

Luciano A Marraffini

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

31,318
citations

41344
49
h-index

66911
78
g-index

122
all docs

122
docs citations

122
times ranked

34451
citing authors

#	ARTICLE	IF	CITATIONS
1	Multiplex Genome Engineering Using CRISPR/Cas Systems. <i>Science</i> , 2013, 339, 819-823.	12.6	12,725
2	DNA targeting specificity of RNA-guided Cas9 nucleases. <i>Nature Biotechnology</i> , 2013, 31, 827-832.	17.5	3,953
3	RNA-guided editing of bacterial genomes using CRISPR-Cas systems. <i>Nature Biotechnology</i> , 2013, 31, 233-239.	17.5	2,071
4	CRISPR Interference Limits Horizontal Gene Transfer in <i>Staphylococci</i> by Targeting DNA. <i>Science</i> , 2008, 322, 1843-1845.	12.6	1,473
5	Programmable repression and activation of bacterial gene expression using an engineered CRISPR-Cas system. <i>Nucleic Acids Research</i> , 2013, 41, 7429-7437.	14.5	960
6	CRISPR interference: RNA-directed adaptive immunity in bacteria and archaea. <i>Nature Reviews Genetics</i> , 2010, 11, 181-190.	16.3	854
7	Exploiting CRISPR-Cas nucleases to produce sequence-specific antimicrobials. <i>Nature Biotechnology</i> , 2014, 32, 1146-1150.	17.5	718
8	CRISPR-Cas immunity in prokaryotes. <i>Nature</i> , 2015, 526, 55-61.	27.8	657
9	CRISPR-Cas Systems: Prokaryotes Upgrade to Adaptive Immunity. <i>Molecular Cell</i> , 2014, 54, 234-244.	9.7	633
10	Sortases and the Art of Anchoring Proteins to the Envelopes of Gram-Positive Bacteria. <i>Microbiology and Molecular Biology Reviews</i> , 2006, 70, 192-221.	6.6	569
11	Self versus non-self discrimination during CRISPR RNA-directed immunity. <i>Nature</i> , 2010, 463, 568-571.	27.8	552
12	Type III CRISPR-Cas systems produce cyclic oligoadenylate second messengers. <i>Nature</i> , 2017, 548, 543-548.	27.8	377
13	Co-transcriptional DNA and RNA Cleavage during Type III CRISPR-Cas Immunity. <i>Cell</i> , 2015, 161, 1164-1174.	28.9	367
14	Cas9 specifies functional viral targets during CRISPR-Cas adaptation. <i>Nature</i> , 2015, 519, 199-202.	27.8	330
15	CRISPR Interference Can Prevent Natural Transformation and Virulence Acquisition during <i>In Vivo</i> Bacterial Infection. <i>Cell Host and Microbe</i> , 2012, 12, 177-186.	11.0	284
16	Conditional tolerance of temperate phages via transcription-dependent CRISPR-Cas targeting. <i>Nature</i> , 2014, 514, 633-637.	27.8	257
17	Dealing with the Evolutionary Downside of CRISPR Immunity: Bacteria and Beneficial Plasmids. <i>PLoS Genetics</i> , 2013, 9, e1003844.	3.5	227
18	Cas13-induced cellular dormancy prevents the rise of CRISPR-resistant bacteriophage. <i>Nature</i> , 2019, 570, 241-245.	27.8	216

