

Charles A Gersbach

List of Publications by Citations

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

117
papers

13,174
citations

46
h-index

114
g-index

139
ext. papers

15,800
ext. citations

14.9
avg, IF

7.16
L-index

#	Paper	IF	Citations
117	ZFN, TALEN, and CRISPR/Cas-based methods for genome engineering. <i>Trends in Biotechnology</i> , 2013 , 31, 397-405	15.1	2526
116	Epigenome editing by a CRISPR-Cas9-based acetyltransferase activates genes from promoters and enhancers. <i>Nature Biotechnology</i> , 2015 , 33, 510-7	44.5	1141
115	RNA-guided gene activation by CRISPR-Cas9-based transcription factors. <i>Nature Methods</i> , 2013 , 10, 973-6	61.6	861
114	In vivo genome editing improves muscle function in a mouse model of Duchenne muscular dystrophy. <i>Science</i> , 2016 , 351, 403-7	33.3	774
113	Highly specific epigenome editing by CRISPR-Cas9 repressors for silencing of distal regulatory elements. <i>Nature Methods</i> , 2015 , 12, 1143-9	21.6	554
112	The next generation of CRISPR-Cas technologies and applications. <i>Nature Reviews Molecular Cell Biology</i> , 2019 , 20, 490-507	48.7	498
111	A light-inducible CRISPR-Cas9 system for control of endogenous gene activation. <i>Nature Chemical Biology</i> , 2015 , 11, 198-200	11.7	437
110	Genome-editing Technologies for Gene and Cell Therapy. <i>Molecular Therapy</i> , 2016 , 24, 430-46	11.7	413
109	Multiplex CRISPR/Cas9-based genome editing for correction of dystrophin mutations that cause Duchenne muscular dystrophy. <i>Nature Communications</i> , 2015 , 6, 6244	17.4	307
108	Editing the epigenome: technologies for programmable transcription and epigenetic modulation. <i>Nature Methods</i> , 2016 , 13, 127-37	21.6	272
107	CRISPR-Cas9 epigenome editing enables high-throughput screening for functional regulatory elements in the human genome. <i>Nature Biotechnology</i> , 2017 , 35, 561-568	44.5	241
106	Multiplex CRISPR/Cas9-based genome engineering from a single lentiviral vector. <i>Nucleic Acids Research</i> , 2014 , 42, e147	20.1	232
105	Long-term evaluation of AAV-CRISPR genome editing for Duchenne muscular dystrophy. <i>Nature Medicine</i> , 2019 , 25, 427-432	50.5	189
104	Synergistic and tunable human gene activation by combinations of synthetic transcription factors. <i>Nature Methods</i> , 2013 , 10, 239-42	21.6	181
103	How vinculin regulates force transmission. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 9788-93	11.5	175
102	Myoblast proliferation and differentiation on fibronectin-coated self assembled monolayers presenting different surface chemistries. <i>Biomaterials</i> , 2005 , 26, 4523-31	15.6	173
101	Increasing the specificity of CRISPR systems with engineered RNA secondary structures. <i>Nature Biotechnology</i> , 2019 , 37, 657-666	44.5	156

