18
519	The Bump-and-Hole Tactic: Expanding the Scope of Chemical Genetics. <b>2018</b> , 25, 1171-1184	36
518	HIV-1 Employs Multiple Mechanisms To Resist Cas9/Single Guide RNA Targeting the Viral Primer Binding Site. <b>2018</b> , 92,	20
517	Strategies to combat antimicrobial resistance: anti-plasmid and plasmid curing. <b>2018</b> , 42, 781-804	73

### (2018-2018)

516	Neuro-Immuno-Gene- and Genome-Editing-Therapy for Alzheimer's Disease: Are We There Yet?. <b>2018</b> , 65, 321-344	12
515	RNA Binding and HEPN-Nuclease Activation Are Decoupled in CRISPR-Cas13a. <b>2018</b> , 24, 1025-1036	46
514	Targeted Genome Editing Using Nuclease-assisted Vector Integration. 237-248	
513	Inducible CRISPR-based Genome Editing for the Characterization of Cancer Genes. 337-357	
512	The Future of Cross-Linking and Immunoprecipitation (CLIP). <b>2018</b> , 10,	39
511	An enChIP system for the analysis of bacterial genome functions. <b>2018</b> , 11, 387	4
510	Genetics of Cardiovascular Disease: Fishing for Causality. <b>2018</b> , 5, 60	18
509	How can preclinical mouse models be used to gain insight into prefrontal cortex dysfunction in obsessive-compulsive disorder?. <b>2018</b> , 2, 2398212818783896	6
508	Versatile CAR T-cells for cancer immunotherapy. <b>2018</b> , 22, 73-80	13
507	Cross-Regulation between Bacteria and Phages at a Posttranscriptional Level. 2018, 6,	9
506	FlashFry: a fast and flexible tool for large-scale CRISPR target design. 2018, 16, 74	40
505	Genome Editing: Targeting Susceptibility Genes for Plant Disease Resistance. <b>2018</b> , 36, 898-906	124
504	CRISPR GENOME SURGERY IN THE RETINA IN LIGHT OF OFF-TARGETING. <b>2018</b> , 38, 1443-1455	9
503	Targeted Gene Knock Out Using Nuclease-Assisted Vector Integration: Hemi- and Homozygous Deletion of JAG1. <b>2018</b> , 1772, 233-248	3
502	Real-time observation of DNA target interrogation and product release by the RNA-guided endonuclease CRISPR Cpf1 (Cas12a). <b>2018</b> , 115, 5444-5449	86
501	Molecular organization of the type II-A CRISPR adaptation module and its interaction with Cas9 via Csn2. <b>2018</b> , 46, 9805-9815	14
500	Implementation of the CRISPR-Cas13a system in fission yeast and its repurposing for precise RNA editing. <b>2018</b> , 46, e90	31
499	Recent advances in activating silent biosynthetic gene clusters in bacteria. <b>2018</b> , 45, 156-163	54

498	Guide RNA selection for CRISPR-Cas9 transfections in Plasmodium falciparum. 2018, 48, 825-832	15
497	Synthetic switch-based baculovirus for transgene expression control and selective killing of hepatocellular carcinoma cells. <b>2018</b> , 46, e93	18
496	Employing CRISPR/Cas9 genome engineering to dissect the molecular requirements for mitosis. <b>2018</b> , 144, 75-105	0
495	Modular ssDNA binding and inhibition of telomerase activity by designer PPR proteins. <b>2018</b> , 9, 2212	10
494	CRISPR therapeutic tools for complex genetic disorders and cancer (Review). <b>2018</b> , 53, 443-468	21
493	A splice junction-targeted CRISPR approach (spJCRISPR) reveals human FOXO3B to be a protein-coding gene. <b>2018</b> , 673, 95-101	7
492	Enabling the Rise of a CRISPR World. 2018, 1, 205-208	18
491	Potentials of CRISPR in liver research and therapy. <b>2019</b> , 43, 5-11	3
490	Molecular Mechanisms of RNA Targeting by Cas13-containing Type VI CRISPR-Cas Systems. <b>2019</b> , 431, 66-87	126
489	Cyclic oligoadenylate signalling mediates Mycobacterium tuberculosis CRISPR defence. <b>2019</b> , 47, 9259-9270	24
488	CRISPR DNA elements controlling site-specific spacer integration and proper repeat length by a Type II CRISPR-Cas system. <b>2019</b> , 47, 8632-8648	12
487	Preface. <b>2019</b> , xxxv-xxxvi	1
486	Prospects for the Use of Genome-Editing Technology to Correct Neurodegenerative Diseases. <b>2019</b> , 9, 154-163	1
485	Conformational Dynamics and Cleavage Sites of Cas12a Are Modulated by Complementarity between crRNA and DNA. <b>2019</b> , 19, 492-503	15
484	Exploration of Plant-Microbe Interactions for Sustainable Agriculture in CRISPR Era. <b>2019</b> , 7,	52
483	Off-Target Editing by CRISPR-Guided DNA Base Editors. <b>2019</b> , 58, 3727-3734	21
483	Off-Target Editing by CRISPR-Guided DNA Base Editors. 2019, 58, 3727-3734  Learn from Your Elders: Developmental Biology Lessons to Guide Maturation of Stem Cell-Derived Cardiomyocytes. 2019, 40, 1367-1387	21

### (2019-2019)

480	Systematic Immunotherapy Target Discovery Using Genome-Scale In Vivo CRISPR Screens in CD8 T Cells. <i>Cell</i> , <b>2019</b> , 178, 1189-1204.e23	56.2	104
479	Quantifying the Potential for Future Gene Therapy to Lower Lifetime Risk of Polygenic Late-Onset Diseases. <b>2019</b> , 20,		2
478	The importance of long non-coding RNAs in neuropsychiatric disorders. <b>2019</b> , 70, 127-140		31
477	Single-Cell Editing: The CRISPR/Cas9 and Applications. <b>2019</b> , 397-415		О
476	Gene therapy for primary immunodeficiency. <b>2019</b> , 28, R15-R23		31
475	Target preference of Type III-A CRISPR-Cas complexes at the transcription bubble. <b>2019</b> , 10, 3001		22
474	Highly multiplex guide RNA expression units of CRISPR/Cas9 were completely stable using cosmid amplification in a novel polygonal structure. <b>2019</b> , 21, e3115		4
473	Bridged Nucleic Acids Reloaded. <b>2019</b> , 24,		15
472	Theoretical study of overstretching DNARNA hybrid duplex. <b>2019</b> , 28, 068701		1
471	CRISPR© as Gene Editing for Neurological Disease. <b>2019</b> , 365-376		О
470	Derived Polymorphic Amplified Cleaved Sequence (dPACS): A Novel PCR-RFLP Procedure for Detecting Known Single Nucleotide and Deletion-Insertion Polymorphisms. <b>2019</b> , 20,		8
469	Vector-related stratagems for enhanced monoclonal antibody production in mammalian cells. <b>2019</b> , 37, 107415		6
468	CRISPR Toolbox for Mammalian Cell Engineering. <b>2019</b> , 185-206		O
467	Programmable Inhibition and Detection of RNA Viruses Using Cas13. <b>2019</b> , 76, 826-837.e11		176
466	. 2019,		1
465	Using CRISPR/Cas9 to model human liver disease. <b>2019</b> , 1, 392-402		10
464	Microbial Genomics in Sustainable Agroecosystems. 2019,		1
463	Genetic Engineering as a Driver for Biotechnological Developments and Cloning Tools to Improve Industrial Microorganisms. <b>2019</b> , 273-288		

