Diarmaid Hughes

List of Publications by Year in Descending Order

141 papers	9,209 citations	41 h-index	95 g-index
150 ext. papers	10,989 ext. citations	7.9 avg, IF	6.75 L-index

#	Paper	IF	Citations
141	Antibacterial activity of apramycin at acidic pH warrants wide therapeutic window in the treatment of complicated urinary tract infections and acute pyelonephritis. *EBioMedicine*, **2021**, 73, 103652	8.8	1
140	Efficacy of EBL-1003 (apramycin) against Acinetobacter baumannii lung infections in mice. *Clinical Microbiology and Infection*, **2021**, 27, 1315-1321	9.5	6
139	Evaluating the potential efficacy and limitations of a phage for joint antibiotic and phage therapy of infections. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	16
138	Chromosomal Location Determines the Rate of Intrachromosomal Homologous Recombination in Salmonella. *MBio*, **2021**, 12, e0115121	7.8	0
137	Model-Informed Drug Development for Antimicrobials: Translational PK and PK/PD Modeling to Predict an Efficacious Human Dose for Apramycin. *Clinical Pharmacology and Therapeutics*, **2021**, 109, 1063-1073	6.1	6
136	Genetic Architecture and Fitness of Bacterial Interspecies Hybrids. *Molecular Biology and Evolution*, **2021**, 38, 1472-1481	8.3	1
135	Mutant RNA polymerase can reduce susceptibility to antibiotics via ppGpp-independent induction of a stringent-like response. *Journal of Antimicrobial Chemotherapy*, **2021**, 76, 606-615	5.1	2
134	Resistance/fitness trade-off is a barrier to the evolution of MarR inactivation mutants in Escherichia coli. *Journal of Antimicrobial Chemotherapy*, **2021**, 76, 77-83	5.1	5
133	Expression of the qepA1 gene is induced under antibiotic exposure. *Journal of Antimicrobial Chemotherapy*, **2021**, 76, 1433-1440	5.1	1
132	Phenotypic and genetic barriers to establishment of horizontally transferred genes encoding ribosomal protection proteins. *Journal of Antimicrobial Chemotherapy*, **2021**, 76, 1441-1447	5.1	0
131	Antibacterial sulfonimidamide-based oligopeptides as type I signal peptidase inhibitors: Synthesis and biological evaluation. *European Journal of Medicinal Chemistry*, **2021**, 224, 113699	6.8	3
130	The SNAP hypothesis: Chromosomal rearrangements could emerge from positive Selection during Niche Adaptation. *PLoS Genetics*, **2020**, 16, e1008615	6	3
129	Population Bottlenecks Strongly Influence the Evolutionary Trajectory to Fluoroquinolone Resistance in Escherichia coli. *Molecular Biology and Evolution*, **2020**, 37, 1637-1646	8.3	18
128	Antibiotic resistance by high-level intrinsic suppression of a frameshift mutation in an essential gene. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 3185-3191	11.5	6
127	Structure-activity relationship studies on the inhibition of the bacterial translation of novel Odilorhabdins analogues. *Bioorganic and Medicinal Chemistry*, **2020**, 28, 115469	3.4	2
126	Isopedopeptins A-H: Cationic Cyclic Lipodepsipeptides from UP508 Targeting WHO Top-Priority Carbapenem-Resistant Bacteria. *ACS Chemical Biology*, **2020**, 15, 2937-2944	4.9	3
125	In vitro activity of apramycin against multidrug-, carbapenem- and aminoglycoside-resistant Enterobacteriaceae and Acinetobacter baumannii. *Journal of Antimicrobial Chemotherapy*, **2019**, 74, 944-952	5.1	40

124	Operon Concatenation Is an Ancient Feature That Restricts the Potential to Rearrange Bacterial Chromosomes. *Molecular Biology and Evolution*, **2019**, 36, 1990-2000	8.3	7
123	Measuring Homologous Recombination Rates between Chromosomal Locations in. *Bio-protocol*, **2019**, 9, e3159	0.9	1
122	Selection and Transmission of Antibiotic-Resistant Bacteria **2019**, 117-137		1
