R Craig Maclean

List of Publications by Year in descending order

70 papers	5,780 citations	81900 39 h-index	91884 69 g-index
102 all docs	102 docs citations	102 times ranked	6074 citing authors

#	Article	IF	Citations
1	Susceptibility profiles and resistance genomics of <i>Pseudomonas aeruginosa</i> isolates from European ICUs participating in the ASPIRE-ICU trial. Journal of Antimicrobial Chemotherapy, 2022, 77, 1862-1872.	3.0	23
2	CRISPR-Cas systems restrict horizontal gene transfer in <i>Pseudomonas aeruginosa</i>. ISME Journal, 2021, 15, 1420-1433.	9.8	59
3	Beyond horizontal gene transfer: the role of plasmids in bacterial evolution. Nature Reviews Microbiology, 2021, 19, 347-359.	28.6	194
4	Integron activity accelerates the evolution of antibiotic resistance. ELife, 2021, 10, .	6.0	43
5	Evolutionary constraints on the acquisition of antimicrobial peptide resistance in bacterial pathogens. Trends in Microbiology, 2021, 29, 1058-1061.	7.7	20
6	Rapid evolution and host immunity drive the rise and fall of carbapenem resistance during an acute Pseudomonas aeruginosa infection. Nature Communications, 2021, 12, 2460.	12.8	47
7	Staphylococcal phages and pathogenicity islands drive plasmid evolution. Nature Communications, 2021, 12, 5845.	12.8	26
8	Evolutionary Processes Driving the Rise and Fall of <i>Staphylococcus aureus</i> ST239, a Dominant Hybrid Pathogen. MBio, 2021, 12, e0216821.	4.1	9
9	Compensatory mutations modulate the competitiveness and dynamics of plasmid-mediated colistin resistance in <i>Escherichia coli</i> clones. ISME Journal, 2020, 14, 861-865.	9.8	38
10	Efflux pump activity potentiates the evolution of antibiotic resistance across S. aureus isolates. Nature Communications, 2020, 11, 3970.	12.8	79
11	Stochastic bacterial population dynamics restrict the establishment of antibiotic resistance from single cells. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 19455-19464.	7.1	54
12	Assessing the Potential for Staphylococcus aureus to Evolve Resistance to XF-73. Trends in Microbiology, 2020, 28, 432-435.	7.7	4
13	The Ecology and Evolution of Pangenomes. Current Biology, 2019, 29, R1094-R1103.	3.9	206
14	The evolution of antibiotic resistance. Science, 2019, 365, 1082-1083.	12.6	322
15	Assessing evolutionary risks of resistance for new antimicrobial therapies. Nature Ecology and Evolution, 2019, 3, 515-517.	7.8	37
16	Identifying and exploiting genes that potentiate the evolution of antibiotic resistance. Nature Ecology and Evolution, 2018, 2, 1033-1039.	7.8	41
17	Multicopy plasmids allow bacteria to escape from fitness trade-offs during evolutionary innovation. Nature Ecology and Evolution, 2018, 2, 873-881.	7.8	72
18	Cooperation, competition and antibiotic resistance in bacterial colonies. ISME Journal, 2018, 12, 1582-1593.	9.8	160

