Laurence G Rahme

List of Publications by Year
in descending order

110 papers	12,105 citations	43973 48 h-index	27345 106 g-index
118 all docs	118 docs citations	118 times ranked	14762 citing authors

#	Article	IF	Citations
1	Genomic responses in mouse models poorly mimic human inflammatory diseases. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 3507-3512.	3.3	2,518
2	Molecular Mechanisms of Bacterial Virulence Elucidated Using a Pseudomonas aeruginosaâ€“ Caenorhabditis elegans Pathogenesis Model. Cell, 1999, 96, 47-56.	13.5	721
3	Analysis of Pseudomonas aeruginosa 4-hydroxy-2-alkylquinolines (HAQs) reveals a role for 4-hydroxy-2-heptylquinoline in cell-to-cell communication. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 1339-1344.	3.3	561
4	Genomic analysis reveals that Pseudomonas aeruginosa virulence is combinatorial. Genome Biology, 2006, 7, R90.	13.9	479
5	Positive Correlation between Virulence ofPseudomonas aeruginosa Mutants in Mice and Insects. Journal of Bacteriology, 2000, 182, 3843-3845.	1.0	475
6	The contribution of MvfR to Pseudomonas aeruginosa pathogenesis and quorum sensing circuitry regulation: multiple quorum sensing-regulated genes are modulated without affecting lasRI, rhlRI or the production of N-acyl- l-homoserine lactones. Molecular Microbiology, 2004, 55, 998-1014.	1.2	396
7	The broad host range pathogen Pseudomonas aeruginosa strain PA14 carries two pathogenicity islands harboring plant and animal virulence genes. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 2530-2535.	3.3	364
8	Pseudomonas aeruginosa-Plant Root Interactions. Pathogenicity, Biofilm Formation, and Root Exudation. Plant Physiology, 2004, 134, 320-331.	2.3	327
9	MvfR, a key Pseudomonas aeruginosa pathogenicity LTTR-class regulatory protein, has dual ligands. Molecular Microbiology, 2006, 62, 1689-1699.	1.2	273
10	<i>Drosophila melanogaster</i> as a model for human intestinal infection and pathology. DMM Disease Models and Mechanisms, 2011, 4, 21-30.	1.2	254
11	Application of genome-wide expression analysis to human health and disease. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 4801-4806.	3.3	238
12	Identification of Anti-virulence Compounds That Disrupt Quorum-Sensing Regulated Acute and Persistent Pathogenicity. PLoS Pathogens, 2014, 10, e1004321.	2.1	238
13	Electrospray/mass spectrometric identification and analysis of 4-hydroxy-2-alkylquinolines (HAQs) produced by Pseudomonas aeruginosa. Journal of the American Society for Mass Spectrometry, 2004, 15, 862-869.	1.2	232
14	Synergy between bacterial infection and genetic predisposition in intestinal dysplasia. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 20883-20888.	3.3	200
15	Inhibitors of Pathogen Intercellular Signals as Selective Anti-Infective Compounds. PLoS Pathogens, 2007, 3, e126.	2.1	184
16	Elucidating the molecular mechanisms of bacterial virulence using non-mammalian hosts. Molecular Microbiology, 2000, 37, 981-988.	1.2	178
17	Dynorphin Activates Quorum Sensing Quinolone Signaling in Pseudomonas aeruginosa. PLoS Pathogens, 2007, 3, e35.	2.1	170
18	The Drosophila melanogaster Toll Pathway Participates in Resistance to Infection by the Gram-Negative Human Pathogen Pseudomonas aeruginosa. Infection and Immunity, 2003, 71, 4059-4066.	1.0	162

