Catherine Vilcheze

List of Publications by Year
in descending order

78 papers	6,583 citations	66343 42 h-index	79698 73 g-index
79 all docs	79 docs citations	79 times ranked	7142 citing authors

#	Article	IF	Citations
1	Effect of the Structure of Natural Sterols and Sphingolipids on the Formation of Ordered Sphingolipid/Sterol Domains (Rafts). Journal of Biological Chemistry, 2001, 276, 33540-33546.	3.4	472
2	Enzymic Characterization of the Target for Isoniazid in Mycobacterium tuberculosis. Biochemistry, 1995, 34, 8235-8241.	2.5	390
3	Transfer of a point mutation in Mycobacterium tuberculosisÂinhA resolves the target of isoniazid. Nature Medicine, 2006, 12, 1027-1029.	30.7	281
4	The Mechanism of Isoniazid Killing: Clarity Through the Scope of Genetics. Annual Review of Microbiology, 2007, 61, 35-50.	7.3	269
5	Altered NADH/NAD + Ratio Mediates Coresistance to Isoniazid and Ethionamide in Mycobacteria. Antimicrobial Agents and Chemotherapy, 2005, 49, 708-720.	3.2	263
6	Mycobacterium tuberculosis is extraordinarily sensitive to killing by a vitamin C-induced Fenton reaction. Nature Communications, 2013, 4, 1881.	12.8	261
7	Auranofin exerts broad-spectrum bactericidal activities by targeting thiol-redox homeostasis. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4453-4458.	7.1	259
8	Crystal Structure of the Mycobacterium tuberculosis Enoyl-ACP Reductase, InhA, in Complex with NAD+ and a C16 Fatty Acyl Substrate. Journal of Biological Chemistry, 1999, 274, 15582-15589.	3.4	248
9	Pyrazinamide inhibits the eukaryotic-like fatty acid synthetase I (FASI) of Mycobacterium tuberculosis. Nature Medicine, 2000, 6, 1043-1047.	30.7	232
10	Resistance to Isoniazid and Ethionamide in <i>Mycobacterium tuberculosis</i> : Genes, Mutations, and Causalities. Microbiology Spectrum, 2014, 2, MGM2-0014-2013.	3.0	204
11	Overexpression ofinhA, but notkasA, confers resistance to isoniazid and ethionamide inMycobacterium smegmatis,M. bovisBCG andM. tuberculosis. Molecular Microbiology, 2002, 46, 453-466.	2.5	176
12	Separable roles for <i>Mycobacterium tuberculosis</i> ESX-3 effectors in iron acquisition and virulence. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E348-57.	7.1	166
13	Energetics of Respiration and Oxidative Phosphorylation in Mycobacteria. Microbiology Spectrum, 2014, 2, .	3.0	164
14	Enhanced respiration prevents drug tolerance and drug resistance in <i>Mycobacterium tuberculosis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4495-4500.	7.1	157
15	Mycothiol biosynthesis is essential for ethionamide susceptibility in <i>Mycobacterium tuberculosis</i>. Molecular Microbiology, 2008, 69, 1316-1329.	2.5	155
16	Trichoderins, novel aminolipopeptides from a marine sponge-derived Trichoderma sp., are active against dormant mycobacteria. Bioorganic and Medicinal Chemistry Letters, 2010, 20, 3658-3663.	2.2	146
17	Triclosan Derivatives: Towards Potent Inhibitors of Drugâ€Sensitive and Drugâ€Resistant <i>Mycobacterium tuberculosis</i>. ChemMedChem, 2009, 4, 241-248.	3.2	130
18	Antituberculosis thiophenes define a requirement for Pks13 in mycolic acid biosynthesis. Nature Chemical Biology, 2013, 9, 499-506.	8.0	129