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19	The Search for â€˜Evolution-Proofâ€™ Antibiotics. Trends in Microbiology, 2018, 26, 471-483.	7.7	68
20	Evolution-proof Antibiotics: Response to Uecker. Trends in Microbiology, 2018, 26, 970-971.	7.7	0
21	Testing the Role of Multicopy Plasmids in the Evolution of Antibiotic Resistance. Journal of Visualized Experiments, 2018, , .	0.3	3
22	Integrative analysis of fitness and metabolic effects of plasmids in <i>Pseudomonas aeruginosa</i> PAO1. ISME Journal, 2018, 12, 3014-3024.	9.8	80
23	Balancing mcr-1 expression and bacterial survival is a delicate equilibrium between essential cellular defence mechanisms. Nature Communications, 2017, 8, 2054.	12.8	157
24	Multicopy plasmids potentiate the evolution of antibiotic resistance in bacteria. Nature Ecology and Evolution, 2017, 1, 10.	7.8	147
25	Fitness Costs of Plasmids: a Limit to Plasmid Transmission. Microbiology Spectrum, 2017, 5, .	3.0	312
26	Divergent evolution peaks under intermediate population bottlenecks during bacterial experimental evolution. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20160749.	2.6	51
27	The Genomic Basis of Evolutionary Innovation in Pseudomonas aeruginosa. PLoS Genetics, 2016, 12, e1006005.	3.5	35
28	Epistatic interactions between ancestral genotype and beneficial mutations shape evolvability in<i>Pseudomonas aeruginosa</i>. Evolution; International Journal of Organic Evolution, 2016, 70, 1659-1666.	2.3	18
29	Environmental variation alters the fitness effects of rifampicin resistance mutations in<i>Pseudomonas aeruginosa</i>. Evolution; International Journal of Organic Evolution, 2016, 70, 725-730.	2.3	30
30	Epistasis between antibiotic resistance mutations and genetic background shape the fitness effect of resistance across species of<i>Pseudomonas</i>. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20160151.	2.6	79
31	Parasite diversity drives rapid host dynamics and evolution of resistance in a bacteria-phage system. Evolution; International Journal of Organic Evolution, 2016, 70, 969-978.	2.3	24
32	The genomic basis of adaptation to the fitness cost of rifampicin resistance in<i>Pseudomonas aeruginosa</i>. Proceedings of the Royal Society B: Biological Sciences, 2016, 283, 20152452.	2.6	25
33	The SOS response increases bacterial fitness, but not evolvability, under a sublethal dose of antibiotic. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20150885.	2.6	56
34	Evaluating the effect of horizontal transmission on the stability of plasmids under different selection regimes. Mobile Genetic Elements, 2015, 5, 29-33.	1.8	20
35	The genetic basis of the fitness costs of antimicrobial resistance: a metaâ€analysis approach. Evolutionary Applications, 2015, 8, 284-295.	3.1	306
36	Limits to compensatory adaptation and the persistence of antibiotic resistance in pathogenic bacteria. Evolution, Medicine and Public Health, 2015, 2015, 4-12.	2.5	65

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37	Sequencing of plasmids pAMBL1 and pAMBL2 from<i>Pseudomonas aeruginosa</i>reveals a<i>bla</i>_{VIM-1}amplification causing high-level carbapenem resistance. Journal of Antimicrobial Chemotherapy, 2015, 70, 3000-3003.	3.0	35
38	Interactions between horizontally acquired genes create a fitness cost in Pseudomonas aeruginosa. Nature Communications, 2015, 6, 6845.	12.8	147
39	Microbial Evolution: Towards Resolving the Plasmid Paradox. Current Biology, 2015, 25, R764-R767.	3.9	82
40	Hereâ€™s to the Losers: Evolvable Residents Accelerate the Evolution of High-Fitness Invaders. American Naturalist, 2015, 186, 41-49.	2.1	2
41	Positive epistasis between co-infecting plasmids promotes plasmid survival in bacterial populations. ISME Journal, 2014, 8, 601-612.	9.8	143
42	Linking System-Wide Impacts of RNA Polymerase Mutations to the Fitness Cost of Rifampin Resistance in Pseudomonas aeruginosa. MBio, 2014, 5, e01562.	4.1	55
43	Fitness Is Strongly Influenced by Rare Mutations of Large Effect in a Microbial Mutation Accumulation Experiment. Genetics, 2014, 197, 981-990.	2.9	59
44	Testing the Role of Genetic Background in Parallel Evolution Using the Comparative Experimental Evolution of Antibiotic Resistance. Molecular Biology and Evolution, 2014, 31, 3314-3323.	8.9	54
45	EVOLUTIONARY REVERSALS OF ANTIBIOTIC RESISTANCE IN EXPERIMENTAL POPULATIONS OF<i>PSEUDOMONAS AERUGINOSA</i>. Evolution; International Journal of Organic Evolution, 2013, 67, n/a-n/a.	2.3	26
46	Evaluating evolutionary models of stress-induced mutagenesis in bacteria. Nature Reviews Genetics, 2013, 14, 221-227.	16.3	115
47	A trade-off between oxidative stress resistance and DNA repair plays a role in the evolution of elevated mutation rates in bacteria. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20130007.	2.6	40
48	EPISTASIS BUFFERS THE FITNESS EFFECTS OF RIFAMPICIN- RESISTANCE MUTATIONS IN PSEUDOMONAS AERUGINOSA. Evolution; International Journal of Organic Evolution, 2011, 65, 2370-2379.	2.3	65
49	The Fitness Cost of Rifampicin Resistance in<i>Pseudomonas aeruginosa</i>Depends on Demand for RNA Polymerase. Genetics, 2011, 187, 817-822.	2.9	77
50	Predicting epistasis: an experimental test of metabolic control theory with bacterial transcription and translation. Journal of Evolutionary Biology, 2010, 23, 488-493.	1.7	25
51	Mutational neighbourhood and mutation supply rate constrain adaptation in<i>Pseudomonas aeruginosa</i>. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 643-650.	2.6	42
52	Comparative Analysis of <i>Myxococcus</i> Predation on Soil Bacteria. Applied and Environmental Microbiology, 2010, 76, 6920-6927.	3.1	128
53	Diminishing Returns From Beneficial Mutations and Pervasive Epistasis Shape the Fitness Landscape for Rifampicin Resistance in <i>Pseudomonas aeruginosa</i>. Genetics, 2010, 186, 1345-1354.	2.9	156
54	A Mixture of â€œCheatsâ€•and â€œCo-Operatorsâ€•Can Enable Maximal Group Benefit. PLoS Biology, 2010, 8, e1000486.	5.6	103