462	Multiplexed editing of a begomovirus genome restricts escape mutant formation and disease development. <b>2019</b> , 14, e0223765	20
461	Mechanistic Insights into the cis- and trans-Acting DNase Activities of Cas12a. <b>2019</b> , 73, 589-600.e4	121
460	CRISPR technologies for stem cell engineering and regenerative medicine. 2019, 37, 107447	34
459	Experimental models and tools to tackle glioblastoma. <b>2019</b> , 12,	46
458	Asymmetric Centromeres Differentially Coordinate with Mitotic Machinery to Ensure Biased Sister Chromatid Segregation in Germline Stem Cells. <b>2019</b> , 25, 666-681.e5	21
457	Characterization of distinct mutation patterns by CRISPR-Cas9 and CRISPR-Cpf1 genome editing systems. <b>2019</b> , 15, 383-389	O
456	Engineering of high-precision base editors for site-specific single nucleotide replacement. <b>2019</b> , 10, 439	79
455	Ethics of Human Genome Editing. <b>2019</b> , 70, 289-305	35
454	A Functional Mini-Integrase in a Two-Protein-type V-C CRISPR System. <b>2019</b> , 73, 727-737.e3	15
453	Next-Generation Sequencing and CRISPR/Cas13 Editing in Viroid Research and Molecular Diagnostics. <b>2019</b> , 11,	22
452	CRISPR: a new principle of genome engineering linked to conceptual shifts in evolutionary biology. <b>2019</b> , 34, 9	17
451	Generation of marker-free transgenic rice using CRISPR/Cas9 system controlled by floral specific promoters. <b>2019</b> , 46, 61-64	6
450	Agricultural Innovation and the Global Politics of Food Trade. <b>2019</b> , 114-121	1
449	CRISPR-Cas Genome Editing: Another Revolution in Molecular Biology. <b>2019</b> , 345-361	
448	An overview of designing and selection of sgRNAs for precise genome editing by the CRISPR-Cas9 system in plants. <b>2019</b> , 9, 223	18
447	Synthetic evolution. <b>2019</b> , 37, 730-743	36
446	Structural basis of Type IV CRISPR RNA biogenesis by a Cas6 endoribonuclease. <b>2019</b> , 16, 1438-1447	13
445	GalK limits type I-F CRISPR-Cas expression in a CRP-dependent manner. <b>2019</b> , 366,	3

444	Two HEPN domains dictate CRISPR RNA maturation and target cleavage in Cas13d. 2019, 10, 2544	32
443	Structural Basis for the Inhibition of CRISPR-Cas12a by Anti-CRISPR Proteins. <b>2019</b> , 25, 815-826.e4	35
442	CRISPR technology to combat plant RNA viruses: A theoretical model for Potato virus Y (PVY) resistance. <b>2019</b> , 133, 103551	6
441	Live-Animal Epigenome Editing: Convergence of Novel Techniques. <b>2019</b> , 35, 527-541	12
440	A piggyBac-based toolkit for inducible genome editing in mammalian cells. <b>2019</b> , 25, 1047-1058	7
439	Outcomes and characterization of chromosomal self-targeting by native CRISPR-Cas systems in Streptococcus thermophilus. <b>2019</b> , 366,	20
438	Regulation of cyclic oligoadenylate synthesis by the Cas10-Csm complex. <b>2019</b> , 25, 948-962	21
437	Cas9-NG Greatly Expands the Targeting Scope of the Genome-Editing Toolkit by Recognizing NG and Other Atypical PAMs in Rice. <b>2019</b> , 12, 1015-1026	78
436	CasX: a new and small CRISPR gene-editing protein. <b>2019</b> , 29, 345-346	12
435	Genome Editing for Duchenne Muscular Dystrophy. <b>2019</b> , 383-403	1
434	Grand Research Challenges for Sustainable Industrial Biotechnology. <b>2019</b> , 37, 1042-1050	53
433	Unified energetics analysis unravels SpCas9 cleavage activity for optimal gRNA design. <b>2019</b> , 116, 8693-8698	24
432	Applications of CRISPR systems in respiratory health: Entering a new 'red pen' era in genome editing. <b>2019</b> , 24, 628-637	6
431	Genome editing: A perspective on the application of CRISPR/Cas9 to study human diseases (Review). <b>2019</b> , 43, 1559-1574	43
430	A guide for drug inducible genome editing with HIT systems. <b>2019</b> , 621, 53-68	
429	Evasion of Pre-Existing Immunity to Cas9: a Prerequisite for Successful Genome Editing In Vivo?. <b>2019</b> , 6, 127-133	9
428	CRISPR-Cas: Converting A Bacterial Defence Mechanism into A State-of-the-Art Genetic Manipulation Tool. <b>2019</b> , 8,	20
427	CRISPR Gene Editing. <b>2019</b> ,	4

426	Conditional Gene Knockout in Human Cells with Inducible CRISPR/Cas9. <b>2019</b> , 1961, 185-209	1
425	Origins and evolution of CRISPR-Cas systems. <b>2019</b> , 374, 20180087	126
424	Genetic Engineering for Disease Resistance in Plants: Recent Progress and Future Perspectives. <b>2019</b> , 180, 26-38	98
423	CRISPR-Cas based targeting of host and viral genes as an antiviral strategy. <b>2019</b> , 96, 53-64	10
422	Primed adaptation tolerates extensive structural and size variations of the CRISPR RNA guide in Haloarcula hispanica. <b>2019</b> , 47, 5880-5891	6
421	Advancements and Obstacles of CRISPR-Cas9 Technology in Translational Research. <b>2019</b> , 13, 359-370	48
420	Increasing the specificity of CRISPR systems with engineered RNA secondary structures. <b>2019</b> , 37, 657-666	156
419	Efficient Human Genome Editing Using SaCas9 Ribonucleoprotein Complexes. <b>2019</b> , 14, e1800689	13
418	Broad-spectrum enzymatic inhibition of CRISPR-Cas12a. <b>2019</b> , 26, 315-321	63
417	Enzymatic anti-CRISPRs improve the bacteriophage arsenal. <b>2019</b> , 26, 250-251	5
416	Multiplexed and tunable transcriptional activation by promoter insertion using nuclease-assisted vector integration. <b>2019</b> , 47, e67	7
415	Butanol production by Clostridium. <b>2019</b> , 35-77	13
414	A pipeline for rapidly generating genetically engineered mouse models of pancreatic cancer using in vivo CRISPR-Cas9-mediated somatic recombination. <b>2019</b> , 99, 1233-1244	19
413	Engineered CRISPR-Cas12a variants with increased activities and improved targeting ranges for gene, epigenetic and base editing. <b>2019</b> , 37, 276-282	235
412	A D desaturase (SlitDes11) is associated with the biosynthesis of ester sex pheromone components in Spodoptera litura. <b>2019</b> , 156, 152-159	5
411	Characterization and Evaluation of OsLCT1 and OsNramp5 Mutants Generated Through CRISPR/Cas9-Mediated Mutagenesis for Breeding Low Cd Rice. <b>2019</b> , 26, 88-97	35
410	Modulating CRISPR gene drive activity through nucleocytoplasmic localization of Cas9 in. <b>2019</b> , 6, 2	5
409	. 2019,	1

408	Chemogenetic interactions in human cancer cells. <b>2019</b> , 17, 1318-1325	3
407	Biomimetic Mineralization-Based CRISPR/Cas9 Ribonucleoprotein Nanoparticles for Gene Editing. <b>2019</b> , 11, 47762-47770	6
406	Virus-borne mini-CRISPR arrays are involved in interviral conflicts. <b>2019</b> , 10, 5204	27
405	Future Preventive Gene Therapy of Polygenic Diseases from a Population Genetics Perspective. <b>2019</b> , 20,	1
404	Upgrading of efficient and scalable CRISPR-Cas-mediated technology for genetic engineering in thermophilic fungus. <b>2019</b> , 12, 293	16
403	CRISPR-Cas3 induces broad and unidirectional genome editing in human cells. <b>2019</b> , 10, 5302	66
402	Understanding CRISPR/Cas9: A Magnificent Tool for Plant Genome Editing. 2019,	1
401	CRISPR-Cas: Complex Functional Networks and Multiple Roles beyond Adaptive Immunity. <b>2019</b> , 431, 3-20	41
400	Synthetic switch to minimize CRISPR off-target effects by self-restricting Cas9 transcription and translation. <b>2019</b> , 47, e13	39
399	Pharmacology of PCSK9 Inhibitors: Current Status and Future Perspectives. <b>2018</b> , 24, 3622-3633	6
398	Recent advances in structural studies of the CRISPR-Cas-mediated genome editing tools. <b>2019</b> , 6, 438-451	7
397	CRISPR/Cas9-Based Positive Screens for Cancer-Related Traits. <b>2019</b> , 1907, 137-144	3
396	Exploring the Catalytic Mechanism of Cas9 Using Information Inferred from Endonuclease VII. <b>2019</b> , 9, 1329-1336	17
395	Clinical applications of CRISPR-based genome editing and diagnostics. <b>2019</b> , 59, 1389-1399	23
394	Approaches to treat immune hot, altered and cold tumours with combination immunotherapies. <b>2019</b> , 18, 197-218	981
393	The Mechanical Properties of RNA-DNA Hybrid Duplex Stretched by Magnetic Tweezers. <b>2019</b> , 116, 196-204	23
392	CRISPR/Cas Systems towards Next-Generation Biosensing. <b>2019</b> , 37, 730-743	320
391	CRISPR-Cas9 a boon or bane: the bumpy road ahead to cancer therapeutics. <b>2019</b> , 19, 12	33