100	Light-inducible spatiotemporal control of gene activation by customizable zinc finger transcription factors. <i>Journal of the American Chemical Society</i> , 2012 , 134, 16480-3	16.4	155
99	A CRISPR/Cas9-based system for reprogramming cell lineage specification. <i>Stem Cell Reports</i> , 2014 , 3, 940-7	8	147
98	Reading frame correction by targeted genome editing restores dystrophin expression in cells from Duchenne muscular dystrophy patients. <i>Molecular Therapy</i> , 2013 , 21, 1718-26	11.7	141
97	Targeted Epigenetic Remodeling of Endogenous Loci by CRISPR/Cas9-Based Transcriptional Activators Directly Converts Fibroblasts to Neuronal Cells. <i>Cell Stem Cell</i> , 2016 , 19, 406-14	18	139
96	Advances in targeted genome editing. <i>Current Opinion in Chemical Biology</i> , 2012 , 16, 268-77	9.7	127
95	Loss-of-function genetic tools for animal models: cross-species and cross-platform differences. <i>Nature Reviews Genetics</i> , 2017 , 18, 24-40	30.1	113
94	Runx2/Cbfa1 stimulates transdifferentiation of primary skeletal myoblasts into a mineralizing osteoblastic phenotype. <i>Experimental Cell Research</i> , 2004 , 300, 406-17	4.2	111
93	Structure-guided reprogramming of serine recombinase DNA sequence specificity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011 , 108, 498-503	11.5	107
92	Regulation of chromatin accessibility and Zic binding at enhancers in the developing cerebellum. <i>Nature Neuroscience</i> , 2015 , 18, 647-56	25.5	105
91	Glucocorticoid-induced osteogenesis is negatively regulated by Runx2/Cbfa1 serine phosphorylation. <i>Journal of Cell Science</i> , 2006 , 119, 581-91	5.3	103
90	Genome-wide specificity of DNA binding, gene regulation, and chromatin remodeling by TALE- and CRISPR/Cas9-based transcriptional activators. <i>Genome Research</i> , 2015 , 25, 1158-69	9.7	99
89	Scaffold-mediated lentiviral transduction for functional tissue engineering of cartilage. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E798-806	11.5	97
88	Virus-based gene therapy strategies for bone regeneration. <i>Biomaterials</i> , 2007 , 28, 211-29	15.6	96
87	RNA-guided transcriptional silencing in vivo with <i>S. aureus</i> CRISPR-Cas9 repressors. <i>Nature Communications</i> , 2018 , 9, 1674	17.4	91
86	Correction of dystrophin expression in cells from Duchenne muscular dystrophy patients through genomic excision of exon 51 by zinc finger nucleases. <i>Molecular Therapy</i> , 2015 , 23, 523-32	11.7	86
85	Synthetic zinc finger proteins: the advent of targeted gene regulation and genome modification technologies. <i>Accounts of Chemical Research</i> , 2014 , 47, 2309-18	24.3	85
84	Tissue-engineered cartilage with inducible and tunable immunomodulatory properties. <i>Biomaterials</i> , 2014 , 35, 5921-31	15.6	79
83	Synthesis of programmable integrases. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 5053-8	11.5	78

82	Anatomically shaped tissue-engineered cartilage with tunable and inducible anticytokine delivery for biological joint resurfacing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, E4513-22	11.5	77
81	Engineering Delivery Vehicles for Genome Editing. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2016 , 7, 637-62	8.9	75
80	Structure and specificity of the RNA-guided endonuclease Cas9 during DNA interrogation, target binding and cleavage. <i>Nucleic Acids Research</i> , 2015 , 43, 8924-41	20.1	72
79	Highly active zinc-finger nucleases by extended modular assembly. <i>Genome Research</i> , 2013 , 23, 530-8	9.7	71
78	Enabling functional genomics with genome engineering. <i>Genome Research</i> , 2015 , 25, 1442-55	9.7	67
77	Enhancer Histone Acetylation Modulates Transcriptional Bursting Dynamics of Neuronal Activity-Inducible Genes. <i>Cell Reports</i> , 2019 , 26, 1174-1188.e5	10.6	65
76	Editing the Epigenome: Reshaping the Genomic Landscape. <i>Annual Review of Genomics and Human Genetics</i> , 2018 , 19, 43-71	9.7	64
75	Gene targeting to the ROSA26 locus directed by engineered zinc finger nucleases. <i>Nucleic Acids Research</i> , 2012 , 40, 3741-52	20.1	61
74	AAV CRISPR editing rescues cardiac and muscle function for 18 months in dystrophic mice. <i>JCI Insight</i> , 2018 , 3,	9.9	56
73	Genome Engineering of Stem Cells for Autonomously Regulated, Closed-Loop Delivery of Biologic Drugs. <i>Stem Cell Reports</i> , 2017 , 8, 1202-1213	8	52
72	Gene therapies that restore dystrophin expression for the treatment of Duchenne muscular dystrophy. <i>Human Genetics</i> , 2016 , 135, 1029-40	6.3	52
71	Glucocorticoid receptor recruits to enhancers and drives activation by motif-directed binding. <i>Genome Research</i> , 2018 , 28, 1272-1284	9.7	46
70	Genome engineering: a new approach to gene therapy for neuromuscular disorders. <i>Nature Reviews Neurology</i> , 2017 , 13, 647-661	15	45
69	CRISPR/Cas9 Editing of Murine Induced Pluripotent Stem Cells for Engineering Inflammation-Resistant Tissues. <i>Arthritis and Rheumatology</i> , 2017 , 69, 1111-1121	9.5	45
68	Targeted plasmid integration into the human genome by an engineered zinc-finger recombinase. <i>Nucleic Acids Research</i> , 2011 , 39, 7868-78	20.1	45
67	CRISPR-Based Epigenome Editing of Cytokine Receptors for the Promotion of Cell Survival and Tissue Deposition in Inflammatory Environments. <i>Tissue Engineering - Part A</i> , 2017 , 23, 738-749	3.9	44
66	Runx2/Cbfa1-genetically engineered skeletal myoblasts mineralize collagen scaffolds in vitro. <i>Biotechnology and Bioengineering</i> , 2004 , 88, 369-78	4.9	44
65	Directed evolution of recombinase specificity by split gene reassembly. <i>Nucleic Acids Research</i> , 2010 , 38, 4198-206	20.1	42

