Jean-Denis Docquier

List of Publications by Year
in descending order

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105 papers	4,470 citations	101543 36 h-index	114465 63 g-index
106 all docs	106 docs citations	106 times ranked	3781 citing authors

#	Article	IF	Citations
1	Novel Acquired Metallo-Î²-Lactamase Gene, bla SIM-1 , in a Class 1 Integron from Acinetobacter baumannii Clinical Isolates from Korea. Antimicrobial Agents and Chemotherapy, 2005, 49, 4485-4491.	3.2	293
2	Structural Insight into Potent Broad-Spectrum Inhibition with Reversible Recyclization Mechanism: Avibactam in Complex with CTX-M-15 and Pseudomonas aeruginosa AmpC Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 2013, 57, 2496-2505.	3.2	185
3	Discovery of Taniborbactam (VNRX-5133): A Broad-Spectrum Serine- and Metallo-Î²-lactamase Inhibitor for Carbapenem-Resistant Bacterial Infections. Journal of Medicinal Chemistry, 2020, 63, 2789-2801.	6.4	181
4	An update on Î²-lactamase inhibitor discovery and development. Drug Resistance Updates, 2018, 36, 13-29.	14.4	170
5	On functional and structural heterogeneity of VIM-type metallo-beta-lactamases. Journal of Antimicrobial Chemotherapy, 2003, 51, 257-266.	3.0	146
6	Crystal Structure of the OXA-48 Î²-Lactamase Reveals Mechanistic Diversity among Class D Carbapenemases. Chemistry and Biology, 2009, 16, 540-547.	6.0	144
7	Metallo-Î²-lactamases as emerging resistance determinants in Gram-negative pathogens: open issues. International Journal of Antimicrobial Agents, 2007, 29, 380-388.	2.5	134
8	IMP-12, a New Plasmid-Encoded Metallo-Î²-Lactamase from a Pseudomonas putida Clinical Isolate. Antimicrobial Agents and Chemotherapy, 2003, 47, 1522-1528.	3.2	125
9	VNRX-5133 (Taniborbactam), a Broad-Spectrum Inhibitor of Serine- and Metallo-Î²-Lactamases, Restores Activity of Cefepime in Enterobacterales and Pseudomonas aeruginosa. Antimicrobial Agents and Chemotherapy, 2020, 64, .	3.2	123
10	The Three-Dimensional Structure of VIM-2, a Zn-Î²-Lactamase from Pseudomonas aeruginosa in Its Reduced and Oxidised Form. Journal of Molecular Biology, 2008, 375, 604-611.	4.2	115
11	Nosocomial Infections Caused by Multidrug-Resistant Isolates of Pseudomonas putida Producing VIM-1 Metallo-Î²-Lactamase. Journal of Clinical Microbiology, 2002, 40, 4051-4055.	3.9	105
12	Emergence in Klebsiella pneumoniae and Enterobacter cloacae Clinical Isolates of the VIM-4 Metallo-Î²-Lactamase Encoded by a Conjugative Plasmid. Antimicrobial Agents and Chemotherapy, 2004, 48, 648-650.	3.2	103
13	CENTA as a Chromogenic Substrate for Studying Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 2001, 45, 1868-1871.	3.2	95
14	FIM-1, a New Acquired Metallo-Î²-Lactamase from a Pseudomonas aeruginosa Clinical Isolate from Italy. Antimicrobial Agents and Chemotherapy, 2013, 57, 410-416.	3.2	87
15	Bloodstream infections caused by multidrug-resistant Klebsiella pneumoniae producing the carbapenem-hydrolysing VIM-1 metallo-Â-lactamase: first Italian outbreak. Journal of Antimicrobial Chemotherapy, 2007, 61, 296-300.	3.0	85
16	Purification and Biochemical Characterization of the VIM-1 Metallo-Î²-Lactamase. Antimicrobial Agents and Chemotherapy, 2000, 44, 3003-3007.	3.2	83
17	Metallo-Î²-Lactamase Producers in Environmental Microbiota: New Molecular Class B Enzyme in Janthinobacterium lividum. Antimicrobial Agents and Chemotherapy, 2001, 45, 837-844.	3.2	83
18	Molecular Basis of Selective Inhibition and Slow Reversibility of Avibactam against Class D Carbapenemases: A Structure-Guided Study of OXA-24 and OXA-48. ACS Chemical Biology, 2015, 10, 591-600.	3.4	83