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19	Profiling early infection responses: Pseudomonas aeruginosa eludes host defenses by suppressing antimicrobial peptide gene expression. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 2573-2578.	3.3	149
20	Auto Poisoning of the Respiratory Chain by a Quorum-Sensing-Regulated Molecule Favors Biofilm Formation and Antibiotic Tolerance. Current Biology, 2016, 26, 195-206.	1.8	148
21	Drosophila melanogaster as a model host for studying Pseudomonas aeruginosa infection. Nature Protocols, 2009, 4, 1285-1294.	5.5	136
22	COMMONMECHANISMS FORPATHOGENS OFPLANTS ANDANIMALS. Annual Review of Phytopathology, 2001, 39, 259-284.	3.5	135
23	Use of the lambda Red recombinase system to rapidly generate mutants in Pseudomonas aeruginosa. BMC Molecular Biology, 2008, 9, 20.	3.0	128
24	A method for high throughput determination of viable bacteria cell counts in 96-well plates. BMC Microbiology, 2012, 12, 259.	1.3	128
25	Considerations and caveats in anti-virulence drug development. Current Opinion in Microbiology, 2016, 33, 41-46.	2.3	128
26	Challenge of Drosophila melanogaster with Cryptococcus neoformans and Role of the Innate Immune Response. Eukaryotic Cell, 2004, 3, 413-419.	3.4	126
27	Mutation analysis of the Pseudomonas aeruginosa mvfR and pqsABCDE gene promoters demonstrates complex quorum-sensing circuitry. Microbiology (United Kingdom), 2006, 152, 1679-1686.	0.7	126
28	<i>Pseudomonas aeruginosa</i> Alginate Overproduction Promotes Coexistence with <i>Staphylococcus aureus</i> in a Model of Cystic Fibrosis Respiratory Infection. MBio, 2017, 8, .	1.8	124
29	The End of an Old Hypothesis: The Pseudomonas Signaling Molecules 4-Hydroxy-2-Alkylquinolines Derive from Fatty Acids, Not 3-Ketofatty Acids. Chemistry and Biology, 2013, 20, 1481-1491.	6.2	122
30	Dysfunctional expansion of hematopoietic stem cells and block of myeloid differentiation in lethal sepsis. Blood, 2009, 114, 4064-4076.	0.6	120
31	Pathogenesis of the Human Opportunistic PathogenPseudomonas aeruginosa PA14 in Arabidopsis. Plant Physiology, 2000, 124, 1766-1774.	2.3	118
32	Differential Roles of the Pseudomonas aeruginosa PA14 rpoN Gene in Pathogenicity in Plants, Nematodes, Insects, and Mice. Journal of Bacteriology, 2001, 183, 7126-7134.	1.0	117
33	A Quorum Sensing Regulated Small Volatile Molecule Reduces Acute Virulence and Promotes Chronic Infection Phenotypes. PLoS Pathogens, 2011, 7, e1002192.	2.1	100
34	The roles of mucD and alginate in the virulence of Pseudomonas aeruginosa in plants, nematodes and mice. Molecular Microbiology, 2008, 41, 1063-1076.	1.2	98
35	Evidence for Direct Control of Virulence and Defense Gene Circuits by the Pseudomonas aeruginosa Quorum Sensing Regulator, MvfR. Scientific Reports, 2016, 6, 34083.	1.6	95
36	Burn injury causes mitochondrial dysfunction in skeletal muscle. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5368-5373.	3.3	93

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37	Identification of Virulence Genes in a Pathogenic Strain of Pseudomonas aeruginosa by Representational Difference Analysis. Journal of Bacteriology, 2002, 184, 952-961.	1.0	92
38	Modeling Pseudomonas aeruginosa pathogenesis in plant hosts. Nature Protocols, 2009, 4, 117-124.	5.5	83
39	Skeletal muscle mitochondrial uncoupling in a murine cancer cachexia model. International Journal of Oncology, 2013, 43, 886-894.	1.4	79
40	A Quorum Sensing Small Volatile Molecule Promotes Antibiotic Tolerance in Bacteria. PLoS ONE, 2013, 8, e80140.	1.1	77
41	Homeostatic Interplay between Bacterial Cell-Cell Signaling and Iron in Virulence. PLoS Pathogens, 2010, 6, e1000810.	2.1	76
42	Modulation of Expression of the ToxR Regulon in <i>Vibrio cholerae</i> by a Member of the Two-Component Family of Response Regulators. Infection and Immunity, 1998, 66, 5854-5861.	1.0	74
43	Nuclear magnetic resonance in conjunction with functional genomics suggests mitochondrial dysfunction in a murine model of cancer cachexia. International Journal of Molecular Medicine, 2011, 27, 15-24.	1.8	70
44	Intestinal alkaline phosphatase targets the gut barrier to prevent aging. JCI Insight, 2020, 5, .	2.3	66
45	Pharmacological Inhibition of the Pseudomonas aeruginosa MvfR Quorum-Sensing System Interferes with Biofilm Formation and Potentiates Antibiotic-Mediated Biofilm Disruption. Antimicrobial Agents and Chemotherapy, 2017, 61, .	1.4	65
46	Analysis of factorial time-course microarrays with application to a clinical study of burn injury. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 9923-9928.	3.3	62
47	Honeyâ€™s Ability to Counter Bacterial Infections Arises from Both Bactericidal Compounds and QS Inhibition. Frontiers in Microbiology, 2012, 3, 144.	1.5	59
48	A quorum-sensing signal promotes host tolerance training through HDAC1-mediated epigenetic reprogramming. Nature Microbiology, 2016, 1, 16174.	5.9	56
49	Molecular Insights into Function and Competitive Inhibition of <i>Pseudomonas aeruginosa</i> Multiple Virulence Factor Regulator. MBio, 2018, 9, .	1.8	53
50	Immune response to bacteria induces dissemination of Rasâ€activated <i>Drosophila</i> hindgut cells. EMBO Reports, 2012, 13, 569-576.	2.0	51
51	The Quorum Sensing Volatile Molecule 2-Amino Acetophenon Modulates Host Immune Responses in a Manner that Promotes Life with Unwanted Guests. PLoS Pathogens, 2012, 8, e1003024.	2.1	49
52	In-depth Profiling of MvfR-Regulated Small Molecules in Pseudomonas aeruginosa after Quorum Sensing Inhibitor Treatment. Frontiers in Microbiology, 2017, 8, 924.	1.5	49
53	Combination of high-resolution magic angle spinning proton magnetic resonance spectroscopy and microscale genomics to type brain tumor biopsies. International Journal of Molecular Medicine, 2007, 20, 199-208.	1.8	42
54	Designed Small-Molecule Inhibitors of the Anthranilyl-CoA Synthetase PqsA Block Quinolone Biosynthesis in <i>Pseudomonas aeruginosa</i>. ACS Chemical Biology, 2016, 11, 3061-3067.	1.6	41

