Gyanu Lamichhane

List of Publications by Year
in descending order

79 papers	4,137 citations	126907 33 h-index	123424 61 g-index
85 all docs	85 docs citations	85 times ranked	4344 citing authors

#	Article	IF	Citations
1	Mechanistic insight on the inhibition of D, D-carboxypeptidase from <i>Mycobacterium tuberculosis</i> by <i>Î²</i>-lactam antibiotics: an ONIOM acylation study. Journal of Biomolecular Structure and Dynamics, 2022, 40, 7645-7655.	3.5	1
2	Potency of Omadacycline against Mycobacteroides abscessus Clinical Isolates <i>In Vitro</i> and in a Mouse Model of Pulmonary Infection. Antimicrobial Agents and Chemotherapy, 2022, 66, AAC0170421.	3.2	31
3	Penicillin Binding Proteins and Î²-Lactamases of Mycobacterium tuberculosis: Reexamination of the Historical Paradigm. MSphere, 2022, 7, e0003922.	2.9	13
4	Early Bactericidal Activity of Meropenem plus Clavulanate (with or without Rifampin) for Tuberculosis: The COMRADE Randomized, Phase 2A Clinical Trial. American Journal of Respiratory and Critical Care Medicine, 2022, 205, 1228-1235.	5.6	17
5	Glby, Encoded by <i>MAB_3167c</i> , Is Required for <i>In Vivo</i> Growth of Mycobacteroides abscessus and Exhibits Mild Î²-Lactamase Activity. Journal of Bacteriology, 2022, , e0004622.	2.2	3
6	Allosteric cooperation in Î²-lactam binding to a non-classical transpeptidase. ELife, 2022, 11, .	6.0	1
7	T405, a New Penem, Exhibits <i>In Vivo</i> Efficacy against M. abscessus and Synergy with Î²-Lactams Imipenem and Cefditoren. Antimicrobial Agents and Chemotherapy, 2022, 66, .	3.2	8
8	Peptidoglycan compositional analysis of Mycobacterium smegmatis using high-resolution LCâ€"MS. Scientific Reports, 2022, 12, .	3.3	6
9	Î²-Lactam Combinations That Exhibit Synergy against Mycobacteroides abscessus Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2021, 65, .	3.2	16
10	Assessment of carbapenems in a mouse model of Mycobacterium tuberculosis infection. PLoS ONE, 2021, 16, e0249841.	2.5	2
11	Development of a penem antibiotic against Mycobacteroides abscessus. Communications Biology, 2020, 3, 741.	4.4	11
12	A mouse model of pulmonary Mycobacteroides abscessus infection. Scientific Reports, 2020, 10, 3690.	3.3	41
13	Structure and Function of L,D- and D,D-Transpeptidase Family Enzymes from Mycobacterium tuberculosis. Current Medicinal Chemistry, 2020, 27, 3250-3267.	2.4	13
14	Identification of potent L,D-transpeptidase 5 inhibitors for Mycobacterium tuberculosis as potential anti-TB leads: virtual screening and molecular dynamics simulations. Journal of Molecular Modeling, 2019, 25, 328.	1.8	13
15	<i>N</i>-Trifluoromethylthiolated Sulfonimidamides and Sulfoximines: Anti-microbial, Anti-mycobacterial, and Cytotoxic Activity. ACS Medicinal Chemistry Letters, 2019, 10, 1457-1461.	2.8	31
16	Synergistic Efficacy of Î²-Lactam Combinations against <i>Mycobacterium abscessus</i> Pulmonary Infection in Mice. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	29
17	The Driving Force for the Acylation of Î² â€Lactam Antibiotics by L,Dâ€Transpeptidase 2: Quantum Mechanics/Molecular Mechanics (QM/MM) Study. ChemPhysChem, 2019, 20, 1126-1134.	2.1	13
18	Select Î²-Lactam Combinations Exhibit Synergy against <i>Mycobacterium abscessus In Vitro</i>. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	42