390	Optimization of T-DNA architecture for Cas9-mediated mutagenesis in Arabidopsis. <b>2019</b> , 14, e0204778	52
389	Current progress in CRISPR-based diagnostic platforms. <b>2019</b> , 120, 2721-2725	36
388	Current situation of biofuel production and its enhancement by CRISPR/Cas9-mediated genome engineering of microbial cells. <b>2019</b> , 219, 1-11	20
387	Brain Tumor Stem Cells. <b>2019</b> ,	1
386	Pooled Lentiviral CRISPR-Cas9 Screens for Functional Genomics in Mammalian Cells. <b>2019</b> , 1869, 169-188	21
385	Cancer Driver Genes. 2019,	1
384	Chemical transformation mediated CRISPR/Cas9 genome editing in Escherichia coli. <b>2019</b> , 41, 293-303	7
383	DNA methylation correlates of PTSD: Recent findings and technical challenges. <b>2019</b> , 90, 223-234	15
382	Bait-and-Switch Supramolecular Strategy To Generate Noncationic RNA-Polymer Complexes for RNA Delivery. <b>2019</b> , 20, 435-442	21
381	Bibliography. <b>2019</b> , 497-718	1
380	Characterization of CRISPR-Cas systems in the Ralstonia solanacearum species complex. <b>2019</b> , 20, 223-239	5
379	Tolerance of Sulfolobus SMV1 virus to the immunity of I-A and III-B CRISPR-Cas systems in Sulfolobus islandicus. <b>2019</b> , 16, 549-556	12
378	dCas9-Based Scn1a Gene Activation Restores Inhibitory Interneuron Excitability and Attenuates Seizures in Dravet Syndrome Mice. <b>2020</b> , 28, 235-253	74
377	Genome editing in animals: an overview. <b>2020</b> , 75-104	1
376	Applications of genome editing in farm animals. <b>2020</b> , 131-149	3
375	Prospects for potato genome editing to engineer resistance against viruses and cold-induced sweetening. <b>2020</b> , 11, 185-205	7
374	Oxidative DNA Cleavage with Clip-Phenanthroline Triplex-Forming Oligonucleotide Hybrids. <b>2020</b> , 21, 991-1000	7
373	Bone morphogenetic protein 1 cleaves the linker region between ligand-binding repeats 4 and 5 of the LDL receptor non-functional. <b>2020</b> , 29, 1229-1238	2

### (2020-2020)

372	Structure and Mechanism of a Cyclic Trinucleotide-Activated Bacterial Endonuclease Mediating Bacteriophage Immunity. <b>2020</b> , 77, 723-733.e6	56
371	Metabolomics should be deployed in the identification and characterization of gene-edited crops. <b>2020</b> , 102, 897-902	24
370	Engineering a CRISPR Interference System To Repress a Class 1 Integron in Escherichia coli. <b>2020</b> , 64,	6
369	Monitoring of Lactobacillus sanfranciscensis strains during wheat and rye sourdough fermentations by CRISPR locus length polymorphism PCR. <b>2020</b> , 316, 108475	9
368	Evolutionary classification of CRISPR-Cas systems: a burst of class 2 and derived variants. <b>2020</b> , 18, 67-83	545
367	Absence of XRCC4 and its paralogs in human cells reveal differences in outcomes for DNA repair and V(D)J recombination. <b>2020</b> , 85, 102738	3
366	Anti-CRISPR proteins targeting the CRISPR-Cas system enrich the toolkit for genetic engineering. <b>2020</b> , 287, 626-644	12
365	The interaction of phages and bacteria: the co-evolutionary arms race. <b>2020</b> , 40, 119-137	21
364	DNA and RNA editing without sequence limitation using the flap endonuclease 1 guided by hairpin DNA probes. <b>2020</b> , 48, e117	2
363	All living cells are cognitive. <b>2021</b> , 564, 134-149	4
362	Multiplex CRISPRi System Enables the Study of Stage-Specific Biofilm Genetic Requirements in Enterococcus faecalis. <b>2020</b> , 11,	5
361	Recent advances in the nucleic acid-based diagnostic tool for coronavirus. <b>2020</b> , 47, 9033-9041	10
360	CRISPR/Cas9-Mediated Gene Editing in Grain Crops. <b>2020</b> ,	O
359	CRISPR©as immune systems and genome engineering. <b>2020</b> , 157-177	
358	Application of CRISPR/Cas9 in Understanding Avian Viruses and Developing Poultry Vaccines. <b>2020</b> , 10, 581504	3
357	Experimental Models to Study Autism Spectrum Disorders: hiPSCs, Rodents and Zebrafish. <b>2020</b> , 11,	6
356	Engineering crops of the future: CRISPR approaches to develop climate-resilient and disease-resistant plants. <b>2020</b> , 21, 289	31
355	Opportunities and Challenges in Studies of Host-Pathogen Interactions and Management of in Tomatoes. <b>2020</b> , 9,	6

354	Spatial and Temporal Control of CRISPR-Cas9-Mediated Gene Editing Delivered via a Light-Triggered Liposome System. <b>2020</b> , 12, 52433-52444	12
353	Functional Constitutional Dynamic Networks Revealing Evolutionary Reproduction/Variation/Selection Principles. <b>2020</b> , 142, 14437-14442	4
352	CRISPR-Cas9 System for Plant Genome Editing: Current Approaches and Emerging Developments. <b>2020</b> , 10, 1033	24
351	Machine-learning approach expands the repertoire of anti-CRISPR protein families. <b>2020</b> , 11, 3784	21
350	The Novel Insight of SARS-CoV-2 Molecular Biology and Pathogenesis and Therapeutic Options. <b>2020</b> , 39, 1741-1753	23
349	"Tomorrow Never Dies": Recent Advances in Diagnosis, Treatment, and Prevention Modalities against Coronavirus (COVID-19) amid Controversies. <b>2020</b> , 8,	12
348	Unveiling Human Non-Random Genome Editing Mechanisms Activated in Response to Chronic Environmental Changes: I. Where Might These Mechanisms Come from and What Might They Have Led To?. <b>2020</b> , 9,	5
347	Types I and V Anti-CRISPR Proteins: From Phage Defense to Eukaryotic Synthetic Gene Circuits. <b>2020</b> , 8, 575393	1
346	Potential Diagnostic Systems for Coronavirus Detection: a Critical Review. <b>2020</b> , 22, 21	9
2.45	CDISDD Cast 2a classes DNA C quadruplayes 2020 F6 12526 12520	
345	CRISPR-Cas12a -cleaves DNA G-quadruplexes. <b>2020</b> , 56, 12526-12529	11
344	The later stages of viral infection: An undiscovered country of host dependency factors. <b>2020</b> , 16, e1008777	1
		1
344	The later stages of viral infection: An undiscovered country of host dependency factors. <b>2020</b> , 16, e1008777	1
344	The later stages of viral infection: An undiscovered country of host dependency factors. <b>2020</b> , 16, e1008777  Mechanisms for target recognition and cleavage by the Cas12i RNA-guided endonuclease. <b>2020</b> , 27, 1069-107	1
344 343 342	The later stages of viral infection: An undiscovered country of host dependency factors. <b>2020</b> , 16, e1008777  Mechanisms for target recognition and cleavage by the Cas12i RNA-guided endonuclease. <b>2020</b> , 27, 1069-107  A CRISPR-based method for testing the essentiality of a gene. <b>2020</b> , 10, 14779	1 68 6
344 343 342 341	The later stages of viral infection: An undiscovered country of host dependency factors. 2020, 16, e1008777  Mechanisms for target recognition and cleavage by the Cas12i RNA-guided endonuclease. 2020, 27, 1069-107  A CRISPR-based method for testing the essentiality of a gene. 2020, 10, 14779  CRISPR-Cas13d for Gene Knockdown and Engineering of CHO Cells. 2020, 9, 2808-2818  CRISPR/Cas with ribonucleoprotein complexes and transiently selected telomere vectors allows	1 68 6
344 343 342 341 340	The later stages of viral infection: An undiscovered country of host dependency factors. 2020, 16, e1008777  Mechanisms for target recognition and cleavage by the Cas12i RNA-guided endonuclease. 2020, 27, 1069-107  A CRISPR-based method for testing the essentiality of a gene. 2020, 10, 14779  CRISPR-Cas13d for Gene Knockdown and Engineering of CHO Cells. 2020, 9, 2808-2818  CRISPR/Cas with ribonucleoprotein complexes and transiently selected telomere vectors allows highly efficient marker-free and multiple genome editing in Botrytis cinerea. 2020, 16, e1008326	1 68 6 7