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19	Anthelmintic Avermectins Kill Mycobacterium tuberculosis, Including Multidrug-Resistant Clinical Strains. Antimicrobial Agents and Chemotherapy, 2013, 57, 1040-1046.	3.2	114
20	Transcriptional Regulation of Multi-Drug Tolerance and Antibiotic-Induced Responses by the Histone-Like Protein Lsr2 in M. tuberculosis. PLoS Pathogens, 2007, 3, e87.	4.7	113
21	Keto-Mycolic Acid-Dependent Pellicle Formation Confers Tolerance to Drug-Sensitive Mycobacterium tuberculosis. MBio, 2013, 4, e00222-13.	4.1	103
22	The Isoniazid Paradigm of Killing, Resistance, and Persistence in Mycobacterium tuberculosis. Journal of Molecular Biology, 2019, 431, 3450-3461.	4.2	98
23	Arginine-deprivationâ€“induced oxidative damage sterilizes <i>Mycobacterium tuberculosis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 9779-9784.	7.1	97
24	Pyrazinoic Acid and Its n -Propyl Ester Inhibit Fatty Acid Synthase Type I in Replicating Tubercle Bacilli. Antimicrobial Agents and Chemotherapy, 2007, 51, 752-754.	3.2	88
25	Succinate Dehydrogenase is the Regulator of Respiration in Mycobacterium tuberculosis. PLoS Pathogens, 2014, 10, e1004510.	4.7	87
26	An Anaerobic-Type Î±-Ketoglutarate Ferredoxin Oxidoreductase Completes the Oxidative Tricarboxylic Acid Cycle of Mycobacterium tuberculosis. PLoS Pathogens, 2009, 5, e1000662.	4.7	70
27	Characterization of Mycobacterium smegmatis Expressing the Mycobacterium tuberculosis Fatty Acid Synthase I (fas1) Gene. Journal of Bacteriology, 2004, 186, 4051-4055.	2.2	68
28	<i>Mycobacterium tuberculosis</i> Dihydrofolate Reductase Is Not a Target Relevant to the Antitubercular Activity of Isoniazid. Antimicrobial Agents and Chemotherapy, 2010, 54, 3776-3782.	3.2	67
29	Deletion of a dehydratase important for intracellular growth and cording renders rough <i>Mycobacterium abscessus</i> avirulent. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4228-37.	7.1	67
30	Dual-Reporter Mycobacteriophages (Î¦ ² DRMs) Reveal Preexisting Mycobacterium tuberculosis Persistent Cells in Human Sputum. MBio, 2016, 7, .	4.1	67
31	Inhibition of InhA Activity, but Not KasA Activity, Induces Formation of a KasA-containing Complex in Mycobacteria. Journal of Biological Chemistry, 2003, 278, 20547-20554.	3.4	66
32	Phosphorylation of KasB Regulates Virulence and Acid-Fastness in Mycobacterium tuberculosis. PLoS Pathogens, 2014, 10, e1004115.	4.7	63
33	The effect of side-chain analogues of cholesterol on the thermotropic phase behavior of 1-stearoyl-2-oleoylphosphatidylcholine bilayers: a differential scanning calorimetric study. Biochimica Et Biophysica Acta - Biomembranes, 1996, 1279, 235-242.	2.6	60
34	Phosphorylation of InhA inhibits mycolic acid biosynthesis and growth of <i>Mycobacterium tuberculosis</i>. Molecular Microbiology, 2010, 78, 1591-1605.	2.5	60
35	Novel Inhibitors of InhA Efficiently Kill <i>Mycobacterium tuberculosis</i> under Aerobic and Anaerobic Conditions. Antimicrobial Agents and Chemotherapy, 2011, 55, 3889-3898.	3.2	60
36	Halicyclamine A, a marine spongean alkaloid as a lead for anti-tuberculosis agent. Bioorganic and Medicinal Chemistry, 2008, 16, 6732-6736.	3.0	58