64	Pre-established Chromatin Interactions Mediate the Genomic Response to Glucocorticoids. <i>Cell Systems</i> , 2018 , 7, 146-160.e7	10.6	41
63	Genome Engineering for Personalized Arthritis Therapeutics. <i>Trends in Molecular Medicine</i> , 2017 , 23, 917-931	11.5	40
62	The once and future gene therapy. <i>Nature Communications</i> , 2020 , 11, 5820	17.4	40
61	Step-Wise Chondrogenesis of Human Induced Pluripotent Stem Cells and Purification Via a Reporter Allele Generated by CRISPR-Cas9 Genome Editing. <i>Stem Cells</i> , 2019 , 37, 65-76	5.8	40
60	Bidirectional approaches for optogenetic regulation of gene expression in mammalian cells using Arabidopsis cryptochrome 2. <i>Nucleic Acids Research</i> , 2017 , 45, e167	20.1	39
59	Targeted transcriptional modulation with type I CRISPR-Cas systems in human cells. <i>Nature Biotechnology</i> , 2019 , 37, 1493-1501	44.5	37
58	Mammalian Synthetic Biology: Engineering Biological Systems. <i>Annual Review of Biomedical Engineering</i> , 2017 , 19, 249-277	12	36
57	Biomaterial-mediated retroviral gene transfer using self-assembled monolayers. <i>Biomaterials</i> , 2007 , 28, 5121-7	15.6	36
56	AAV9 Edits Muscle Stem Cells in Normal and Dystrophic Adult Mice. <i>Molecular Therapy</i> , 2019 , 27, 1568-1585	15.5	32
55	An anionic, endosome-escaping polymer to potentiate intracellular delivery of cationic peptides, biomacromolecules, and nanoparticles. <i>Nature Communications</i> , 2019 , 10, 5012	17.4	30
54	Generation and comparison of CRISPR-Cas9 and Cre-mediated genetically engineered mouse models of sarcoma. <i>Nature Communications</i> , 2017 , 8, 15999	17.4	30
53	Genetic engineering for skeletal regenerative medicine. <i>Annual Review of Biomedical Engineering</i> , 2007 , 9, 87-119	12	29
52	N-cadherin is Key to Expression of the Nucleus Pulposus Cell Phenotype under Selective Substrate Culture Conditions. <i>Scientific Reports</i> , 2016 , 6, 28038	4.9	28
51	Engineering synthetic TALE and CRISPR/Cas9 transcription factors for regulating gene expression. <i>Methods</i> , 2014 , 69, 188-97	4.6	27
50	An Engineered Optogenetic Switch for Spatiotemporal Control of Gene Expression, Cell Differentiation, and Tissue Morphogenesis. <i>ACS Synthetic Biology</i> , 2017 , 6, 2003-2013	5.7	26
49	Prospective isolation of chondroprogenitors from human iPSCs based on cell surface markers identified using a CRISPR-Cas9-generated reporter. <i>Stem Cell Research and Therapy</i> , 2020 , 11, 66	8.3	25
48	In vitro and in vivo osteoblastic differentiation of BMP-2- and Runx2-engineered skeletal myoblasts. <i>Journal of Cellular Biochemistry</i> , 2007 , 100, 1324-36	4.7	25
47	The Development of TALE Nucleases for Biotechnology. <i>Methods in Molecular Biology</i> , 2016 , 1338, 27-42	1.4	24