336	Gene editing and RNAi approaches for COVID-19 diagnostics and therapeutics. <b>2021</b> , 28, 290-305	11
335	Functional Genomics in Pancreatic ICells: Recent Advances in Gene Deletion and Genome Editing Technologies for Diabetes Research. <b>2020</b> , 11, 576632	7
334	Precise CRISPR-Cas9 Mediated Genome Editing in Super Basmati Rice for Resistance Against Bacterial Blight by Targeting the Major Susceptibility Gene. <b>2020</b> , 11, 575	32
333	Protein Engineering of DNA-Dependent Enzymes. <b>2020</b> , 1241, 19-33	0
332	Systematic mapping of genetic interactions for de novo fatty acid synthesis identifies C12orf49 as a regulator of lipid metabolism. <b>2020</b> , 2, 499-513	22
331	Challenges and Advances in Genome Editing Technologies in. <b>2020</b> , 10,	15
330	Characterization of a novel type III CRISPR-Cas effector provides new insights into the allosteric activation and suppression of the Cas10 DNase. <b>2020</b> , 6, 29	7
329	Design of a surrogate Anticalin protein directed against CD98hc for preclinical studies in mice. <b>2020</b> , 29, 1774-1783	3
328	Description of CRISPR/Cas9 development and its prospect in hepatocellular carcinoma treatment. <b>2020</b> , 39, 97	7
327	INTRODUCING THE BRAVE NEW CRISPR WORLD. <b>2020</b> , 55, 421-429	1
326	Una alarma nada excepcional: CRISPR/Cas9 y la edicifi de la lfiea germinal en seres humanos. <b>2020</b> , 6, 17-36	
325	Single-Cell Genomics of Novel Actinobacteria With the Wood-Ljungdahl Pathway Discovered in a Serpentinizing System. <b>2020</b> , 11, 1031	9
324	CRISPR-Cas system-a promising tool for engineering resistance to plant viruses. <b>2020</b> , 649-655	
323	Genetic interaction mapping and exon-resolution functional genomics with a hybrid Cas9-Cas12a platform. <b>2020</b> , 38, 638-648	54
322	Anti-CRISPRs: Protein Inhibitors of CRISPR-Cas Systems. <b>2020</b> , 89, 309-332	37
321	Spatiotemporal Control of CRISPR/Cas9 Function in Cells and Zebrafish using Light-Activated Guide	46
	RNA. <b>2020</b> , 59, 8998-9003	
320	Development and challenges of using CRISPR-Cas9 system in mammalians. <b>2020</b> , 83-93	1

318	Evolution and molecular mechanism of CRISPR/Cas9 systems. <b>2020</b> , 15-25	1
317	A Tale of Two Moieties: Rapidly Evolving CRISPR/Cas-Based Genome Editing. 2020, 45, 874-888	11
316	A scoutRNA Is Required for Some Type V CRISPR-Cas Systems. <b>2020</b> , 79, 416-424.e5	24
315	Enzymatic potential for the valorization of agro-industrial by-products. <b>2020</b> , 42, 1799-1827	13
314	CRISPR-Cas9/CRISPRi tools for cell factory construction in E. coli. <b>2020</b> , 36, 96	4
313	Implications of CRISPR/Cas9 system in Hypertension and its related diseases. <b>2021</b> , 35, 642-644	1
312	CRISPR-Cas12a: Functional overview and applications. <b>2020</b> , 43, 8-17	46
311	Human Papillomavirus E6 and E7: The Cervical Cancer Hallmarks and Targets for Therapy. <b>2019</b> , 10, 3116	92
310	CRISPR/Cas9-mediated genome editing: From basic research to translational medicine. <b>2020</b> , 24, 3766-3778	32
309	Specificity profiling of CRISPR system reveals greatly enhanced off-target gene editing. <b>2020</b> , 10, 2269	18
308	Peptide Nucleic Acids. <b>2020</b> ,	1
307	Recent advances and perspectives of nucleic acid detection for coronavirus. <b>2020</b> , 10, 97-101	257
306	Non-cationic Material Design for Nucleic Acid Delivery. <b>2020</b> , 3, 1900206	20
305	Ex vivo cell-based CRISPR/Cas9 genome editing for therapeutic applications. <b>2020</b> , 234, 119711	24
304	How are genes modified? Crossbreeding, mutagenesis, and CRISPR-Cas9. <b>2020</b> , 39-54	3
303	CRISPR/Cas9 gene editing in a chicken model: current approaches and applications. <b>2020</b> , 61, 221-229	16
302	Spatiotemporal Control of CRISPR/Cas9 Function in Cells and Zebrafish using Light-Activated Guide RNA. <b>2020</b> , 132, 9083-9088	12
301	Biolistic DNA Delivery in Plants. <b>2020</b> ,	2

300 Gene therapy. **2020**, 493-518

299	Genome-scale CRISPR activation screening identifies a role of LRP8 in Sorafenib resistance in Hepatocellular carcinoma. <b>2020</b> , 526, 1170-1176	5
298	Second Generation Genome Editing Technologies in Drug Discovery. <b>2020</b> , 213-242	
297	Therapeutic genome editing in cardiovascular diseases. <b>2021</b> , 168, 147-157	6
296	One Cut to Change Them All: CRISPR/Cas, a Groundbreaking Tool for Genome Editing in and Other Fungal Plant Pathogens. <b>2021</b> , 111, 474-477	3
295	Targeted inactivation of the AGO1 homeologues of Nicotiana benthamiana reveals their distinct roles in development and antiviral defence. <b>2021</b> , 229, 1289-1297	1
294	Current methods for diagnosis of human coronaviruses: pros and cons. <b>2021</b> , 413, 2311-2330	24
293	COVID-19: Virology, biology and novel laboratory diagnosis. <b>2021</b> , 23, e3303	71
292	Ravaging SARS-CoV-2: rudimentary diagnosis and puzzling immunological responses. <b>2021</b> , 37, 207-217	2
291	CRISPR Guide RNA Design. <b>2021</b> ,	1
290	RNAi-mediated stable silencing of TaCSN5 confers broad-spectrum resistance to Puccinia striiformis f. sp. tritici. <b>2021</b> , 22, 410-421	5
289	Gene editing in filamentous fungi and oomycetes using CRISPR-Cas technology. <b>2021</b> , 723-753	1
288	Plant Viruses: From Targets to Tools for CRISPR. <b>2021</b> , 13,	8
287	Heterologous production of cyanobacterial compounds. <b>2021</b> , 48,	4
286	CRISPR/Cas System: An Introduction. <b>2021</b> , 1-35	2
285	Targeting alternative splicing by RNAi: from the differential impact on splice variants to triggering artificial pre-mRNA splicing. <b>2021</b> , 49, 1133-1151	4
284	CRISPR/Cas-based Diagnostics and Gene Therapy. 2021,	1
283	Nanoelectrochemical Study of Molecular Transport through the Nuclear Pore Complex. <b>2021</b> , 21, 1430-1441	1

282 Genomic Designing for Biotic Stress Resistant Rice. **2021**, 1-58

- 0 -	MSCV based selective electrical electrical events and the electrical electric	
281	MSCV-based retroviral plasmids expressing 3xFLAG-Sp-dCas9 for enChIP analysis. <b>2021</b> , 6, bpab013	
280	CRISPR-Cas9: A method for establishing rat models of drug metabolism and pharmacokinetics. <b>2021</b> , 11, 2973-2982	6
279	Optimization of CRISPR/Cas System for Improving Genome Editing Efficiency in. <b>2020</b> , 11, 625862	4
278	Approach for in vivo delivery of CRISPR/Cas system: a recent update and future prospect. <b>2021</b> , 78, 2683-27	08 14
277	Nonspecific interactions between SpCas9 and dsDNA sites located downstream of the PAM mediate facilitated diffusion to accelerate target search. <b>2021</b> , 12, 12776-12784	3
276	Screening of Microbial Enzymes and Their Potential Applications in the Bioremediation Process. <b>2021</b> , 359-378	2
275	Application of CRISPR/Cas system for genome editing in cotton. <b>2021</b> , 277-301	1
274	Mechanisms of spacer acquisition by sequential assembly of the adaptation module in Synechocystis. <b>2021</b> , 49, 2973-2984	2
273	Future Approaches for Treating Chronic Myeloid Leukemia: CRISPR Therapy. <b>2021</b> , 10,	5
272	Development of CRISPR technology for precise single-base genome editing: a brief review. <b>2021</b> , 54, 98-105	4
271	Versatile CRISPR/Cas9 Systems for Genome Editing in. <b>2021</b> , 7,	2
270	CRISPR perturbations at many coronary artery disease loci impair vascular endothelial cell functions.	1
269	Construction of adenovirus vectors simultaneously expressing four multiplex, double-nicking guide RNAs of CRISPR/Cas9 and in vivo genome editing. <b>2021</b> , 11, 3961	5
268	Simple and reliable detection of CRISPR-induced on-target effects by qgPCR and SNP genotyping. <b>2021</b> , 16, 1714-1739	6
267	A comprehensive review on genetically modified fish: key techniques, applications and future prospects. <b>2021</b> , 13, 1635	3
266	Structural basis for self-cleavage prevention by tag:anti-tag pairing complementarity in type VI Cas13 CRISPR systems. <b>2021</b> , 81, 1100-1115.e5	6
265	Targeted epigenetic repression by CRISPR/dSaCas9 suppresses pathogenic expression in FSHD. <b>2021</b> , 20, 298-311	7