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55	TNF-Î±/IL-10 Ratio Correlates with Burn Severity and May Serve as a Risk Predictor of Increased Susceptibility to Infections. Frontiers in Public Health, 2016, 4, 216.	1.3	39
56	Polypharmacology Approaches against the <i>Pseudomonas aeruginosa</i> MvfR Regulon and Their Application in Blocking Virulence and Antibiotic Tolerance. ACS Chemical Biology, 2017, 12, 1435-1443.	1.6	36
57	Prediction of Multiple Infections After Severe Burn Trauma. Annals of Surgery, 2015, 261, 781-792.	2.1	33
58	Involvement of Skeletal Muscle Gene Regulatory Network in Susceptibility to Wound Infection Following Trauma. PLoS ONE, 2007, 2, e1356.	1.1	32
59	A Small Volatile Bacterial Molecule Triggers Mitochondrial Dysfunction in Murine Skeletal Muscle. PLoS ONE, 2013, 8, e74528.	1.1	32
60	Proton NMR spectroscopy shows lipids accumulate in skeletal muscle in response to burn traumaâ€induced apoptosis. FASEB Journal, 2005, 19, 1431-1440.	0.2	31
61	Do standard burn mortality formulae work on a population of severely burned children and adults?. Burns, 2015, 41, 935-945.	1.1	31
62	PqsA is required for the biosynthesis of 2,4-dihydroxyquinoline (DHQ), a newly identified metabolite produced by <i>Pseudomonas aeruginosa</i> and <i>Burkholderia thailandensis</i>. Biological Chemistry, 2007, 388, 839-845.	1.2	29
63	Downâ€regulation of glutatione Sâ€transferase Î± 4 (hGSTA4) in the muscle of thermally injured patients is indicative of susceptibility to bacterial infection. FASEB Journal, 2012, 26, 730-737.	0.2	29
64	Comparison of longitudinal leukocyte gene expression after burn injury or trauma-hemorrhage in mice. Physiological Genomics, 2008, 32, 299-310.	1.0	28
65	In vivo high-resolution magic angle spinning proton NMR spectroscopy of Drosophila melanogaster flies as a model system to investigate mitochondrial dysfunction in Drosophila GST2 mutants. International Journal of Molecular Medicine, 2014, 34, 327-333.	1.8	28
66	Mitochondriaâ€targeted antioxidant promotes recovery of skeletal muscle mitochondrial function after burn trauma assessed by<i>in vivo</i>³¹P nuclear magnetic resonance and electron paramagnetic resonance spectroscopy. FASEB Journal, 2013, 27, 2521-2530.	0.2	22
67	Microarray analysis suggests that burn injury results in mitochondial dysfunction in human skeletal muscle. International Journal of Molecular Medicine, 2009, 24, 387-92.	1.8	22
68	Targeting the gut to prevent sepsis from a cutaneous burn. JCI Insight, 2020, 5, .	2.3	19
69	Local and Distant Burn Injury Alter Immuno-Inflammatory Gene Expression in Skeletal Muscle. Journal of Trauma, 2006, 61, 280-292.	2.3	18
70	Assessing Pseudomonas aeruginosa Persister/Antibiotic Tolerant Cells. Methods in Molecular Biology, 2014, 1149, 699-707.	0.4	18
71	Production of<i>Pseudomonas aeruginosa</i>Intercellular Small Signaling Molecules in Human Burn Wounds. Journal of Pathogens, 2011, 2011, 1-5.	0.9	17
72	In vivo high-resolution magic angle spinning magnetic resonance spectroscopy of Drosophila melanogaster at 14.1 T shows trauma in aging and in innate immune-deficiency is linked to reduced insulin signaling. International Journal of Molecular Medicine, 2010, 26, 175-84.	1.8	17