46	Enhancer RNAs predict enhancer-gene regulatory links and are critical for enhancer function in neuronal systems. <i>Nucleic Acids Research</i> , 2020 , 48, 9550-9570	20.1	23
45	Genome engineering: the next genomic revolution. <i>Nature Methods</i> , 2014 , 11, 1009-11	21.6	22
44	The NIH Somatic Cell Genome Editing program. <i>Nature</i> , 2021 , 592, 195-204	50.4	21
43	Enhanced MyoD-induced transdifferentiation to a myogenic lineage by fusion to a potent transactivation domain. <i>ACS Synthetic Biology</i> , 2015 , 4, 689-99	5.7	20
42	Branched-chain ketoacids are preferentially reaminated and activate protein synthesis in the heart. <i>Nature Communications</i> , 2021 , 12, 1680	17.4	20
41	Synthetic transcription factors for cell fate reprogramming. <i>Current Opinion in Genetics and Development</i> , 2018 , 52, 13-21	4.9	20
40	Incomplete MyoD-induced transdifferentiation is associated with chromatin remodeling deficiencies. <i>Nucleic Acids Research</i> , 2017 , 45, 11684-11699	20.1	17
39	Identification of novel Runx2 targets in osteoblasts: cell type-specific BMP-dependent regulation of Tram2. <i>Journal of Cellular Biochemistry</i> , 2007 , 102, 1458-71	4.7	17
38	Light-inducible gene regulation with engineered zinc finger proteins. <i>Methods in Molecular Biology</i> , 2014 , 1148, 89-107	1.4	17
37	Gene Editing of Muscle Stem Cells with Adeno-Associated Viral Vectors in a Mouse Model of Duchenne Muscular Dystrophy. <i>Molecular Therapy - Methods and Clinical Development</i> , 2020 , 19, 320-329 ^{6.4}	6.4	17
36	Expanding the CRISPR Toolbox: Targeting RNA with Cas13b. <i>Molecular Cell</i> , 2017 , 65, 582-584	17.6	15
35	CRISPR technology for gene therapy. <i>Nature Medicine</i> , 2014 , 20, 476-7	50.5	15
34	In Vivo Zinc Finger Nuclease-mediated Targeted Integration of a Glucose-6-phosphatase Transgene Promotes Survival in Mice With Glycogen Storage Disease Type IA. <i>Molecular Therapy</i> , 2016 , 24, 697-706 ^{11.7}	11.7	12
33	Cas9-specific immune responses compromise local and systemic AAV CRISPR therapy in multiple dystrophic canine models. <i>Nature Communications</i> , 2021 , 12, 6769	17.4	12
32	Knockdown of the cell cycle inhibitor p21 enhances cartilage formation by induced pluripotent stem cells. <i>Tissue Engineering - Part A</i> , 2015 , 21, 1261-74	3.9	11
31	Myogenic Progenitor Cell Lineage Specification by CRISPR/Cas9-Based Transcriptional Activators. <i>Stem Cell Reports</i> , 2020 , 14, 755-769	8	11
30	CRISPR-based methods for high-throughput annotation of regulatory DNA. <i>Current Opinion in Biotechnology</i> , 2018 , 52, 32-41	11.4	11
29	Translating the genomics revolution: the need for an international gene therapy consortium for monogenic diseases. <i>Molecular Therapy</i> , 2013 , 21, 266-8	11.7	11