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19	Inhibition mechanism of L,D-transpeptidase 5 in presence of the Î²-lactams using ONIOM method. Journal of Molecular Graphics and Modelling, 2019, 87, 204-210.	2.4	12
20	<i>In Vitro</i> Activity of the New Î²-Lactamase Inhibitors Relebactam and Vaborbactam in Combination with Î²-Lactams against Mycobacterium abscessus Complex Clinical Isolates. Antimicrobial Agents and Chemotherapy, 2019, 63, .	3.2	45
21	Repurposing of Carbapenems for the Treatment of Drug-Resistant Tuberculosis. , 2019, , 497-514.		1
22	Compromised longevity due to Mycobacterium abscessus pulmonary disease in lungs scarred by tuberculosis. Access Microbiology, 2019, 1, e000003.	0.5	2
23	Activities of Dual Combinations of Antibiotics Against Multidrug-Resistant Nontuberculous Mycobacteria Recovered from Patients with Cystic Fibrosis. Microbial Drug Resistance, 2018, 24, 1191-1197.	2.0	23
24	803. Overcoming Î²-Lactam Resistance in Mycobacterium abscessus. Open Forum Infectious Diseases, 2018, 5, S288-S288.	0.9	1
25	Inhibition of <i>Mycobacterium tuberculosis</i> L,Dâ€Transpeptidase 5â€‰by Carbapenems: MD and QM/MM Mechanistic Studies. ChemistrySelect, 2018, 3, 13603-13612.	1.5	6
26	Mycobacterium abscessus and Î²-Lactams: Emerging Insights and Potential Opportunities. Frontiers in Microbiology, 2018, 9, 2273.	3.5	35
27	The catalytic role of water in the binding site of l,d-transpeptidase 2 within acylation mechanism: A QM/MM (ONIOM) modelling. Tuberculosis, 2018, 113, 222-230.	1.9	13
28	Molecular insight on the non-covalent interactions between carbapenems and l,d-transpeptidase 2 from Mycobacterium tuberculosis: ONIOM study. Journal of Computer-Aided Molecular Design, 2018, 32, 687-701.	2.9	10
29	Have we realized the full potential of Î²â€lactams for treating drugâ€resistant TB?. IUBMB Life, 2018, 70, 881-888.	3.4	30
30	Mutation in an Unannotated Protein Confers Carbapenem Resistance in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	17
31	Pyrazinoic Acid Inhibits a Bifunctional Enzyme in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	29
32	Differential flap dynamics in <scp>l</scp>,<scp>d</scp>-transpeptidase2 from mycobacterium tuberculosis revealed by molecular dynamics. Molecular BioSystems, 2017, 13, 1223-1234.	2.9	36
33	In vitro and in vivo activity of biapenem against drug-susceptible and rifampicin-resistant Mycobacterium tuberculosis. Journal of Antimicrobial Chemotherapy, 2017, 72, 2320-2325.	3.0	30
34	LdtMav2, a nonclassical transpeptidase and susceptibility ofMycobacterium aviumto carbapenems. Future Microbiology, 2017, 12, 595-607.	2.0	13
35	Emerging Therapies. , 2017, , 191-218.		0
36	Combinations of avibactam and carbapenems exhibit enhanced potencies against drug-resistant<i>Mycobacterium abscessus</i>. Future Microbiology, 2017, 12, 473-480.	2.0	54