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73	Bacterial-excreted small volatile molecule 2-aminoacetophenone induces oxidative stress and apoptosis in murine skeletal muscle. International Journal of Molecular Medicine, 2016, 37, 867-878.	1.8	16
74	NF-Î°Bp50 and HDAC1 Interaction Is Implicated in the Host Tolerance to Infection Mediated by the Bacterial Quorum Sensing Signal 2-Aminoacetophenone. Frontiers in Microbiology, 2017, 8, 1211.	1.5	15
75	Animal Models for Pseudomonas aeruginosa Quorum Sensing Studies. Methods in Molecular Biology, 2018, 1673, 227-241.	0.4	15
76	Burn trauma in skeletal muscle results in oxidative stress as assessed by in vivo electron paramagnetic resonance. Molecular Medicine Reports, 2008, 1, 813-819.	1.1	15
77	Combination of high-resolution magic angle spinning proton magnetic resonance spectroscopy and microscale genomics to type brain tumor biopsies. International Journal of Molecular Medicine, 2007, , .	1.8	14
78	Live-cell high resolution magic angle spinning magnetic resonance spectroscopy for in vivo analysis of Pseudomonas aeruginosa metabolomics. Biomedical Reports, 2013, 1, 707-712.	0.9	14
79	The Pathogenic Properties of a Novel and Conserved Gene Product, KerV, in Proteobacteria. PLoS ONE, 2009, 4, e7167.	1.1	13
80	Editorial: Beyond Antimicrobials: Non-traditional Approaches to Combating Multidrug-Resistant Bacteria. Frontiers in Cellular and Infection Microbiology, 2019, 9, 343.	1.8	13
81	Structural, mechanistic, and physiological insights into phospholipase A-mediated membrane phospholipid degradation in Pseudomonas aeruginosa. ELife, 2022, 11, .	2.8	13
82	Bioanalysis of Pseudomonas aeruginosa alkyl quinolone signalling molecules in infected mouse tissue using LCâ€“MS/MS; and its application to a pharmacodynamic evaluation of MvfR inhibition. Journal of Pharmaceutical and Biomedical Analysis, 2017, 139, 44-53.	1.4	12
83	Targeting bacterial quorum sensing shows promise in improving intestinal barrier function following burnâ€'site infection. Molecular Medicine Reports, 2019, 19, 4057-4066.	1.1	12
84	Murine intramyocellular lipids quantified by NMR act as metabolic biomarkers in burn trauma. International Journal of Molecular Medicine, 2008, 21, 825-32.	1.8	12
85	Combined offâ€resonance imaging and T2 relaxation in the rotating frame for positive contrast MR imaging of infection in a murine burn model. Journal of Magnetic Resonance Imaging, 2010, 32, 1172-1183.	1.9	11
86	Pseudomonas aeruginosa Quorum Sensing Molecule Alters Skeletal Muscle Protein Homeostasis by Perturbing the Antioxidant Defense System. MBio, 2019, 10, .	1.8	11
87	Reduced rate of adenosine triphosphate synthesis by in vivo 31P nuclear magnetic resonance spectroscopy and downregulation of PGC-1beta in distal skeletal muscle following burn. International Journal of Molecular Medicine, 2008, 21, 201-8.	1.8	11
88	Use of plant and insect hosts to model bacterial pathogenesis. Methods in Enzymology, 2002, 358, 3-13.	0.4	8
89	In vivo high-resolution magic angle spinning magnetic and electron paramagnetic resonance spectroscopic analysis of mitochondria-targeted peptide in Drosophila melanogaster with trauma-induced thoracic injury. International Journal of Molecular Medicine, 2016, 37, 299-308.	1.8	8
90	Effects of a small, volatile bacterial molecule on Pseudomonas aeruginosa bacteria using whole cell high-resolution magic angle spinning nuclear magnetic resonance spectroscopy and genomics. International Journal of Molecular Medicine, 2018, 42, 2129-2136.	1.8	8