121	Odilorhabdins, Antibacterial Agents that Cause Miscoding by Binding at a New Ribosomal Site. *Molecular Cell*, **2018**, 70, 83-94.e7	17.6	58
120	Increased expression of Qnr is sufficient to confer clinical resistance to ciprofloxacin in Escherichia coli. *Journal of Antimicrobial Chemotherapy*, **2018**, 73, 348-352	5.1	16
119	Methods to Determine Mutational Trajectories After Experimental Evolution of Antibiotic Resistance. *Methods in Molecular Biology*, **2018**, 1736, 95-103	1.4	
118	Imidazopyrazinones (IPYs): Non-Quinolone Bacterial Topoisomerase Inhibitors Showing Partial Cross-Resistance with Quinolones. *Journal of Medicinal Chemistry*, **2018**, 61, 3565-3581	8.3	11
117	Co-evolution with recombination affects the stability of mobile genetic element insertions within gene families of Salmonella. *Molecular Microbiology*, **2018**, 108, 697-710	4.1	8
116	Predicting mutant selection in competition experiments with ciprofloxacin-exposed Escherichia coli. *International Journal of Antimicrobial Agents*, **2018**, 51, 399-406	14.3	2
115	Muramyl Endopeptidase Spr Contributes to Intrinsic Vancomycin Resistance in Serovar Typhimurium. *Frontiers in Microbiology*, **2018**, 9, 2941	5.7	2
114	Mechanisms of fitness cost reduction for rifampicin-resistant strains with deletion or duplication mutations in rpoB. *Scientific Reports*, **2018**, 8, 17488	4.9	9
113	Effect of aminoacyl-tRNA synthetase mutations on susceptibility to ciprofloxacin in Escherichia coli. *Journal of Antimicrobial Chemotherapy*, **2018**, 73, 3285-3292	5.1	11
112	Transcriptional Regulation Buffers Gene Dosage Effects on a Highly Expressed Operon in. *MBio*, **2018**, 9,	7.8	5
111	Boronic ester-linked macrocyclic lipopeptides as serine protease inhibitors targeting Escherichia coli type I signal peptidase. *European Journal of Medicinal Chemistry*, **2018**, 157, 1346-1360	6.8	8
110	Design, synthesis and in vitro biological evaluation of oligopeptides targeting E. coli type I signal peptidase (LepB). *Bioorganic and Medicinal Chemistry*, **2017**, 25, 897-911	3.4	8
109	Mutation Supply and Relative Fitness Shape the Genotypes of Ciprofloxacin-Resistant Escherichia coli. *Molecular Biology and Evolution*, **2017**, 34, 1029-1039	8.3	49
108	Environmental and genetic modulation of the phenotypic expression of antibiotic resistance. *FEMS Microbiology Reviews*, **2017**, 41, 374-391	15.1	73
107	Alternative Evolutionary Pathways for Drug-Resistant Small Colony Variant Mutants in. *MBio*, **2017**, 8,	7.8	34

106	The processive kinetics of gene conversion in bacteria. *Molecular Microbiology*, **2017**, 104, 752-760	4.1	12
105	Can a pharmacokinetic/pharmacodynamic (PKPD) model be predictive across bacterial densities and strains? External evaluation of a PKPD model describing longitudinal in vitro data. *Journal of Antimicrobial Chemotherapy*, **2017**, 72, 3108-3116	5.1	14
104	Functional Constraints on Replacing an Essential Gene with Its Ancient and Modern Homologs. *MBio*, **2017**, 8,	7.8	27
103	Fitness cost constrains the spectrum of marR mutations in ciprofloxacin-resistant Escherichia coli. *Journal of Antimicrobial Chemotherapy*, **2017**, 72, 3016-3024	5.1	25
102	Evolutionary Trajectories to Antibiotic Resistance. *Annual Review of Microbiology*, **2017**, 71, 579-596	17.5	93
101	Ciprofloxacin selects for RNA polymerase mutations with pleiotropic antibiotic resistance effects. *Journal of Antimicrobial Chemotherapy*, **2017**, 72, 75-84	5.1	31
100	Having your cake and eating it - small colony variants can evolve faster growth rate without losing their antibiotic resistance. *Microbial Cell*, **2017**, 4, 275-277	3.9	4
99	Early-Life Human Microbiota Associated With Childhood Allergy Promotes the T Helper 17 Axis in Mice. *Frontiers in Immunology*, **2017**, 8, 1699	8.4	10