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37	The Combination of Sulfamethoxazole, Trimethoprim, and Isoniazid or Rifampin Is Bactericidal and Prevents the Emergence of Drug Resistance in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2012, 56, 5142-5148.	3.2	58
38	Plasticity of <i>Mycobacterium tuberculosis</i> NADH dehydrogenases and their role in virulence. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1599-1604.	7.1	58
39	Bxz1, a new generalized transducing phage for mycobacteria. FEMS Microbiology Letters, 2004, 241, 271-276.	1.8	55
40	Acid-Fast Positive and Acid-Fast Negative <i>Mycobacterium tuberculosis</i> : The Koch Paradox. Microbiology Spectrum, 2017, 5, .	3.0	53
41	Targeting Mycobacterium tuberculosis Tumor Necrosis Factor Alpha-Downregulating Genes for the Development of Antituberculous Vaccines. MBio, 2016, 7, .	4.1	52
42	Dual Inhibition of Mycobacterial Fatty Acid Biosynthesis and Degradation by 2-Alkynoic Acids. Chemistry and Biology, 2006, 13, 297-307.	6.0	50
43	Rational Design of Biosafety Level 2-Approved, Multidrug-Resistant Strains of Mycobacterium tuberculosis through Nutrient Auxotrophy. MBio, 2018, 9, .	4.1	50
44	NAD⁺ auxotrophy is bacteriocidal for the tubercle bacilli. Molecular Microbiology, 2010, 76, 365-377.	2.5	49
45	Defining a temporal order of genetic requirements for development of mycobacterial biofilms. Molecular Microbiology, 2017, 105, 794-809.	2.5	48
46	Precise Null Deletion Mutations of the Mycothiol Synthesis Genes Reveal Their Role in Isoniazid and Ethionamide Resistance in Mycobacterium smegmatis. Antimicrobial Agents and Chemotherapy, 2011, 55, 3133-3139.	3.2	44
47	Mycobacterial Cell Wall: A Source of Successful Targets for Old and New Drugs. Applied Sciences (Switzerland), 2020, 10, 2278.	2.5	44
48	Small Molecules Targeting Mycobacterium tuberculosis Type II NADH Dehydrogenase Exhibit Antimycobacterial Activity. Angewandte Chemie - International Edition, 2018, 57, 3478-3482.	13.8	42
49	Lateral domain formation in cholesterol/phospholipid monolayers as affected by the sterol side chain conformation. Biochimica Et Biophysica Acta - Biomembranes, 1995, 1240, 237-247.	2.6	39
50	Vitamin C Potentiates the Killing of Mycobacterium tuberculosis by the First-Line Tuberculosis Drugs Isoniazid and Rifampin in Mice. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	39
51	Effect of sterol side-chain structure on sterol-phosphatidylcholine interactions in monolayers and small unilamellar vesicles. Biochimica Et Biophysica Acta - Biomembranes, 1994, 1190, 435-443.	2.6	36
52	Determinants of the Inhibition of DprE1 and CYP2C9 by Antitubercular Thiophenes. Angewandte Chemie - International Edition, 2017, 56, 13011-13015.	13.8	36
53	Interactions of cholesterol and synthetic sterols with phosphatidylcholines as deduced from infrared CH2 wagging progression intensities. Journal of the American Chemical Society, 1993, 115, 12050-12055.	13.7	35
54	Coresistance to Isoniazid and Ethionamide Maps to Mycothiol Biosynthetic Genes in Mycobacterium bovis. Antimicrobial Agents and Chemotherapy, 2011, 55, 4422-4423.	3.2	31