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91	Uncoupling protein 3 expression and intramyocellular lipid accumulation by NMR following local burn trauma. International Journal of Molecular Medicine, 2006, 18, 1223-9.	1.8	8
92	Multi-Biomarker Prediction Models for Multiple Infection Episodes Following Blunt Trauma. IScience, 2020, 23, 101659.	1.9	7
93	Murine intramyocellular lipids quantified by NMR act as metabolic biomarkers in burn trauma. International Journal of Molecular Medicine, 0, , .	1.8	7
94	An Ex Vivo Bacteriologic Study Comparing Antiseptic Techniques for Natural Orifice Translumenal Endoscopic Surgery (NOTES) via the Gastrointestinal Tract. Digestive Diseases and Sciences, 2012, 57, 2130-2136.	1.1	6
95	Assessing Pseudomonas Virulence with the Nonmammalian Host Model: Arabidopsis thaliana. Methods in Molecular Biology, 2014, 1149, 689-697.	0.4	6
96	Reduced rate of adenosine triphosphate synthesis by in vivo 31P nuclear magnetic resonance spectroscopy and downregulation of PGC-1Î^{2} in distal skeletal muscle following burn. International Journal of Molecular Medicine, 2008, , .	1.8	5
97	Combining magnetic resonance spectroscopy and molecular genomics offers better accuracy in brain tumor typing and prediction of survival than either methodology alone. International Journal of Oncology, 2011, 38, 1113-27.	1.4	5
98	Associations between clinical characteristics and the development of multiple organ failure after severe burns in adult patients. Burns, 2019, 45, 1775-1782.	1.1	5
99	The Role of Common Solvents against Pseudomonas aeruginosa-Induced Pathogenicity in a Murine Burn Site Infection Model. Microbiology Spectrum, 2021, 9, e0023321.	1.2	5
100	Uncoupling protein 3 expression and intramyocellular lipid accumulation by NMR following local burn trauma. International Journal of Molecular Medicine, 0, , .	1.8	5
101	Proteobacteria and Firmicutes Secreted Factors Exert Distinct Effects on Pseudomonas aeruginosa Infection under Normoxia or Mild Hypoxia. Metabolites, 2022, 12, 449.	1.3	5
102	Characterization of antibiotic resistance profiles in Pseudomonas aeruginosa isolates from burn patients. Burns, 2021, 47, 1833-1843.	1.1	4
103	Antimicrobial Peptide Dendrimers and Quorum-Sensing Inhibitors in Formulating Next-Generation Anti-Infection Cell Therapy Dressings for Burns. Molecules, 2021, 26, 3839.	1.7	4
104	The Effectiveness of Current Sterility Techniques in Natural Orifice Transluminal Endoscopic Surgery (NOTES). Gastrointestinal Endoscopy, 2007, 65, AB290.	0.5	3
105	Denver and Marshall scores successfully predict susceptibility to multiple independent infections in trauma patients. PLoS ONE, 2020, 15, e0232175.	1.1	3
106	Magnetic Resonance Spectroscopy of live Drosophila melanogaster using Magic Angle Spinning. Journal of Visualized Experiments, 2010, , .	0.2	2
107	Portal System as the Source of Inflammation in an Acute Systemic Burn. Journal of the American College of Surgeons, 2018, 227, S271.	0.2	0
108	952 - The Gut-Liver Axis: Probing the Portal System as the Source of Inflammation in Acute and Chronic Diseases. Gastroenterology, 2018, 154, S-1295.	0.6	0

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109	Imaging C-Fos Gene Expression in Burns Using Lipid Coated Spion Nanoparticles. Advances in Molecular Imaging, 2012, 02, 31-37.	0.3	0
110	Magnetization transfer contrast MRI in GFPâ€‘tagged live bacteria. Molecular Medicine Reports, 2019, 19, 617-621.	1.1	0