Jean-Emmanuel Hugonnet

List of Publications by Citations

53 papers	2,564 citations	28 h-index	50 g-index
57 ext. papers	3,017 ext. citations	6.4 avg, IF	4.56 L-index

#	Paper	IF	Citations
53	Meropenem-clavulanate is effective against extensively drug-resistant Mycobacterium tuberculosis. *Science*, **2009**, 323, 1215-8	33.3	390
52	Irreversible inhibition of the Mycobacterium tuberculosis beta-lactamase by clavulanate. *Biochemistry*, **2007**, 46, 11998-2004	3.2	168
51	A novel peptidoglycan cross-linking enzyme for a beta-lactam-resistant transpeptidation pathway. *Journal of Biological Chemistry*, **2005**, 280, 38146-52	5.4	152
50	Inactivation of Mycobacterium tuberculosis l,d-transpeptidase LdtMt1 by carbapenems and cephalosporins. *Antimicrobial Agents and Chemotherapy*, **2012**, 56, 4189-95	5.9	103
49	Unexpected inhibition of peptidoglycan LD-transpeptidase from Enterococcus faecium by the beta-lactam imipenem. *Journal of Biological Chemistry*, **2007**, 282, 30414-22	5.4	97
48	Crystal structure of a novel beta-lactam-insensitive peptidoglycan transpeptidase. *Journal of Molecular Biology*, **2006**, 359, 533-8	6.5	95
47	In vitro cross-linking of Mycobacterium tuberculosis peptidoglycan by L,D-transpeptidases and inactivation of these enzymes by carbapenems. *Antimicrobial Agents and Chemotherapy*, **2013**, 57, 5940-5	5.9	91
46	Factors essential for L,D-transpeptidase-mediated peptidoglycan cross-linking and β-lactam resistance in. *ELife*, **2016**, 5,	8.9	90
45	β-Lactamase inhibition by avibactam in Mycobacterium abscessus. *Journal of Antimicrobial Chemotherapy*, **2015**, 70, 1051-8	5.1	88
44	Role of class A penicillin-binding proteins in PBP5-mediated beta-lactam resistance in Enterococcus faecalis. *Journal of Bacteriology*, **2004**, 186, 1221-8	3.5	82
43	The CroRS two-component regulatory system is required for intrinsic beta-lactam resistance in Enterococcus faecalis. *Journal of Bacteriology*, **2003**, 185, 7184-92	3.5	77
42	Rapid cytolysis of Mycobacterium tuberculosis by faropenem, an orally bioavailable β-lactam antibiotic. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 1308-19	5.9	75
41	Aslfm, the D-aspartate ligase responsible for the addition of D-aspartic acid onto the peptidoglycan precursor of Enterococcus faecium. *Journal of Biological Chemistry*, **2006**, 281, 11586-94	5.4	68
40	Specificity of L,D-transpeptidases from gram-positive bacteria producing different peptidoglycan chemotypes. *Journal of Biological Chemistry*, **2007**, 282, 13151-9	5.4	66
39	Synthesis of mosaic peptidoglycan cross-bridges by hybrid peptidoglycan assembly pathways in gram-positive bacteria. *Journal of Biological Chemistry*, **2004**, 279, 41546-56	5.4	66
38	Characterization of broad-spectrum Mycobacterium abscessus class A β-lactamase. *Journal of Antimicrobial Chemotherapy*, **2014**, 69, 691-6	5.1	63
37	Synthesis of the L-alanyl-L-alanine cross-bridge of Enterococcus faecalis peptidoglycan. *Journal of Biological Chemistry*, **2002**, 277, 45935-41	5.4	61

36	Characterization of CrgA, a new partner of the Mycobacterium tuberculosis peptidoglycan polymerization complexes. *Journal of Bacteriology*, **2011**, 193, 3246-56	3.5	53
35	Structure of the covalent adduct formed between Mycobacterium tuberculosis beta-lactamase and clavulanate. *Biochemistry*, **2008**, 47, 5312-6	3.2	49
34	Inactivation kinetics of a new target of beta-lactam antibiotics. *Journal of Biological Chemistry*, **2011** , 286, 22777-84	5.4	42
33	Kinetic features of L,D-transpeptidase inactivation critical for β-lactam antibacterial activity. *PLoS ONE*, **2013**, 8, e67831	3.7	42
32	Idiosyncratic features in tRNAs participating in bacterial cell wall synthesis. *Nucleic Acids Research*, **2007**, 35, 6870-83	20.1	40
31	Copper inhibits peptidoglycan LD-transpeptidases suppressing β-lactam resistance due to bypass of penicillin-binding proteins. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 10786-10791	11.5	39
30	Activation of the L,D-transpeptidation peptidoglycan cross-linking pathway by a metallo-D,D-carboxypeptidase in Enterococcus faecium. *Molecular Microbiology*, **2010**, 75, 874-85	4.1	35
29	Novel mechanism of resistance to glycopeptide antibiotics in Enterococcus faecium. *Journal of Biological Chemistry*, **2006**, 281, 32254-62	5.4	32
28	Combinations of β-Lactam Antibiotics Currently in Clinical Trials Are Efficacious in a DHP-I-Deficient Mouse Model of Tuberculosis Infection. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 4997-9	5.9	31
27	Structure of Enterococcus faeciuml,d-transpeptidase acylated by ertapenem provides insight into the inactivation mechanism. *ACS Chemical Biology*, **2013**, 8, 1140-6	4.9	30
26	Inhibition of β-lactamases of mycobacteria by avibactam and clavulanate. *Journal of Antimicrobial Chemotherapy*, **2017**, 72, 1081-1088	5.1	30
25	Methicillin-Susceptible, Vancomycin-Resistant Staphylococcus aureus, Brazil. *Emerging Infectious Diseases*, **2015**, 21, 1844-8	10.2	28
24	Impact of β-lactamase inhibition on the activity of ceftaroline against Mycobacterium tuberculosis and Mycobacterium abscessus. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 2938-41	5.9	26
23	Dynamics induced by β-lactam antibiotics in the active site of Bacillus subtilis L,D-transpeptidase. *Structure*, **2012**, 20, 850-61	5.2	25
22	Synthesis of Avibactam Derivatives and Activity on β-Lactamases and Peptidoglycan Biosynthesis Enzymes of Mycobacteria. *Chemistry - A European Journal*, **2018**, 24, 8081-8086	4.8	22
21	Peptidoglycan cross-linking in glycopeptide-resistant Actinomycetales. *Antimicrobial Agents and Chemotherapy*, **2014**, 58, 1749-56	5.9	22
20	Kinetic analysis of Enterococcus faecium L,D-transpeptidase inactivation by carbapenems. *Antimicrobial Agents and Chemotherapy*, **2012**, 56, 3409-12	5.9	22
19	Hydrolysis of clavulanate by Mycobacterium tuberculosis β-lactamase BlaC harboring a canonical SDN motif. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 5714-20	5.9	21