### (2021-2021)

264	Regulatory status of genome-editing plants: perspectives for Russian Federation. <b>2021</b> , 19, 89-101	1
263	Therapeutic RNA Delivery for COVID and Other Diseases. <b>2021</b> , 10, e2002022	11
262	CRISPR-Cas12a System for Biosensing and Gene Regulation. <b>2021</b> , 16, 857-867	4
261	CRISPR systems: Novel approaches for detection and combating COVID-19. <b>2021</b> , 294, 198282	14
260	CRISPR-Cas systems: From gene scissors to programmable biosensors. <b>2021</b> , 137, 116210	19
259	Frontiers of CRISPR-Cas9 for Cancer Research and Therapy. <b>2021</b> , 000, 000-000	1
258	Muscular dystrophy: Experimental animal models and therapeutic approaches (Review). 2021, 21, 610	1
257	CRISPR-based DNA and RNA detection with liquid-liquid phase separation. <b>2021</b> , 120, 1198-1209	10
256	A programmable system to methylate and demethylate m6A on specific mRNAs.	
255	CRISPR: A new paradigm of theranostics. <b>2021</b> , 33, 102350	3
<sup>255</sup>	CRISPR: A new paradigm of theranostics. <b>2021</b> , 33, 102350  Biology transcends the limits of computation. <b>2021</b> , 165, 88-101	1
254	Biology transcends the limits of computation. <b>2021</b> , 165, 88-101	1
<sup>254</sup>	Biology transcends the limits of computation. <b>2021</b> , 165, 88-101  Advances in the Integration of Nucleic Acid Nanotechnology into CRISPR-Cas System. <b>2021</b> , 5, 130	1
254 253 252	Biology transcends the limits of computation. <b>2021</b> , 165, 88-101  Advances in the Integration of Nucleic Acid Nanotechnology into CRISPR-Cas System. <b>2021</b> , 5, 130  Sequencing Provides Insights Into the Pathogenicity of Foodborne. <b>2021</b> , 11, 652957	1 4
254 253 252 251	Biology transcends the limits of computation. 2021, 165, 88-101  Advances in the Integration of Nucleic Acid Nanotechnology into CRISPR-Cas System. 2021, 5, 130  Sequencing Provides Insights Into the Pathogenicity of Foodborne. 2021, 11, 652957  History of plant genetic mutations — human influences. 2021, 57, 554  Functional Features and Current Applications of the RNA-Targeting Type VI CRISPR-Cas Systems.	1 4 1
254 253 252 251 250	Biology transcends the limits of computation. 2021, 165, 88-101  Advances in the Integration of Nucleic Acid Nanotechnology into CRISPR-Cas System. 2021, 5, 130  Sequencing Provides Insights Into the Pathogenicity of Foodborne. 2021, 11, 652957  History of plant genetic mutations — human influences. 2021, 57, 554  Functional Features and Current Applications of the RNA-Targeting Type VI CRISPR-Cas Systems. 2021, 8, 2004685	1 4 1 0

246	COVID-19 rhapsody: Rage towards advanced diagnostics and therapeutic strategy. <b>2021</b> , 11, 529-540	1
245	Exploiting DNA Endonucleases to Advance Mechanisms of DNA Repair. <b>2021</b> , 10,	1
244	Application of CRISPR-Cas9 gene editing for congenital heart disease. <b>2021</b> , 64, 269-279	4
243	Brassinosteroids as a multidimensional regulator of plant physiological and molecular responses under various environmental stresses. <b>2021</b> , 28, 44768-44779	7
242	A type III-A CRISPR-Cas system mediates co-transcriptional DNA cleavage at the transcriptional bubbles in close proximity to active effectors. <b>2021</b> , 49, 7628-7643	3
241	Applications of CRISPR-Cas9 as an Advanced Genome Editing System in Life Sciences. <b>2021</b> , 10, 14	8
240	Long non-coding RNAs: Emerging roles in periodontitis. <b>2021</b> , 56, 848-862	2
239	DNA Repair Pathway Choices in CRISPR-Cas9-Mediated Genome Editing. <b>2021</b> , 37, 639-656	18
238	Recent advancements in CRISPR-Cas toolbox for imaging applications. <b>2021</b> , 1-24	3
237	Disintegration promotes protospacer integration by the Cas1-Cas2 complex. <b>2021</b> , 10,	2
236	The extracellular region of bovine milk butyrophilin exhibits closer structural similarity to human myelin oligodendrocyte glycoprotein than to immunological BTN family receptors. <b>2021</b> , 402, 1187-1202	O
235	Targeted integration into pseudo attP sites of CHO cells using CRISPR/Cas9. 2021, 337, 1-7	O
234	Protein or ribonucleoprotein-mediated blocking of recombinase polymerase amplification enables the discrimination of nucleotide and epigenetic differences between cell populations. <b>2021</b> , 4, 988	0
233	Duchenne muscular dystrophy cell culture models created by CRISPR/Cas9 gene editing and their application in drug screening. <b>2021</b> , 11, 18188	O
232	CRISPR-Cas9 genome engineering: trends in medicine and health. <b>2021</b> ,	1
231	From Descriptive to Functional Genomics of Leukemias Focusing on Genome Engineering Techniques. <b>2021</b> , 22,	2
230	Large chromosomal segment deletions by CRISPR/LbCpf1-mediated multiplex gene editing in soybean. <b>2021</b> , 63, 1620-1631	8
229	A DREaMR system to simplify combining mutations with rescue transgenes in Aedes aegypti. <b>2021</b> , 219,	2

228	Optical Control of Base Editing and Transcription through Light-Activated Guide RNA.	1
227	Programmable RNA targeting with the single-protein CRISPR effector Cas7-11. <b>2021</b> , 597, 720-725	27
226	Advanced mesoporous silica nanocarriers in cancer theranostics and gene editing applications. <b>2021</b> , 337, 193-211	9
225	Genetical engineering for NK and T cell immunotherapy with CRISPR/Cas9 technology: Implications and challenges. <b>2021</b> , 369, 104436	1
224	Non-coding Natural Antisense Transcripts: Analysis and Application. 2021, 340, 75-101	4
223	The evolution and history of gene editing technologies. <b>2021</b> , 178, 1-62	2
222	Programming Molecular Circuitry and Intracellular Computing with Framework Nucleic Acids. <b>2021</b> , 77-103	
221	A CRISPR-Cas9-integrase complex generates precise DNA fragments for genome integration. <b>2021</b> , 49, 3546-3556	3
220	enAsCas12a Enables CRISPR-Directed Evolution to Screen for Functional Drug Resistance Mutations in Sequences Inaccessible to SpCas9. <b>2021</b> , 29, 208-224	4
219	Predicting Targets for Genome Editing with Long Short Term Memory Networks. <b>2021</b> , 657-670	O
218	Nucleobase-Modified Triplex-Forming Peptide Nucleic Acids for Sequence-Specific Recognition of Double-Stranded RNA. <b>2020</b> , 2105, 157-172	6
217	CRISPR-Cas RNA Scaffolds for Transcriptional Programming in Yeast. <b>2017</b> , 1632, 341-357	2
216	Neuronal Genome Plasticity: Retrotransposons, Environment and Disease. <b>2017</b> , 107-125	2
215	CRISPR-Cas systems: Overview, innovations and applications in human disease research and gene therapy. <b>2020</b> , 18, 2401-2415	25
214	CasX enzymes comprise a distinct family of RNA-guided genome editors. <b>2019</b> , 566, 218-223	203
213	Precision medicine in the era of CRISPR-Cas9: evidence from Bosnia and Herzegovina. 2019, 5,	1
212	Analysis of CRISPR gene drive design in budding yeast. <b>2019</b> , 1, e000059	3
211	C2c2 is a single-component programmable RNA-guided RNA-targeting CRISPR effector.	10