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55	The population genetics of antibiotic resistance: integrating molecular mechanisms and treatment contexts. Nature Reviews Genetics, 2010, 11, 405-414.	16.3	181
56	Dispersal scales up the biodiversityâ€"productivity relationship in an experimental source-sink metacommunity. Proceedings of the Royal Society B: Biological Sciences, 2010, 277, 2339-2345.	2.6	27
57	The evolution of antibiotic resistance: insight into the roles of molecular mechanisms of resistance and treatment context. Discovery Medicine, 2010, 10, 112-8.	0.5	13
58	The Distribution of Fitness Effects of Beneficial Mutations in Pseudomonas aeruginosa. PLoS Genetics, 2009, 5, e1000406.	3.5	100
59	The Beagle in a bottle. Nature, 2009, 457, 824-829.	27.8	185
60	The tragedy of the commons in microbial populations: insights from theoretical, comparative and experimental studies. Heredity, 2008, 100, 233-239.	2.6	94
61	Stable public goods cooperation and dynamic social interactions in yeast. Journal of Evolutionary Biology, 2008, 21, 1836-1843.	1.7	44
62	Mutations of intermediate effect are responsible for adaptation in evolving<i>Pseudomonas fluorescens</i>populations. Biology Letters, 2006, 2, 236-238.	2.3	63
63	Resource competition and social conflict in experimental populations of yeast. Nature, 2006, 441, 498-501.	27.8	258
64	Adaptive radiation in microbial microcosms. Journal of Evolutionary Biology, 2005, 18, 1376-1386.	1.7	89
65	Experimental Evolution ofPseudomonas fluorescensin Simple and Complex Environments. American Naturalist, 2005, 166, 470-480.	2.1	98
66	The evolution of a pleiotropic fitness tradeoff in Pseudomonas fluorescens. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8072-8077.	7.1	156
67	Resource competition and adaptive radiation in a microbial microcosm. Ecology Letters, 2004, 8, 38-46.	6.4	52
68	Divergent evolution during an experimental adaptive radiation. Proceedings of the Royal Society B: Biological Sciences, 2003, 270, 1645-1650.	2.6	52
69	Experimental Adaptive Radiation inPseudomonas. American Naturalist, 2002, 160, 569-581.	2.1	65
70	Fitness Costs of Plasmids: A Limit to Plasmid Transmission. , 0, , 65-79.		18