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37	Inhibition of innate immune cytosolic surveillance by an M. tuberculosis phosphodiesterase. Nature Chemical Biology, 2017, 13, 210-217.	8.0	96
38	Substituted <i>N</i>-Phenyl-5-(2-(phenylamino)thiazol-4-yl)isoxazole-3-carboxamides Are Valuable Antitubercular Candidates that Evade Innate Efflux Machinery. Journal of Medicinal Chemistry, 2017, 60, 7108-7122.	6.4	64
39	Mycobacterium abscessus <scp>l</scp> , <scp>d</scp> -Transpeptidases Are Susceptible to Inactivation by Carbapenems and Cephalosporins but Not Penicillins. Antimicrobial Agents and Chemotherapy, 2017, 61, .	3.2	50
40	Structural insight into the inactivation of Mycobacterium tuberculosis non-classical transpeptidase LdtMt2 by biapenem and tebipenem. BMC Biochemistry, 2017, 18, 8.	4.4	42
41	Non-classical transpeptidases yield insight into new antibacterials. Nature Chemical Biology, 2017, 13, 54-61.	8.0	116
42	Drug resistance mechanisms and novel drug targets for tuberculosis therapy. Journal of Genetics and Genomics, 2017, 44, 21-37.	3.9	77
43	Computational model for the acylation step of the Î²-lactam ring: Potential application for l,d-transpeptidase 2 in mycobacterium tuberculosis. Journal of Molecular Structure, 2017, 1128, 94-102.	3.6	41
44	REMap: Operon map of M.Âtuberculosis based on RNA sequence data. Tuberculosis, 2016, 99, 70-80.	1.9	8
45	An evolved oxazolidinone with selective potency against Mycobacterium tuberculosis and gram positive bacteria. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 3572-3576.	2.2	11
46	Role of the Cys154Arg Substitution in Ribosomal Protein L3 in Oxazolidinone Resistance in Mycobacterium tuberculosis. Antimicrobial Agents and Chemotherapy, 2016, 60, 3202-3206.	3.2	30
47	A comparative modeling and molecular docking study on<i>Mycobacterium tuberculosis</i>targets involved in peptidoglycan biosynthesis. Journal of Biomolecular Structure and Dynamics, 2016, 34, 2399-2417.	3.5	23
48	Targeting the cell wall of<i>Mycobacterium tuberculosis</i>: a molecular modeling investigation of the interaction of imipenem and meropenem with<i>L</i>,<i>D</i>-transpeptidase 2. Journal of Biomolecular Structure and Dynamics, 2016, 34, 304-317.	3.5	18
49	Immunogenicity without Efficacy of an Adenoviral Tuberculosis Vaccine in a Stringent Mouse Model for Immunotherapy during Treatment. PLoS ONE, 2015, 10, e0127907.	2.5	7
50	Structural and functional features of enzymes of Mycobacterium tuberculosis peptidoglycan biosynthesis as targets for drug development. Tuberculosis, 2015, 95, 95-111.	1.9	54
51	Loss of a Functionally and Structurally Distinct ld-Transpeptidase, LdtMt5, Compromises Cell Wall Integrity in Mycobacterium tuberculosis. Journal of Biological Chemistry, 2015, 290, 25670-25685.	3.4	45
52	Carbapenems and Rifampin Exhibit Synergy against Mycobacterium tuberculosis and Mycobacterium abscessus. Antimicrobial Agents and Chemotherapy, 2015, 59, 6561-6567.	3.2	109
53	Nonclassical Transpeptidases of Mycobacterium tuberculosis Alter Cell Size, Morphology, the Cytosolic Matrix, Protein Localization, Virulence, and Resistance to Î²-Lactams. Journal of Bacteriology, 2014, 196, 1394-1402.	2.2	80
54	Systems Biology-Based Identification of Mycobacterium tuberculosis Persistence Genes in Mouse Lungs. MBio, 2014, 5, .	4.1	21