210	Genome-wide specificity profiles of CRISPR-Cas Cpf1 nucleases in human cells.	2
209	A conformational checkpoint between DNA binding and cleavage by CRISPR-Cas9.	7
208	The CRISPR spacer space is dominated by sequences from the species-specific mobilome.	4
207	Mappingin vivogenetic interactomics through Cpf1 crRNA array screening.	1
206	Conformational dynamics of Cas9 governing DNA cleavage revealed by single molecule FRET.	2
205	FlashFry: a fast and flexible tool for large-scale CRISPR target design.	2
204	Characterization of a novel type III CRISPR-Cas effector provides new insights into the allosteric activation and suppression of the Cas10 DNase.	1
203	CRISPR/Cas with ribonucleoprotein complexes and transiently selected telomere vectors allows highly efficient marker-free and multiple genome editing in Botrytis cinerea.	2
202	Vast diversity of anti-CRISPR proteins predicted with a machine-learning approach.	3
201	Characterization of Primed Adaptation in the Escherichia coli type I-E CRISPR-Cas System.	2
200	Real-time observation of DNA target interrogation and product release by the RNA-guided endonuclease CRISPR Cpf1.	5
199	Mechanistic Insights into theCis-andTrans-acting Deoxyribonuclease Activities of Cas12a.	3
198	Quantifying the potential for future gene therapy to lower lifetime risk of polygenic late-onset diseases.	1
197	A piggyBac-based toolkit for inducible genome editing in mammalian cells.	1
196	CRISPR-based DNA and RNA detection with liquid-liquid phase separation.	4
195	Cas12a trans-cleavage can be modulated in vitro and is active on ssDNA, dsDNA, and RNA.	16
194	Selective Prespacer Processing Ensures Precise CRISPR-Cas Adaptation.	2
193	Structure and mechanism of a cyclic trinucleotide-activated bacterial endonuclease mediating bacteriophage immunity.	3

192	Streptococcus pyogenes Cas9 displays biased one-dimensional diffusion on dsDNA to search for a target.	1
191	Cross-Regulation between Bacteria and Phages at a Posttranscriptional Level. 499-514	1
190	A CRISPR-Assisted Nonhomologous End-Joining Strategy for Efficient Genome Editing in Mycobacterium tuberculosis. <b>2020</b> , 11,	14
189	The genome editing revolution: review. <b>2020</b> , 18, 68	30
188	Plasticity of the genome leading to gene copy number variations and drug resistance. <b>2016</b> , 5, 2350	74
187	Making sense of the cause of Crohn⊞ ha new look at an old disease. <b>2016</b> , 5, 2510	10
186	RNA and DNA Targeting by a Reconstituted Thermus thermophilus Type III-A CRISPR-Cas System. <b>2017</b> , 12, e0170552	60
185	DNA recognition by an RNA-guided bacterial Argonaute. <b>2017</b> , 12, e0177097	24
184	Lissencephaly-1 dependent axonal retrograde transport of L1-type CAM Neuroglian in the adult drosophila central nervous system. <b>2017</b> , 12, e0183605	5
183	Insights on Engineered Microbes in Sustainable Agriculture: Biotechnological Developments and Future Prospects. <b>2020</b> , 21, 321-333	7
182	Generation of Mutant Pigs by Direct Pronuclear Microinjection of CRISPR/Cas9 Plasmid Vectors. <b>2017</b> , 7, e2321	3
181	Delivery of the Cas9 or TevCas9 system into via conjugation of plasmids from a bacterial donor. <b>2018</b> , 8, e2974	3
180	Single-Base Genome Editing in with the Help of Negative Selection by Target-Mismatched CRISPR/Cpf1. <b>2020</b> , 30, 1583-1591	6
179	Development of CRISPR/Cas9 system for targeted DNA modifications and recent improvements in modification efficiency and specificity. <b>2020</b> , 53, 341-348	2
178	Tetramerisation of the CRISPR ring nuclease Crn3/Csx3 facilitates cyclic oligoadenylate cleavage. <b>2020</b> , 9,	11
177	Transcription termination and antitermination of bacterial CRISPR arrays. 2020, 9,	4
176	The Application of the CRISPR/Cas9 System in the Treatment of Hepatitis B Liver Cancer. <b>2021</b> , 20, 1533033	82111045206
175	Natural Resources Resistance to Tomato Spotted Wilt Virus (TSWV) in Tomato (). <b>2021</b> , 22,	2

174	Identification of RNA Binding Partners of CRISPR-Cas Proteins in Prokaryotes Using RIP-Seq. <b>2022</b> , 2404, 111-133	1
173	Turning Waste into Beneficial Resource: Implication of Ageratum conyzoides L. in Sustainable Agriculture, Environment and Biopharma Sectors. <b>2021</b> , 1	1
172	Improving the efficiency of CRISPR-Cas12a-based genome editing with site-specific covalent Cas12a-crRNA conjugates. <b>2021</b> , 81, 4747-4756.e7	5
171	Advances in Nanoparticle Drug Delivery Systems for Anti-Hepatitis B Virus Therapy: A Narrative Review. <b>2021</b> , 22,	O
170	Integrating CRISPR-Cas and Next Generation Sequencing in Plant Virology. 2021, 12, 735489	3
169	Diagnostic Techniques for COVID-19: A Mini-review of Early Diagnostic Methods. <b>2021</b> , 5, 1-13	4
168	Dynamical Network Analysis of Key Amino Acids for Domain Interactions of SpCas9. <b>2016</b> , 06, 50-61	
167	Real-time observation of DNA recognition and rejection by the RNA-guided endonuclease Cas9.	O
166	Protocol: Genome-scale CRISPR-Cas9 Knockout and Transcriptional Activation Screening.	2
165	Knock-In of a 25-Kilobase Pair BAC-Derived Donor Molecule by Traditional and CRISPR/Cas9-Stimulated Homologous Recombination.	
164	Cas13b is a Type VI-B CRISPR-associated RNA-Guided RNase differentially regulated by accessory proteins Csx27 and Csx28.	0
163	Advances in biotechnology: Genomics and genome editing. <b>2017</b> , 1, 2-9	1
162	Expanding the Grammar of Biology. <b>2017</b> , 29-53	
161	Genome-Wide Approaches to Defining Macrophage Identity and Function. 553-570	
160	Spatial gene drives and pushed genetic waves.	3
159	Priming in a permissive type I-C CRISPR-Cas system reveals distinct dynamics of spacer acquisition and loss.	O
158	Directin vivomapping of functional suppressors in glioblastoma genome.	
157	Cell type-specific expression profiling sheds light on the development of a peculiar neuron, housing a complex organelle.	1

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liposome system.

Characterizing a thermostable Cas9 for bacterial genome editing and silencing. 156 RNA-binding and HEPN-nuclease activation are decoupled in CRISPRCas13a. 155 Transgenic mouse lines expressing the 3xFLAG-dCas9 protein for enChIP analysis. 154 Unidirectional fork movement coupled with strand-specific histone incorporation ensures 153 asymmetric histone inheritance. Asymmetric Histone Incorporation During DNA Replication in Drosophila Male Germline Stem Cells. 152 O Towards comprehensive characterization of CRISPR-linked genes. 151 Implementation of CRISPR-Cas13a system in fission yeast and its repurposing for precise RNA 150 editing. 149 CRISPR-Cas9 ribonucleoprotein-mediated co-editing and counterselection in the rice blast fungus. Transcription Termination and Antitermination of Bacterial CRISPR Arrays. 148 1 A pipeline for rapidly generating genetically engineered mouse models of pancreatic cancer using 147 in vivo CRISPRCas9 mediated somatic recombination. Stem cell mitotic drive ensures asymmetric epigenetic inheritance. 146 1 Modulating CRISPR gene drive activity through nucleocytoplasmic localization of Cas9 in S. 145 cerevisiae. Optimization of T-DNA architecture for Cas9-mediated mutagenesis in Arabidopsis. 144 RNA-Guided CRISPR-Cas9 System for Removal of Microbial Pathogens. 2019, 227-248 143 2 Recessive Resistance: Developing Targets for Genome Editing to Engineer Viral Disease Resistant 1 142 Crops. 2019, 25, 49-61 Cyclic oligoadenylate signalling mediatesMycobacterium tuberculosisCRISPR defence. 141 A CRISPR-based method for measuring the essentiality of a gene. 140