28	Master Regulators and Cofactors of Human Neuronal Cell Fate Specification Identified by CRISPR Gene Activation Screens. <i>Cell Reports</i> , 2020 , 33, 108460	10.6	11
27	Immunity to Cas9 as an Obstacle to Persistent Genome Editing. <i>Molecular Therapy</i> , 2020 , 28, 1389-1391	11.7	10
26	Gene therapies for hemophilia hit the mark in clinical trials. <i>Nature Medicine</i> , 2018 , 24, 121-122	50.5	9
25	From CRISPR scissors to virus sensors. <i>Nature</i> , 2018 , 557, 168-169	50.4	9
24	Cas9 loosens its grip on off-target sites. <i>Nature Biotechnology</i> , 2016 , 34, 298-9	44.5	8
23	Genetic Engineering of Mesenchymal Stem Cells for Differential Matrix Deposition on 3D Woven Scaffolds. <i>Tissue Engineering - Part A</i> , 2018 , 24, 1531-1544	3.9	8
22	Transgenic mice for in vivo epigenome editing with CRISPR-based systems. <i>Nature Methods</i> , 2021 , 18, 965-974	21.6	7
21	Design, Assembly, and Characterization of TALE-Based Transcriptional Activators and Repressors. <i>Methods in Molecular Biology</i> , 2016 , 1338, 71-88	1.4	6
20	Enhancer RNAs predict enhancer-gene regulatory links and are critical for enhancer function in neuronal systems		6
19	Differential effects of toll-like receptor stimulation on mRNA-driven myogenic conversion of human and mouse fibroblasts. <i>Biochemical and Biophysical Research Communications</i> , 2016 , 478, 1484-90 ^{3,4}		6
18	Genome-wide CRISPR Screen to Identify Genes that Suppress Transformation in the Presence of Endogenous Kras. <i>Scientific Reports</i> , 2019 , 9, 17220	4.9	5
17	Single-molecule analysis of myocyte differentiation reveals bimodal lineage commitment. <i>Integrative Biology (United Kingdom)</i> , 2015 , 7, 663-71	3.7	4
16	AP-1 subunits converge promiscuously at enhancers to potentiate transcription. <i>Genome Research</i> , 2021 , 31, 538-550	9.7	4
15	Boosting, Not Breaking: CRISPR Activators Treat Disease Models. <i>Molecular Therapy</i> , 2018 , 26, 334-336	11.7	3
14	Screening Regulatory Element Function with CRISPR/Cas9-based Epigenome Editing. <i>Methods in Molecular Biology</i> , 2018 , 1767, 447-480	1.4	3
13	Integrating Biomaterials and Genome Editing Approaches to Advance Biomedical Science. <i>Annual Review of Biomedical Engineering</i> , 2021 , 23, 493-516	12	3
12	Chromatin Remodeling of Colorectal Cancer Liver Metastasis is Mediated by an HGF-PU.1-DPP4 Axis. <i>Advanced Science</i> , 2021 , 8, e2004673	13.6	3
11	Full-length dystrophin restoration via targeted exon integration by AAV-CRISPR in a humanized mouse model of Duchenne muscular dystrophy. <i>Molecular Therapy</i> , 2021 , 29, 3243-3257	11.7	3

10	Gene delivery into cells and tissues 2020 , 519-554		2
9	Genetic engineering: Chemical control for CRISPR editing. <i>Nature Chemical Biology</i> , 2017 , 13, 2-3	11.7	2
8	Vector modifications to eliminate transposase expression following piggyBac-mediated transgenesis. <i>Scientific Reports</i> , 2014 , 4, 7403	4.9	2
7	The role of single-cell analyses in understanding cell lineage commitment. <i>Biotechnology Journal</i> , 2013 , 8, 397-407	5.6	2
6	Genome Editing for Duchenne Muscular Dystrophy 2019 , 383-403		1
5	Pulling the genome in opposite directions to dissect gene networks. <i>Genome Biology</i> , 2018 , 19, 42	18.3	1
4	Redirecting Vesicular Transport to Improve Nonviral Delivery of Molecular Cargo. <i>Advanced Biology</i> , 2020 , 4, e2000059	3.5	1
3	Jumping at the chance for precise DNA integration. <i>Nature Biotechnology</i> , 2019 , 37, 1004-1006	44.5	0
2	Unwinding the Role of FACT in Cas9-based Genome Editing. <i>Molecular Cell</i> , 2020 , 79, 365-367	17.6	
1	CRISPR Clocks: The Times They Are a-ChanginW <i>CRISPR Journal</i> , 2021 , 4, 160-163	2.5	