98	Selection and Transmission of Antibiotic-Resistant Bacteria. *Microbiology Spectrum*, **2017**, 5,	8.9	26
97	Using the power of genetic suppressors to probe the essential functions of RNase E. *Current Genetics*, **2016**, 62, 53-7	2.9	6
96	Evidence for the critical role of a secondary site rpoB mutation in the compensatory evolution and successful transmission of an MDR tuberculosis outbreak strain. *Journal of Antimicrobial Chemotherapy*, **2016**, 71, 324-32	5.1	26
95	The Selective Advantage of Synonymous Codon Usage Bias in Salmonella. *PLoS Genetics*, **2016**, 12, e1005926	5.9	41
94	Autoregulation of the tufB operon in Salmonella. *Molecular Microbiology*, **2016**, 100, 1004-16	4.1	13
93	Mechanisms and consequences of bacterial resistance to antimicrobial peptides. *Drug Resistance Updates*, **2016**, 26, 43-57	23.2	353
92	Discovery and structure-activity relationships of a novel isothiazolone class of bacterial type II topoisomerase inhibitors. *Bioorganic and Medicinal Chemistry Letters*, **2016**, 26, 4179-83	2.9	9
91	Evolutionary consequences of drug resistance: shared principles across diverse targets and organisms. *Nature Reviews Genetics*, **2015**, 16, 459-71	30.1	150
90	Genetics: Location affects sporulation. *Nature*, **2015**, 525, 42-3	50.4	2
89	A mechanism-based pharmacokinetic/pharmacodynamic model allows prediction of antibiotic killing from MIC values for WT and mutants. *Journal of Antimicrobial Chemotherapy*, **2015**, 70, 3051-60	5.1	26

88	Comprehensive phenotypic characterization of rifampicin resistance mutations in Salmonella provides insight into the evolution of resistance in Mycobacterium tuberculosis. *Journal of Antimicrobial Chemotherapy*, **2015**, 70, 680-5	5.1	45
87	Turnover of mRNAs is one of the essential functions of RNase E. *Molecular Microbiology*, **2015**, 98, 34-45	4.1	16
86	Microbiological effects of sublethal levels of antibiotics. *Nature Reviews Microbiology*, **2014**, 12, 465-78	22.2	856
85	Mutant prevention concentrations of pradofloxacin for susceptible and mutant strains of Escherichia coli with reduced fluoroquinolone susceptibility. *International Journal of Antimicrobial Agents*, **2014**, 44, 354-7	14.3	4
84	Cell-wall-inhibiting antibiotic combinations with activity against multidrug-resistant Klebsiella pneumoniae and Escherichia coli. *Clinical Microbiology and Infection*, **2014**, 20, O267-73	9.5	15
83	Reducing ppGpp level rescues an extreme growth defect caused by mutant EF-Tu. *PLoS ONE*, **2014**, 9, e90486	3.7	8
82	Acetate availability and utilization supports the growth of mutant sub-populations on aging bacterial colonies. *PLoS ONE*, **2014**, 9, e109255	3.7	10
81	Effects of Antibiotic Resistance on Bacterial Fitness, Virulence, and Transmission **2014**, 307-318		1
80	Selection and evolution of resistance to antimicrobial drugs. *IUBMB Life*, **2014**, 66, 521-9	4.7	24
79	Discovery and preclinical development of new antibiotics. *Upsala Journal of Medical Sciences*, **2014**, 119, 162-9	2.8	64
78	Genetic characterization of compensatory evolution in strains carrying rpoB Ser531Leu, the rifampicin resistance mutation most frequently found in clinical isolates. *Journal of Antimicrobial Chemotherapy*, **2013**, 68, 2493-7	5.1	65
77	Rifampicin Resistance: Fitness Costs and the Significance of Compensatory Evolution. *Antibiotics*, **2013**, 2, 206-16	4.9	15
76	Fitness-compensatory mutations in rifampicin-resistant RNA polymerase. *Molecular Microbiology*, **2012**, 85, 142-51	4.1	104
75	Selection of resistance at lethal and non-lethal antibiotic concentrations. *Current Opinion in Microbiology*, **2012**, 15, 555-60	7.9	105