18	Critical Impact of Peptidoglycan Precursor Amidation on the Activity of l,d-Transpeptidases from Enterococcus faecium and Mycobacterium tuberculosis. *Chemistry - A European Journal*, **2018**, 24, 5743-5747	4.8	20
17	Fighting resistant tuberculosis with old compounds: the carbapenem paradigm. *Clinical Microbiology and Infection*, **2011**, 17, 1755-6	9.5	18
16	Reversible inactivation of a peptidoglycan transpeptidase by a β-lactam antibiotic mediated by β-lactam-ring recyclization in the enzyme active site. *Scientific Reports*, **2017**, 7, 9136	4.9	16
15	Routes of Synthesis of Carbapenems for Optimizing Both the Inactivation of L,D-Transpeptidase LdtMt1 of Mycobacterium tuberculosis and the Stability toward Hydrolysis by β-Lactamase BlaC. *Journal of Medicinal Chemistry*, **2016**, 59, 3427-38	8.3	15
14	Discovery of the first inhibitors of bacterial enzyme D-aspartate ligase from Enterococcus faecium (Aslfm). *European Journal of Medicinal Chemistry*, **2013**, 67, 208-20	6.8	13
13	Structural insight into YcbB-mediated beta-lactam resistance in Escherichia coli. *Nature Communications*, **2019**, 10, 1849	17.4	11
12	Peptidoglycan Cross-Linking Activity of l,d-Transpeptidases from Clostridium difficile and Inactivation of These Enzymes by β-Lactams. *Antimicrobial Agents and Chemotherapy*, **2018**, 62,	5.9	11
11	Mutation landscape of acquired cross-resistance to glycopeptide and β-lactam antibiotics in Enterococcus faecium. *Antimicrobial Agents and Chemotherapy*, **2015**, 59, 5306-15	5.9	6
10	Acyl acceptor recognition by Enterococcus faecium L,D-transpeptidase Ldtfm. *Molecular Microbiology*, **2015**, 98, 90-100	4.1	6
9	Tryptophan Fluorescence Quenching in β-Lactam-Interacting Proteins Is Modulated by the Structure of Intermediates and Final Products of the Acylation Reaction. *ACS Infectious Diseases*, **2019**, 5, 1169-1176	5.5	5
8	Negative Impact of Carbapenem Methylation on the Reactivity of β-Lactams for Cysteine Acylation as Revealed by Quantum Calculations and Kinetic Analyses. *Antimicrobial Agents and Chemotherapy*, **2019**, 63,	5.9	5
7	Activity-Based Protein Profiling Reveals That Cephalosporins Selectively Active on Non-replicating Bind Multiple Protein Families and Spare Peptidoglycan Transpeptidases. *Frontiers in Microbiology*, **2020**, 11, 1248	5.7	5
6	Backbone and side-chain 1H, 15N and 13C assignment of apo- and imipenem-acylated L,D-transpeptidase from Bacillus subtilis. *Biomolecular NMR Assignments*, **2012**, 6, 205-8	0.7	3
5	Role of endopeptidases in peptidoglycan synthesis mediated by alternative cross-linking enzymes in Escherichia coli. *EMBO Journal*, **2021**, 40, e108126	13	3
4	Chemical shift perturbations induced by the acylation of Enterococcus faecium L,D-transpeptidase catalytic cysteine with ertapenem. *Biomolecular NMR Assignments*, **2014**, 8, 339-43	0.7	2
3	Crystallization and preliminary X-ray analysis of Weissella viridescens FemX UDP-MurNAc-pentapeptide:l-alanine ligase. *Acta Crystallographica Section D: Biological Crystallography*, **2003**, 59, 1055-7		2
2	Cloning, purification, crystallization and preliminary crystallographic analysis of a penicillin-binding protein homologue from Pyrococcus abyssi. *Acta Crystallographica Section F: Structural Biology Communications*, **2005**, 61, 1006-8		1
1	l,d-Transpeptidase (Enterococcus) **2013**, 2465-2472		