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55	Definition and annotation of (myco)bacterial non-coding RNA. Tuberculosis, 2013, 93, 26-29.	1.9	36
56	Targeting the Cell Wall of Mycobacterium tuberculosis: Structure and Mechanism of L,D-Transpeptidase 2. Structure, 2012, 20, 2103-2115.	3.3	94
57	A screen for non-coding RNA in Mycobacterium tuberculosis reveals a cAMP-responsive RNA that is expressed during infection. Gene, 2012, 500, 85-92.	2.2	45
58	Combining Cheminformatics Methods and Pathway Analysis to Identify Molecules with Whole-Cell Activity Against Mycobacterium Tuberculosis. Pharmaceutical Research, 2012, 29, 2115-2127.	3.5	28
59	Novel targets in M. tuberculosis: search for new drugs. Trends in Molecular Medicine, 2011, 17, 25-33.	6.7	67
60	Mycobacterium Tuberculosis Response to Stress from Reactive Oxygen and Nitrogen Species. Frontiers in Microbiology, 2011, 2, 176.	3.5	21
61	Essential Metabolites of Mycobacterium tuberculosis and Their Mimics. MBio, 2011, 2, e00301-10.	4.1	56
62	Copper resistance is essential for virulence of <i>Mycobacterium tuberculosis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 1621-1626.	7.1	286
63	Methionine Aminopeptidases from Mycobacterium tuberculosis as Novel Antimycobacterial Targets. Chemistry and Biology, 2010, 17, 86-97.	6.0	55
64	The Mycobacterium tuberculosis protein LdtMt2 is a nonclassical transpeptidase required for virulence and resistance to amoxicillin. Nature Medicine, 2010, 16, 466-469.	30.7	242
65	The Impact of Mouse Passaging of Mycobacterium tuberculosis Strains prior to Virulence Testing in the Mouse and Guinea Pig Aerosol Models. PLoS ONE, 2010, 5, e10289.	2.5	15
66	Protective Efficacy of BCG Overexpressing an L,D-Transpeptidase against M. tuberculosis Infection. PLoS ONE, 2010, 5, e13773.	2.5	10
67	Genetic Requirements for the Survival of Tubercle Bacilli in Primates. Journal of Infectious Diseases, 2010, 201, 1743-1752.	4.0	159
68	Bacterial Thymidine Kinase as a Non-Invasive Imaging Reporter for Mycobacterium tuberculosis in Live Animals. PLoS ONE, 2009, 4, e6297.	2.5	59
69	Role of the <i>dosR</i> - <i>dosS</i> Two-Component Regulatory System in <i>Mycobacterium tuberculosis</i> Virulence in Three Animal Models. Infection and Immunity, 2009, 77, 1230-1237.	2.2	150
70	Mycolic acid methyltransferase, MmaA4, is necessary for thiacetazone susceptibility in <i>Mycobacterium tuberculosis</i>. Molecular Microbiology, 2009, 71, 1263-1277.	2.5	41
71	Cyclic AMP intoxication of macrophages by a Mycobacterium tuberculosis adenylate cyclase. Nature, 2009, 460, 98-102.	27.8	199
72	Murine Model to Study the Invasion and Survival of<i>Mycobacterium tuberculosis</i>in the Central Nervous System. Journal of Infectious Diseases, 2008, 198, 1520-1528.	4.0	65

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73	Accelerated Detection ofMycobacterium tuberculosisGenes Essential for Bacterial Survival in Guinea Pigs, Compared with Mice. Journal of Infectious Diseases, 2007, 195, 1634-1642.	4.0	43
74	Defining the 'survivasome' of Mycobacterium tuberculosis. Nature Medicine, 2007, 13, 280-282.	30.7	13
75	Deletion of aMycobacterium tuberculosisProteasomal ATPase Homologue Gene Produces a Slowâ€Growing Strain That Persists in Host Tissues. Journal of Infectious Diseases, 2006, 194, 1233-1240.	4.0	47
76	Mycobacterium tuberculosisInvasion and Traversal across an In Vitro Human Bloodâ€Brain Barrier as a Pathogenic Mechanism for Central Nervous System Tuberculosis. Journal of Infectious Diseases, 2006, 193, 1287-1295.	4.0	132
77	Designer Arrays for Defined Mutant Analysis To Detect Genes Essential for Survival of Mycobacterium tuberculosis in Mouse Lungs. Infection and Immunity, 2005, 73, 2533-2540.	2.2	139
78	Dormancy Phenotype Displayed by Extracellular Mycobacterium tuberculosis within Artificial Granulomas in Mice. Journal of Experimental Medicine, 2004, 200, 647-657.	8.5	246
79	A postgenomic method for predicting essential genes at subsaturation levels of mutagenesis: Application to Mycobacterium tuberculosis. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 7213-7218.	7.1	346