74	Evolution of antibiotic resistance at non-lethal drug concentrations. *Drug Resistance Updates*, **2012**, 15, 162-72	23.2	193
73	Fitness cost: a bacteriological explanation for the demise of the first international methicillin-resistant Staphylococcus aureus epidemic. *Journal of Antimicrobial Chemotherapy*, **2012**, 67, 1325-32	5.1	38
72	Genome-wide detection of spontaneous chromosomal rearrangements in bacteria. *PLoS ONE*, **2012**, 7, e42639	3.7	25
71	Persistence of antibiotic resistance in bacterial populations. *FEMS Microbiology Reviews*, **2011**, 35, 901-11	15.1	248

70	Intra- and extracellular activities of dicloxacillin and linezolid against a clinical Staphylococcus aureus strain with a small-colony-variant phenotype in an in vitro model of THP-1 macrophages and an in vivo mouse peritonitis model. *Antimicrobial Agents and Chemotherapy*, **2011**, 55, 1443-52	5.9	18
69	Temperature-sensitive mutants of RNase E in Salmonella enterica. *Journal of Bacteriology*, **2011**, 193, 6639-50	3.5	6
68	Can phylogenetic type predict resistance development?. *Journal of Antimicrobial Chemotherapy*, **2011**, 66, 778-87	5.1	20
67	Selection of resistant bacteria at very low antibiotic concentrations. *PLoS Pathogens*, **2011**, 7, e1002158	7.6	913
66	The Origin of Mutants under Selection: Interactions of Mutation, Growth, and Selection. *EcoSal Plus* , **2011**, 4,	7.7	11
65	Genetic complexity of fusidic acid-resistant small colony variants (SCV) in Staphylococcus aureus. *PLoS ONE*, **2011**, 6, e28366	3.7	22
64	Biological roles of translesion synthesis DNA polymerases in eubacteria. *Molecular Microbiology*, **2010**, 77, 540-8	4.1	22
63	Effect of translesion DNA polymerases, endonucleases and RpoS on mutation rates in Salmonella typhimurium. *Genetics*, **2010**, 185, 783-95	4	14
62	Measurements of heme levels and respiration rate in Salmonella enterica serovar typhimurium. *Methods in Molecular Biology*, **2010**, 642, 105-12	1.4	
61	Assays of sensitivity of antibiotic-resistant bacteria to hydrogen peroxide and measurement of catalase activity. *Methods in Molecular Biology*, **2010**, 642, 95-103	1.4	10
60	Antibiotic resistance and its cost: is it possible to reverse resistance?. *Nature Reviews Microbiology*, **2010**, 8, 260-71	22.2	1375
59	Interplay in the selection of fluoroquinolone resistance and bacterial fitness. *PLoS Pathogens*, **2009**, 5, e1000541	7.6	224
58	Genetic determinants of resistance to fusidic acid among clinical bacteremia isolates of Staphylococcus aureus. *Antimicrobial Agents and Chemotherapy*, **2009**, 53, 2059-65	5.9	46
57	Gene amplification and adaptive evolution in bacteria. *Annual Review of Genetics*, **2009**, 43, 167-95	14.5	191
56	Mutants of the RNA-processing enzyme RNase E reverse the extreme slow-growth phenotype caused by a mutant translation factor EF-Tu. *Molecular Microbiology*, **2008**, 70, 1194-209	4.1	17
55	Identification of the genetic basis for clinical menadione-auxotrophic small-colony variant isolates of Staphylococcus aureus. *Antimicrobial Agents and Chemotherapy*, **2008**, 52, 4017-22	5.9	80
54	Accumulation of mutants in "aging" bacterial colonies is due to growth under selection, not stress-induced mutagenesis. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 11863-8	11.5	71
53	Genetic and phenotypic identification of fusidic acid-resistant mutants with the small-colony-variant phenotype in Staphylococcus aureus. *Antimicrobial Agents and Chemotherapy*, **2007**, 51, 4438-46	5.9	75

52	Dose-related selection of fluoroquinolone-resistant Escherichia coli. *Journal of Antimicrobial Chemotherapy*, **2007**, 60, 795-801	5.1	40
51	Weak mutators can drive the evolution of fluoroquinolone resistance in Escherichia coli. *Antimicrobial Agents and Chemotherapy*, **2006**, 50, 3454-6	5.9	26