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55	The Complete Genome Sequence of the Emerging Pathogen Mycobacterium haemophilum Explains Its Unique Culture Requirements. MBio, 2015, 6, e01313-15.	4.1	30
56	Evolution of a thienopyrimidine antitubercular relying on medicinal chemistry and metabolomics insights. Tetrahedron Letters, 2015, 56, 3246-3250.	1.4	27
57	Biological Evaluation of Potent Triclosanâ€Derived Inhibitors of the Enoylâ€"Acyl Carrier Protein Reductase InhA in Drugâ€Sensitive and Drugâ€Resistant Strains of <i>Mycobacterium tuberculosis</i>. ChemMedChem, 2014, 9, 2528-2537.	3.2	26
58	Enhanced Specialized Transduction Using Recombineering in Mycobacterium tuberculosis. MBio, 2014, 5, e01179-14.	4.1	25
59	Sterol side chain length and structure affect the clearance of chylomicron-like lipid emulsions in rats and mice. Journal of Lipid Research, 1998, 39, 302-312.	4.2	25
60	Isolation and Analysis of Mycobacterium tuberculosis Mycolic Acids. Current Protocols in Microbiology, 2007, 5, Unit 10A.3.	6.5	24
61	Mutually Exclusive Genotypes for Pyrazinamide and 5-Chloropyrazinamide Resistance Reveal a Potential Resistance-Proofing Strategy. Antimicrobial Agents and Chemotherapy, 2010, 54, 5323-5328.	3.2	23
62	Addressing the Metabolic Stability of Antituberculars through Machine Learning. ACS Medicinal Chemistry Letters, 2017, 8, 1099-1104.	2.8	13
63	3-(Phenethylamino)demethyl(oxy)aaptamine as an anti-dormant mycobacterial substance: Isolation, evaluation and total synthesis. Tetrahedron Letters, 2020, 61, 151924.	1.4	11
64	The Promises and Limitations of <i>N</i> -Acetylcysteine as a Potentiator of First-Line and Second-Line Tuberculosis Drugs. Antimicrobial Agents and Chemotherapy, 2021, 65, .	3.2	7
65	Commonalities of Mycobacterium tuberculosis Transcriptomes in Response to Defined Persisting Macrophage Stresses. Frontiers in Immunology, 0, 13, .	4.8	7
66	Small Molecules Targeting Mycobacterium tuberculosis Type II NADH Dehydrogenase Exhibit Antimycobacterial Activity. Angewandte Chemie, 2018, 130, 3536-3540.	2.0	6
67	Energetics of Respiration and Oxidative Phosphorylation in Mycobacteria. , 0, , 389-409.		5
68	Einstein Contained Aerosol Pulmonizer (ECAP): Improved Biosafety for Multi-Drug Resistant (MDR) and Extensively Drug Resistant (XDR)Mycobacterium tuberculosisAerosol Infection Studies. Applied Biosafety, 2011, 16, 134-138.	0.5	4
69	Measurements of the in vitro anti-mycobacterial activity of ivermectin are method-dependent. Journal of Antimicrobial Chemotherapy, 2014, 69, 1723-1724.	3.0	4
70	Synthesis and biological activity of alkynoic acids derivatives against mycobacteria. Chemistry and Physics of Lipids, 2016, 194, 125-138.	3.2	4
71	Resistance to Isoniazid and Ethionamide in<i>Mycobacterium tuberculosis</i>: Genes, Mutations, and Causalities. , 0, , 431-453.		4
72	Characterization of Large Deletion Mutants of Mycobacterium tuberculosis Selected for Isoniazid Resistance. Antimicrobial Agents and Chemotherapy, 2020, 64, .	3.2	3

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73	Elimination of PknL and MSMEG_4242 in Mycobacterium smegmatis alters the character of the outer cell envelope and selects for mutations in Lsr2. Cell Surface, 2021, 7, 100060.	3.0	3
74	Acid-Fast Positive and Acid-Fast Negative<i>Mycobacterium tuberculosis</i>: The Koch Paradox. , 0, , 517-532.		2
75	Determinants of the Inhibition of DprE1 and CYP2C9 by Antitubercular Thiophenes. Angewandte Chemie, 2017, 129, 13191-13195.	2.0	1
76	Sterilization by Adaptive Immunity of a Conditionally Persistent Mutant of Mycobacterium tuberculosis. MBio, 2021, 12, .	4.1	1
77	Measurements of the in vitro anti-mycobacterial activity of ivermectin are method-dependent--authors' response. Journal of Antimicrobial Chemotherapy, 2014, 69, 1725-1726.	3.0	0
78	Reply to Yew et al., â€œVitamin C and Mycobacterium tuberculosis Persistersâ€. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	0