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19	Simple Microdilution Test for Detection of Metallo-Î²-Lactamase Production in Pseudomonas aeruginosa. Journal of Clinical Microbiology, 2002, 40, 4388-4390.	3.9	77
20	Nosocomial Outbreak Caused by Multidrug-Resistant Pseudomonas aeruginosa Producing IMP-13 Metallo-Î²-Lactamase. Journal of Clinical Microbiology, 2005, 43, 3824-3828.	3.9	76
21	Clonal Relatedness and Conserved Integron Structures in Epidemiologically Unrelated Pseudomonas aeruginosa Strains Producing the VIM-1 Metallo-Î²-Lactamase from Different Italian Hospitals. Antimicrobial Agents and Chemotherapy, 2005, 49, 104-110.	3.2	64
22	Improved performance of the modified Hodge test with MacConkey agar for screening carbapenemase-producing Gram-negative bacilli. Journal of Microbiological Methods, 2010, 83, 149-152.	1.6	62
23	CAU-1, a Subclass B3 Metallo-Î²-Lactamase of Low Substrate Affinity Encoded by an Ortholog Present in the Caulobacter crescentus Chromosome. Antimicrobial Agents and Chemotherapy, 2002, 46, 1823-1830.	3.2	58
24	Evolution to carbapenem-hydrolyzing activity in noncarbapenemase class D Î²-lactamase OXA-10 by rational protein design. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18424-18429.	7.1	58
25	Discovery of a Novel Metallo-Î²-Lactamase Inhibitor That Potentiates Meropenem Activity against Carbapenem-Resistant Enterobacteriaceae. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	57
26	Biochemical and Structural Characterization of the Subclass B1 Metallo-Î²-Lactamase VIM-4. Antimicrobial Agents and Chemotherapy, 2011, 55, 1248-1255.	3.2	55
27	Mutational Analysis of VIM-2 Reveals an Essential Determinant for Metallo-Î²-Lactamase Stability and Folding. Antimicrobial Agents and Chemotherapy, 2010, 54, 3197-3204.	3.2	53
28	A Standard Numbering Scheme for Class C Î²-Lactamases. Antimicrobial Agents and Chemotherapy, 2020, 64, .	3.2	50
29	Molecular heterogeneity ofblaVIM-2-containing integrons fromPseudomonas aeruginosaplasmids encoding the VIM-2 metallo-ÃŽÂ²-lactamase. FEMS Microbiology Letters, 2001, 195, 145-150.	1.8	49
30	1,2,4â€Triazoleâ€3â€thione Compounds as Inhibitors of Dizinc Metalloâ€Î²â€lactamases. ChemMedChem, 2017, 12, 972-985.	3.2	49
31	Crystal structure of a coldâ€adapted classâ€ƒC Î²â€lactamase. FEBS Journal, 2008, 275, 1687-1697.	4.7	48
32	Postgenomic Scan of Metallo-Î²-Lactamase Homologues in Rhizobacteria: Identification and Characterization of BJP-1, a Subclass B3 Ortholog from Bradyrhizobium japonicum. Antimicrobial Agents and Chemotherapy, 2006, 50, 1973-1981.	3.2	46
33	High-Resolution Crystal Structure of the Subclass B3 Metallo-Î²-Lactamase BJP-1: Rational Basis for Substrate Specificity and Interaction with Sulfonamides. Antimicrobial Agents and Chemotherapy, 2010, 54, 4343-4351.	3.2	46
34	SAR Studies Leading to the Identification of a Novel Series of Metallo-Î²-lactamase Inhibitors for the Treatment of Carbapenem-Resistant Enterobacteriaceae Infections That Display Efficacy in an Animal Infection Model. ACS Infectious Diseases, 2019, 5, 131-140.	3.8	46
35	Multidrug-ResistantPseudomonas aeruginosaProducing PER-1 Extended-Spectrum Serine-Î²-Lactamase and VIM-2 Metallo-Î²-Lactamase. Emerging Infectious Diseases, 2001, 7, 910-911.	4.3	40
36	Novel 3- N -Aminoglycoside Acetyltransferase Gene, aac (3)- Ic , from a Pseudomonas aeruginosa Integron. Antimicrobial Agents and Chemotherapy, 2003, 47, 1746-1748.	3.2	40