50	Selection of ciprofloxacin resistance in Escherichia coli in an in vitro kinetic model: relation between drug exposure and mutant prevention concentration. *Journal of Antimicrobial Chemotherapy*, **2006**, 57, 1116-21	5.1	100
49	Hyper-susceptibility of a fusidic acid-resistant mutant of Salmonella to different classes of antibiotics. *FEMS Microbiology Letters*, **2005**, 247, 215-20	2.9	23
48	Biological consequences for bacteria of homologous recombination **2005**, 351-384		
47	Biological cost of single and multiple norfloxacin resistance mutations in Escherichia coli implicated in urinary tract infections. *Antimicrobial Agents and Chemotherapy*, **2005**, 49, 2343-51	5.9	112
46	Establishment of a superficial skin infection model in mice by using Staphylococcus aureus and Streptococcus pyogenes. *Antimicrobial Agents and Chemotherapy*, **2005**, 49, 3435-41	5.9	123
45	Mutant prevention concentrations of ciprofloxacin for urinary tract infection isolates of Escherichia coli. *Journal of Antimicrobial Chemotherapy*, **2005**, 55, 938-43	5.1	64
44	Fusidic acid-resistant mutants of Salmonella enterica serovar typhimurium have low levels of heme and a reduced rate of respiration and are sensitive to oxidative stress. *Antimicrobial Agents and Chemotherapy*, **2004**, 48, 3877-83	5.9	16
43	Evidence against reciprocal recombination as the basis for tuf gene conversion in Salmonella enterica serovar Typhimurium. *Journal of Molecular Biology*, **2004**, 338, 463-7	6.5	12
42	Exploiting genomics, genetics and chemistry to combat antibiotic resistance. *Nature Reviews Genetics*, **2003**, 4, 432-41	30.1	85
41	Mutation rate and evolution of fluoroquinolone resistance in Escherichia coli isolates from patients with urinary tract infections. *Antimicrobial Agents and Chemotherapy*, **2003**, 47, 3222-32	5.9	255
40	Fusidic acid-resistant mutants of Salmonella enterica serovar Typhimurium with low fitness in vivo are defective in RpoS induction. *Antimicrobial Agents and Chemotherapy*, **2003**, 47, 3743-9	5.9	33
39	Biological cost and compensatory evolution in fusidic acid-resistant Staphylococcus aureus. *Molecular Microbiology*, **2001**, 40, 433-9	4.1	193
38	Fusidic acid-resistant EF-G perturbs the accumulation of ppGpp. *Molecular Microbiology*, **2000**, 37, 98-107	4.1	38
37	Co-evolution of the tuf genes links gene conversion with the generation of chromosomal inversions. *Journal of Molecular Biology*, **2000**, 297, 355-64	6.5	35
36	Structure of a mutant EF-G reveals domain III and possibly the fusidic acid binding site. *Journal of Molecular Biology*, **2000**, 303, 593-603	6.5	128
35	Effects of environment on compensatory mutations to ameliorate costs of antibiotic resistance. *Science*, **2000**, 287, 1479-82	33.3	331

34	Evaluating genome dynamics: the constraints on rearrangements within bacterial genomes. *Genome Biology*, **2000**, 1, REVIEWS0006	18.3	71
33	Novel ribosomal mutations affecting translational accuracy, antibiotic resistance and virulence of Salmonella typhimurium. *Molecular Microbiology*, **1999**, 31, 53-8	4.1	116
32	Virulence of antibiotic-resistant Salmonella typhimurium. *Proceedings of the National Academy of Sciences of the United States of America*, **1998**, 95, 3949-53	11.5	255
31	Carbon starvation of Salmonella typhimurium does not cause a general increase of mutation rates. *Journal of Bacteriology*, **1997**, 179, 6688-91	3.5	24
30	Mutants of EF-Tu defective in binding aminoacyl-tRNA. *FEBS Letters*, **1996**, 382, 297-303	3.8	12
29	The dynamic structure of EF-G studied by fusidic acid resistance and internal revertants. *Journal of Molecular Biology*, **1996**, 258, 420-32	6.5	62