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19	Degradation of Phage Transcripts by CRISPR-Associated RNases Enables Type III CRISPR-Cas Immunity. <i>Cell</i> , 2016, 164, 710-721.	28.9	194
20	Molecular mechanisms of CRISPR-Cas spacer acquisition. <i>Nature Reviews Microbiology</i> , 2019, 17, 7-12.	28.6	194
21	(Ph)ighting Phages: How Bacteria Resist Their Parasites. <i>Cell Host and Microbe</i> , 2019, 25, 184-194.	11.0	190
22	Mature clustered, regularly interspaced, short palindromic repeats RNA (crRNA) length is measured by a ruler mechanism anchored at the precursor processing site. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 21218-21222.	7.1	181
23	Sortases and pilin elements involved in pilus assembly of <i>Corynebacterium diphtheriae</i> . <i>Molecular Microbiology</i> , 2004, 53, 251-261.	2.5	173
24	CRISPR-Cas: New Tools for Genetic Manipulations from Bacterial Immunity Systems. <i>Annual Review of Microbiology</i> , 2015, 69, 209-228.	7.3	160
25	Genetic Characterization of Antiplasmid Immunity through a Type III-A CRISPR-Cas System. <i>Journal of Bacteriology</i> , 2014, 196, 310-317.	2.2	154
26	CRISPR-Cas systems exploit viral DNA injection to establish and maintain adaptive immunity. <i>Nature</i> , 2017, 544, 101-104.	27.8	140
27	A High-Throughput Platform to Identify Small-Molecule Inhibitors of CRISPR-Cas9. <i>Cell</i> , 2019, 177, 1067-1079.e19.	28.9	133
28	Non-specific degradation of transcripts promotes plasmid clearance during type III-A CRISPR-Cas immunity. <i>Nature Microbiology</i> , 2019, 4, 656-662.	13.3	128
29	A Ruler Protein in a Complex for Antiviral Defense Determines the Length of Small Interfering CRISPR RNAs. <i>Journal of Biological Chemistry</i> , 2013, 288, 27888-27897.	3.4	123
30	Broad Targeting Specificity during Bacterial Type III CRISPR-Cas Immunity Constrains Viral Escape. <i>Cell Host and Microbe</i> , 2017, 22, 343-353.e3.	11.0	118
31	Enhanced Bacterial Immunity and Mammalian Genome Editing via RNA-Polymerase-Mediated Dislodging of Cas9 from Double-Strand DNA Breaks. <i>Molecular Cell</i> , 2018, 71, 42-55.e8.	9.7	112
32	CRISPR-Cas Systems Optimize Their Immune Response by Specifying the Site of Spacer Integration. <i>Molecular Cell</i> , 2016, 64, 616-623.	9.7	97
33	Innate and adaptive immunity in bacteria: mechanisms of programmed genetic variation to fight bacteriophages. <i>Current Opinion in Immunology</i> , 2012, 24, 15-20.	5.5	96
34	Molecular Mechanisms of CRISPR-Cas Immunity in Bacteria. <i>Annual Review of Genetics</i> , 2020, 54, 93-120.	7.6	94
35	Targeting proteins to the cell wall of sporulating <i>Bacillus anthracis</i> . <i>Molecular Microbiology</i> , 2006, 62, 1402-1417.	2.5	91
36	Assembly of pili on the surface of <i>Bacillus cereus</i> vegetative cells. <i>Molecular Microbiology</i> , 2007, 66, 495-510.	2.5	91

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37	Adapting to new threats: the generation of memory by CRISPR-Cas immune systems. <i>Molecular Microbiology</i> , 2014, 93, 1-9.	2.5	80
38	RNA Guide Complementarity Prevents Self-Targeting in Type VI CRISPR Systems. <i>Molecular Cell</i> , 2018, 71, 791-801.e3.	9.7	79
39	Type III-A CRISPR-Cas Csm Complexes: Assembly, Periodic RNA Cleavage, DNase Activity Regulation, and Autoimmunity. <i>Molecular Cell</i> , 2019, 73, 264-277.e5.	9.7	77
40	A phage-encoded anti-CRISPR enables complete evasion of type VI-A CRISPR-Cas immunity. <i>Science</i> , 2020, 369, 54-59.	12.6	77
41	Bacillus anthracis Sortase A (SrtA) Anchors LPXTG Motif-Containing Surface Proteins to the Cell Wall Envelope. <i>Journal of Bacteriology</i> , 2005, 187, 4646-4655.	2.2	76
42	Amide bonds assemble pili on the surface of bacilli. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 10215-10220.	7.1	76
43	The Card1 nuclease provides defence during type III CRISPR immunity. <i>Nature</i> , 2021, 590, 624-629.	27.8	76
44	Anchoring of Surface Proteins to the Cell Wall of Staphylococcus aureus. <i>Journal of Biological Chemistry</i> , 2004, 279, 37763-37770.	3.4	71
45	Harnessing CRISPR-Cas9 immunity for genetic engineering. <i>Current Opinion in Microbiology</i> , 2014, 19, 114-119.	5.1	67
46	Activation and self-inactivation mechanisms of the cyclic oligoadenylate-dependent CRISPR ribonuclease Csm6. <i>Nature Communications</i> , 2020, 11, 1596.	12.8	67
47	Anchor Structure of Staphylococcal Surface Proteins. <i>Journal of Biological Chemistry</i> , 2005, 280, 16263-16271.	3.4	65
48	Impact of CRISPR immunity on the emergence and virulence of bacterial pathogens. <i>Current Opinion in Microbiology</i> , 2014, 17, 82-90.	5.1	64
49	Dynamics of Cas10 Govern Discrimination between Self and Non-self in Type III CRISPR-Cas Immunity. <i>Molecular Cell</i> , 2019, 73, 278-290.e4.	9.7	58
50	Type III CRISPR-Cas systems: when DNA cleavage just isn't enough. <i>Current Opinion in Microbiology</i> , 2017, 37, 150-154.	5.1	53
51	Mutations in Cas9 Enhance the Rate of Acquisition of Viral Spacer Sequences during the CRISPR-Cas Immune Response. <i>Molecular Cell</i> , 2017, 65, 168-175.	9.7	47
52	Impact of Different Target Sequences on Type III CRISPR-Cas Immunity. <i>Journal of Bacteriology</i> , 2016, 198, 941-950.	2.2	46
53	Cas9 Cleavage of Viral Genomes Primes the Acquisition of New Immunological Memories. <i>Cell Host and Microbe</i> , 2019, 26, 515-526.e6.	11.0	46
54	Recombination between phages and CRISPR-cas loci facilitates horizontal gene transfer in staphylococci. <i>Nature Microbiology</i> , 2019, 4, 956-963.	13.3	42