Spatial and temporal control of CRISPR/Cas9-mediated gene editing delivered via a light-triggered

138	Future Preventive Gene Therapy of Polygenic Diseases from a Population Genetics Perspective.	
137	Systematic mapping of genetic interactions for de novo fatty acid synthesis.	
136	Spatiotemporal Control of CRISPR/Cas9 Function in Cells and Zebrafish using Light-Activated Guide RNA.	
135	Optimized sgRNA design by deep learning to balance the off-target effects and on-target activity of CRISPR/Cas9.	
134	Multiplex CRISPRi-Cas9 silencing of planktonic and stage-specific biofilm genes in Enterococcus faecalis.	1
133	Drag-and-drop genome insertion without DNA cleavage with CRISPR-directed integrases.	6
132	Disintegration promotes proto-spacer integration by the Cas1-Cas2 complex.	
131	CRISPR: The Revolutionary Gene Editing Tool with Far-Reaching Applications. 2020, 47-56	
130	Genome Editing by Targeted Nucleases and the CRISPR/Cas Revolution. 2020, 953-964	1
129	Biolistic Delivery of Programmable Nuclease (CRISPR/Cas9) in Bread Wheat. <b>2020</b> , 2124, 309-329	1
128	Genome Editing in Cancer Research and Cure. <b>2020</b> , 91-106	
127	Designer mutants for behavioral genetics. <b>2020</b> , 263-278	О
126	Duchenne Muscular Dystrophy Cell Culture Models Created By CRISPR/Cas 9 Gene Editing And Their Application To Drug Screening.	
125	Tetramerisation of the CRISPR ring nuclease Csx3 facilitates cyclic oligoadenylate cleavage.	
124	CRISPR-Csx28 forms a Cas13b-activated membrane pore required for robust CRISPR-Cas adaptive immunity.	0
123	Gene Manipulation Using Fusion Guide RNAs for Cas9 and Cas12a. <b>2021</b> , 2162, 185-193	
122	THE GORDON WILSON LECTURE: THE ETHICS OF HUMAN GENOME EDITING. <b>2020</b> , 131, 99-118	0
121	mRNA Detection with Fluorescence-base Imaging Techniques for Arthritis Diagnosis. <b>2019</b> , 1, 39-46	1

120	Inhibition mechanisms of CRISPR-Cas9 by AcrIIA17 and AcrIIA18. <b>2021</b> ,	1
119	Application of CRISPR-Based Diagnostic Tools in Detecting SARS-CoV-2 Infection. <b>2022</b> , 1-13	Ο
118	Targeted genome editing by CRISPR/Cas9 for livestock improvement. 2022, 415-447	
117	Human Group IIA Phospholipase A-Three Decades on from Its Discovery. <b>2021</b> , 26,	1
116	Paper-Based Point-of-Care Testing of SARS-CoV-2 <b>2021</b> , 9, 773304	3
115	Advances in laboratory detection methods and technology application of SARS-CoV-2. <b>2021</b> ,	2
114	Major Viral Diseases of Salvia spp., Diagnosis, and Their Management Strategies. <b>2021</b> , 211-230	
113	Analyse von Krebsgenen: Schnelle Suche nach der ⊠adel im Heuhaufen□	
112	Using Genome Editing for Alzheimer Disease Therapy: from Experiment to Clinic. 2021, 15, 367-375	
111	Methodologies in visualizing the activation of CRISPR/Cas: The last mile in developing CRISPR-Based diagnostics and biosensing - A review <b>2022</b> , 1205, 339541	1
110	The Application of CRISPR/Cas9 Technology for Cancer Immunotherapy: Current Status and Problems <b>2021</b> , 11, 704999	О
109	RNA Editing with CRISPR/Cas13. <b>2022</b> , 219-254	Ο
108	CRISPR/Cas9 genome editing system confirms centriolin's role in cytokinesis 2022, 15, 8	0
107	The new era of quantitative cell imaging-challenges and opportunities 2022, 82, 241-247	2
106	Mitochondria and Viral Infection: Advances and Emerging Battlefronts 2022, e0209621	
105	Structural Principles of CRISPR-Cas Enzymes Used in Nucleic Acid Detection <b>2022</b> , 214, 107838	1
104	Assembly of Cas7 subunits of Leptospira on the mature crRNA of CRISPR-Cas I-B is modulated by divalent ions <b>2022</b> , 818, 146244	О
103	VIGS Goes Viral: How VIGS Transforms Our Understanding of Plant Science 2022,	0

102	The use of new CRISPR tools in cardiovascular research and medicine 2022,	1
101	High-throughput methodology to identify CRISPR-generated Danio rerio mutants using fragment analysis with unmodified PCR products <b>2022</b> , 484, 22-22	O
100	Plant drought stress tolerance: understanding its physiological, biochemical and molecular mechanisms. <b>2021</b> , 35, 1912-1925	2
99	Nanoformulated herbal bioactives for the treatment of neurodegenerative disorders. 2022, 371-391	
98	CRISPR based therapeutics: a new paradigm in cancer precision medicine <b>2022</b> , 21, 85	5
97	Structural and biochemical characterization of in vivo assembled Lactococcus lactis CRISPR-Csm complex <b>2022</b> , 5, 279	2
96	Chimeric CRISPR-CasX enzymes and guide RNAs for improved genome editing activity 2022,	2
95	Immunotherapy and CRISPR Cas Systems: Potential Cure of COVID-19?. <b>2022</b> , 16, 951-972	Ο
94	Characterization of Cme and Yme thermostable Cas12a orthologs <b>2022</b> , 5, 325	Ο
93	Enhancement of prime editing via xrRNA motif-joined pegRNA <b>2022</b> , 13, 1856	2
92	Dual-gRNA approach with limited off-target effect corrects C9ORF72 repeat expansion in vivo <b>2022</b> , 12, 5672	О
91	Mechanistic Role of HPV-Associated Early Proteins in Cervical Cancer: Molecular Pathways and Targeted Therapeutic Strategies <b>2022</b> , 103675	4
90	CRISPR/Cas9: Regulations and challenges for law enforcement to combat its dual-use <b>2022</b> , 334, 111274	1
89	CRISPR-Based Genetic Switches and Other Complex Circuits: Research and Application. <b>2021</b> , 11,	1
88	Highly Sensitive Immuno-CRISPR Assay for CXCL9 Detection. 2021,	1
87	Common computational tools for analyzing CRISPR screens. 2021,	1
86	Clustered regularly interspaced short palindromic repeats, a glimpse´- impacts in molecular biology, trends and highlights. <b>2021</b> ,	
85	Developing CRISPR/Cas9-Mediated Fluorescent Reporter Human Pluripotent Stem-Cell Lines for High-Content Screening <b>2022</b> , 27,	O

84	Overview of advances in CRISPR/deadCas9 technology and its applications in human diseases <b>2022</b> , 146518	О
83	Data_Sheet_1.pdf. <b>2020</b> ,	
82	Data_Sheet_2.xlsx. <b>2020</b> ,	
81	Image_1.TIF. <b>2021</b> ,	
80	Table_1.XLSX. <b>2021</b> ,	
79	Data_Sheet_1.pdf. <b>2020</b> ,	
78	CRISPR-Cas Systems: The Science and Ethics of Gene Manipulation. 2022, 191-212	
77	Review of CRISPR-Cas Systems in Species: Current Knowledge and Perspectives <b>2022</b> , 2022, 9829770	O
76	A Highly Sensitive and Specific Detection Method for Mycobacterium tuberculosis Fluoroquinolone Resistance Mutations Utilizing the CRISPR-Cas13a System. <b>2022</b> , 13,	О
75	Programmable Nucleic Acid-Binding Proteins-Based Nucleic Acid Detection and Biosensing Technologies. <b>2022</b> ,	
74	CRISPR-Cas9: el debate biolico ma allude la luea germinal. <b>2022</b> , 25, 1-18	
73	A Robust Expression and Purification Method for Production of SpCas9-GFP-MBP Fusion Protein for In Vitro Applications. <b>2022</b> , 5, 44	
72	Development of a universal antibiotic resistance screening reporter for improving efficiency of cytosine and adenine base-editing. <b>2022</b> , 102103	1
71	Cas9-mediated DNA cleavage guided by enzymatically prepared 4?-thio-modified RNA.	
70	Genome Editing and Human Pluripotent Stem Cell Technologies for in vitro Monogenic Diabetes Modeling. Volume 15, 1785-1797	
69	Cellular landscaping of exosomal miRNAs in cancer metastasis: From chemoresistance to prognostic markers. <b>2022</b> , 100050	Ο
68	The Case for Studying New Viruses of New Hosts. <b>2022</b> , 9,	1
67	Natural and engineered resistance: implications for managing the cassava mosaic disease. <b>2022</b> , 531-548	