28	Homologous recombination between the tuf genes of Salmonella typhimurium. *Journal of Molecular Biology*, **1996**, 260, 506-22	6.5	84
27	Muller's ratchet decreases fitness of a DNA-based microbe. *Proceedings of the National Academy of Sciences of the United States of America*, **1996**, 93, 906-7	11.5	139
26	tRNA-ribosome interactions. *Biochemistry and Cell Biology*, **1995**, 73, 1049-54	3.6	6
25	A new mutation in 16S rRNA of Escherichia coli conferring spectinomycin resistance. *Nucleic Acids Research*, **1995**, 23, 464-6	20.1	33
24	Mutations to kirromycin resistance occur in the interface of domains I and III of EF-Tu.GTP. *FEBS Letters*, **1994**, 352, 118-22	3.8	53
23	Fusidic acid-resistant mutants define three regions in elongation factor G of Salmonella typhimurium. *Gene*, **1994**, 143, 55-9	3.8	87
22	Ternary complex-ribosome interaction: its influence on protein synthesis and on growth rate. *Biochemical Society Transactions*, **1993**, 21, 851-7	5.1	7
21	A single amino acid substitution in elongation factor Tu disrupts interaction between the ternary complex and the ribosome. *Journal of Bacteriology*, **1993**, 175, 240-50	3.5	35
20	Suppression of rpsL phenotypes by tuf mutations reveals a unique relationship between translation elongation and growth rate. *Molecular Microbiology*, **1993**, 7, 275-84	4.1	38
19	Growth and translation elongation rate are sensitive to the concentration of EF-Tu. *Molecular Microbiology*, **1993**, 8, 761-70	4.1	33
18	Comparison of the complete sequence of the str operon in Salmonella typhimurium and Escherichia coli. *Gene*, **1992**, 120, 93-8	3.8	13
17	Error-prone EF-Tu reduces in vivo enzyme activity and cellular growth rate. *Molecular Microbiology*, **1991**, 5, 623-30	4.1	21

16	The nucleotide sequence of rpsL and its flanking regions in Salmonella typhimurium. *Gene*, **1991**, 104, 123-4	3.8	2
15	Missense substitutions lethal to essential functions of EF-Tu. *Biochimie*, **1991**, 73, 1457-64	4.6	17
14	Overproduction of release factor reduces spontaneous frameshifting and frameshift suppression by mutant elongation factor Tu. *Journal of Bacteriology*, **1990**, 172, 6721-6	3.5	10
13	Both genes for EF-Tu in Salmonella typhimurium are individually dispensable for growth. *Journal of Molecular Biology*, **1990**, 215, 41-51	6.5	34
12	The role of EF-Tu and other translation components in determining translocation step size. *Biochimica Et Biophysica Acta Gene Regulatory Mechanisms*, **1990**, 1050, 274-8		28
11	Suppression of a -1 frameshift mutation by a recessive tRNA suppressor which causes doublet decoding. *Journal of Bacteriology*, **1989**, 171, 3824-30	3.5	22
10	Genetic characterization of frameshift suppressors with new decoding properties. *Journal of Bacteriology*, **1989**, 171, 1028-34	3.5	17
9	Novel Mutants of EF-Tu **1989**, 51-56		1
8	Mutant forms of tufA and tufB independently suppress nonsense mutations. *Journal of Molecular Biology*, **1987**, 197, 611-5	6.5	32
7	The isolation and mapping of EF-Tu mutations in Salmonella typhimurium. *Molecular Genetics and Genomics*, **1986**, 202, 108-11		16
6	Towards the cloning of the calf prochymosin gene. *Biochemical Society Transactions*, **1984**, 12, 487-488	5.1	1
5	The States, Conformational Dynamics, and Fusidic Acid-Resistant Mutants of Elongation Factor G359-365		1
4	Impact of Homologous Recombination on Genome Organization and Stability109-128		16
3	Joint antibiotic and phage therapy: addressing the limitations of a seemingly ideal phage for treating Staphylococcus aureus infections		3
2	Muramyl endopeptidase Spr contributes to intrinsic vancomycin resistance inSalmonella entericaserovar Typhimurium		1
1	Adventures with Mutation and Selection in Beehive and Cow Country245-253		