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55	Control of gene expression by CRISPR-Cas systems. F1000prime Reports, 2013, 5, 47.	5.9	41
56	Incomplete prophage tolerance by type III-A CRISPR-Cas systems reduces the fitness of lysogenic hosts. Nature Communications, 2018, 9, 61.	12.8	37
57	Sortase C-Mediated Anchoring of BasI to the Cell Wall Envelope of Bacillus anthracis. Journal of Bacteriology, 2007, 189, 6425-6436.	2.2	35
58	CRISPR-Cas Immunity against Phages: Its Effects on the Evolution and Survival of Bacterial Pathogens. PLoS Pathogens, 2013, 9, e1003765.	4.7	34
59	Three New Cs for CRISPR: Collateral, Communicate, Cooperate. Trends in Genetics, 2019, 35, 446-456.	6.7	34
60	Prophage integration into CRISPR loci enables evasion of antiviral immunity in Streptococcus pyogenes. Nature Microbiology, 2021, 6, 1516-1525.	13.3	34
61	Resistance and tolerance to foreign elements by prokaryotic immune systems “curating the genome. Nature Reviews Immunology, 2015, 15, 717-724.	22.7	29
62	Type III-A CRISPR immunity promotes mutagenesis of staphylococci. Nature, 2021, 592, 611-615.	27.8	29
63	Cleavage of viral DNA by restriction endonucleases stimulates the type II CRISPR-Cas immune response. Molecular Cell, 2022, 82, 907-919.e7.	9.7	29
64	Co-evolution within structured bacterial communities results in multiple expansion of CRISPR loci and enhanced immunity. ELife, 2020, 9, .	6.0	26
65	Spacer Acquisition Rates Determine the Immunological Diversity of the Type II CRISPR-Cas Immune Response. Cell Host and Microbe, 2019, 25, 242-249.e3.	11.0	24
66	Invasive DNA, Chopped and in the CRISPR. Structure, 2009, 17, 786-788.	3.3	23
67	Slicer for DNA. Nature, 2010, 468, 45-46.	27.8	16
68	Viral recombination systems limit CRISPR-Cas targeting through the generation of escape mutations. Cell Host and Microbe, 2021, 29, 1482-1495.e12.	11.0	12
69	OUP accepted manuscript. Nucleic Acids Research, 2021, 49, 3546-3556.	14.5	9
70	Impact of CRISPR immunity on the emergence of bacterial pathogens. Future Microbiology, 2010, 5, 693-695.	2.0	8
71	Sensing danger. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 15-16.	7.1	7
72	Different modes of spacer acquisition by the <i>Staphylococcus epidermidis</i> type III-A CRISPR-Cas system. Nucleic Acids Research, 2022, 50, 1661-1672.	14.5	7

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73	Viral Teamwork Pushes CRISPR to the Breaking Point. Cell, 2018, 174, 772-774.	28.9	6
74	CRISPR decoys. RNA Biology, 2013, 10, 694-699.	3.1	2
75	If You™d Like to Stop a Type III CRISPR Ribonuclease, Then You Should Put a Ring (Nuclease) on It. Molecular Cell, 2018, 72, 608-609.	9.7	2
76	From the discovery of DNA to current tools for DNA editing. Journal of Experimental Medicine, 2021, 218, .	8.5	2
77	Turning CRISPR on with antibiotics. Cell Host and Microbe, 2022, 30, 12-14.	11.0	2
78	CRISPR goes retro. Science, 2016, 351, 920-921.	12.6	1
79	Mobile DNA: an evolving field. Mobile DNA, 2014, 5, 16.	3.6	0
80	Shoot the Messenger! A New Phage Weapon to Neutralize the Type III CRISPR Immune Response. Molecular Cell, 2020, 78, 568-569.	9.7	0