66	Characterization of a thermostable Cas13 enzyme for one-pot detection of SARS-CoV-2. 2022, 119,	1
65	Chemical Modifications of CRISPR RNAs to Improve Gene-Editing Activity and Specificity.	2
64	Advances in S gene targeted genome-editing and its applicability to disease resistance breeding in selected Solanaceae crop plants. <b>2022</b> , 13, 14646-14666	
63	Inactivation of Target RNA Cleavage of a III-B CRISPR-Cas System Induces Robust Autoimmunity in Saccharolobus islandicus. <b>2022</b> , 23, 8515	
62	CRISPR applications for Duchenne muscular dystrophy: From animal models to potential therapies.	O
61	Two Years into the COVID-19 Pandemic: Lessons Learned.	4
60	The Prominent Characteristics of the Effective sgRNA for a Precise CRISPR Genome Editing.	O
59	CasDinG is an ATP-dependent 5BIDNA helicase with accessory domains essential for type IV CRISPR immunity.	O
58	CRISPR/Cas Systems-Inspired Nano/Biosensors for Detecting Infectious Viruses and Pathogenic Bacteria. 2200794	0
57	Genetic and Molecular Approaches for Management of Potato Viral Diseases and Their Vectors. <b>2022</b> , 361-387	O
56	Chapter 1. Chemical Approaches for Beta-cell Biology. <b>2022</b> , 1-52	0
55	New Frontier in the Management of Corneal Dystrophies: Basics, Development, and Challenges in Corneal Gene Therapy and Gene Editing. <b>2022</b> , 11, 346-359	O
54	Transposons and CRISPR: Rewiring Gene Editing.	0
53	A programmable system to methylate and demethylate N6-Methyladenosine (m6A) on specific RNA transcripts in mammalian cells. <b>2022</b> , 102525	O
52	Guide RNA engineering enables efficient CRISPR editing with a miniature Syntrophomonas palmitatica Cas12f1 nuclease. <b>2022</b> , 40, 111418	1
51	Long non-coding RNAs (lncRNAs) signaling in cancer chemoresistance: From prediction to druggability. <b>2022</b> , 65, 100866	2
50	Genome Editing advances in Soybean Improvement against Biotic and Abiotic Stresses. <b>2022</b> , 241-274	0
49	An enChIP system for the analysis of genome functions in budding yeast. <b>2022</b> , 7,	O

48	Molecular basis of cyclic tetra-oligoadenylate processing by small standalone CRISPR-Cas ring nucleases.	2
47	Comparative genomic analysis of Lacticaseibacillus paracasei SMN-LBK from koumiss. 13,	O
46	Recent Advances in Exosomal miRNA Biosensing for Liquid Biopsy. 2022, 27, 7145	0
45	Current updates of CRISPR/Cas9-mediated genome editing and targeting within tumor cells: an innovative strategy of cancer management.	1
44	Biotechnological Advances to Improve Abiotic Stress Tolerance in Crops. <b>2022</b> , 23, 12053	1
43	Gene editing of Duchenne muscular dystrophy using biomineralization-based spCas9 variant nanoparticles. <b>2022</b> ,	O
42	Clustered Regularly Interspaced short palindromic repeats-Based Microfluidic System in Infectious Diseases Diagnosis: Current Status, Challenges, and Perspectives. 2204172	О
41	A Sensitive Nucleic Acid Detection Platform for Foodborne Pathogens Based on CRISPR-Cas13a System Combined with Polymerase Chain Reaction.	O
40	Structural insights into target DNA recognition and cleavage by the CRISPR-Cas12c1 system.	О
39	The economics and policy of genome editing in crop improvement.	O
38	Remodeling of a tripartite substrate-binding motif in the HD domain provides the mechanism for activation of CRISPR-Cas10 DNases.	О
37	The structure of a Type III-A CRISPR-Cas effector complex reveals conserved and idiosyncratic contacts to target RNA and crRNA among Type III-A systems.	O
36	RNA interference and gene editing. <b>2023</b> , 375-408	О
35	Multiomics and optobiotechnological approaches for the development of microalgal strain for production of aviation biofuel and biorefinery. <b>2023</b> , 369, 128457	1
34	An Updated Review on MSMD Research Globally and A Literature Review on the Molecular Findings, Clinical Manifestations, and Treatment Approaches in China. 13,	О
33	The effect of crRNAE mismatches on cOA-mediated interference by a type III-A CRISPR-Cas system. <b>2022</b> , 19, 1293-1304	О
32	Drag-and-drop genome insertion of large sequences without double-strand DNA cleavage using CRISPR-directed integrases.	2
31	The compact Cas[[Cas12l] Bracelet[provides a unique structural platform for DNA manipulation.	О

30	Optimization of CRISPR <b>C</b> as system for clinical cancer therapy.	O
29	Maximizing the Efficacy of CRISPR/Cas Homology-Directed Repair Gene Targeting.	O
28	Graphene Oxide Nanoparticles Combined with CRISPR/Cas9 System Enable Efficient Inhibition of Pseudorabies Virus.	0
27	Harnessing synthetic biology to engineer organoids and tissues. <b>2023</b> , 30, 10-19	O
26	Anti-CRISPR AcrIIC5 is a dsDNA mimic that inhibits type II-C Cas9 effectors by blocking PAM recognition.	0
25	CRISPR/Cas9 therapeutics: progress and prospects. <b>2023</b> , 8,	Ο
24	The compact Cas[(Cas12l) Bracelet[provides a unique structural platform for DNA manipulation.	1
23	CRISPR engineering in organoids for gene repair and disease modelling. <b>2023</b> , 1, 32-45	Ο
22	Genome expansion by a CRISPR trimmer-integrase.	O
21	Involvement of CRISPR-Cas Systems in Salmonella Immune Response, Genome Editing, and Pathogen Typing in Diagnosis and Surveillance.	O
20	Advances in CRISPR/Cas technologies and their application in plants. 2023, 1-10	O
19	A comprehensive evaluation of stable expression flot spotlin the ScltI gene of Chinese hamster ovary cells.	O
18	Mechanism of inhibition of CRISPR-Cas9 by anti-CRISPR protein AcrIIC1. 2023, 654, 34-39	O
17	Functional PAM sequence for DNA interference by CRISPR-Cas I-B system of Leptospira interrogans and the role of LinCas11b encoded within lincas8b. <b>2023</b> , 237, 124086	0
16	Harnessing the LdCsm RNA Detection Platform for Efficient microRNA Detection. 2023, 24, 2857	0
15	The paradigm of intracellular parasite survival and drug resistance in leishmanial parasite through genome plasticity and epigenetics: Perception and future perspective. 13,	O
14	Anti-CRISPR AcrIIC5 is a dsDNA mimic that inhibits type II-C Cas9 effectors by blocking PAM recognition. <b>2023</b> , 51, 1984-1995	0
13	Advanced Therapies for Patients with COVID-19. <b>2023</b> , 77-92	O

#### CITATION REPORT

12	Pseudotyped Viruses for Retroviruses. <b>2023</b> , 61-84	Ο
11	Excision of Integrated Human Herpesvirus 6A Genomes Using CRISPR/Cas9 Technology. 2023, 11,	O
10	Multimodal CRISPR perturbations of GWAS loci associated with coronary artery disease in vascular endothelial cells. <b>2023</b> , 19, e1010680	О
9	miRNAs as Predictors of Barrier Integrity. <b>2023</b> , 13, 422	Ο
8	Papaya ring spot virus: Status of 80 years of global research. <b>2023</b> , 135-172	0
7	CRISPR-Cas System: The Current and Emerging Translational Landscape. <b>2023</b> , 12, 1103	O
6	RNA-Dependent RNA Targeting by CRISPR-Cas Systems: Characterizations and Applications. <b>2023</b> , 24, 6894	0
5	CRISPR-cas technology: A key approach for SARS-CoV-2 detection. 11,	Ο
4	A bibliometric analysis of research on R-loop: landscapes, highlights and trending topics. <b>2023</b> , 103502	Ο
3	Chromatin structure and context-dependent sequence features control prime editing efficiency.	O
2	Mechanisms of the Specificity of the CRISPR/Cas9 System in Genome Editing. 2023, 57, 258-271	0
1	Research progress of CRISPR/Cas systemsin nucleic acid detection. 2023,	О