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37	Type M Resistance to Macrolides Is Due to a Two-Gene Efflux Transport System of the ATP-Binding Cassette (ABC) Superfamily. Frontiers in Microbiology, 2018, 9, 1670.	3.5	40
38	Anatomy of an extensively drug-resistant Klebsiella pneumoniae outbreak in Tuscany, Italy. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	37
39	Computational and biological profile of boronic acids for the detection of bacterial serine- and metallo-Î²-lactamases. Scientific Reports, 2017, 7, 17716.	3.3	35
40	OXA-46, a New Class D Î²-Lactamase of Narrow Substrate Specificity Encoded by a bla VIM-1 -Containing Integron from a Pseudomonas aeruginosa Clinical Isolate. Antimicrobial Agents and Chemotherapy, 2005, 49, 1973-1980.	3.2	33
41	Regulation of neuraminidase expression in Streptococcus pneumoniae. BMC Microbiology, 2012, 12, 200.	3.3	33
42	Prevalence and characterization of metallo-Î²-lactamases in clinical isolates of pseudomonas aeruginosaâ˜†. Diagnostic Microbiology and Infectious Disease, 2004, 48, 131-135.	1.8	31
43	Crystal Structure of the Narrow-Spectrum OXA-46 Class D Î²-Lactamase: Relationship between Active-Site Lysine Carbamylation and Inhibition by Polycarboxylates. Antimicrobial Agents and Chemotherapy, 2010, 54, 2167-2174.	3.2	31
44	ANT2681: SAR Studies Leading to the Identification of a Metallo-Î²-lactamase Inhibitor with Potential for Clinical Use in Combination with Meropenem for the Treatment of Infections Caused by NDM-Producing Enterobacteriaceae. ACS Infectious Diseases, 2020, 6, 2419-2430.	3.8	31
45	Overproduction and Biochemical Characterization of the Chryseobacterium meningosepticum BlaB Metallo-Î²-Lactamase. Antimicrobial Agents and Chemotherapy, 2002, 46, 1921-1927.	3.2	30
46	Alkyl-guanidine Compounds as Potent Broad-Spectrum Antibacterial Agents: Chemical Library Extension and Biological Characterization. Journal of Medicinal Chemistry, 2018, 61, 9162-9176.	6.4	30
47	Deciphering Multifactorial Resistance Phenotypes in Acinetobacter baumannii by Genomics and Targeted Label-free Proteomics. Molecular and Cellular Proteomics, 2018, 17, 442-456.	3.8	29
48	4-Amino-1,2,4-triazole-3-thione-derived Schiff bases as metallo-Î²-lactamase inhibitors. European Journal of Medicinal Chemistry, 2020, 208, 112720.	5.5	29
49	Structure-Function Relationships of Class D Carbapenemases. Current Drug Targets, 2016, 17, 1061-1071.	2.1	28
50	Genetic Context and Biochemical Characterization of the IMP-18 Metallo-Î²-Lactamase Identified in a Pseudomonas aeruginosa Isolate from the United States. Antimicrobial Agents and Chemotherapy, 2011, 55, 140-145.	3.2	27
51	OXA-372, a novel carbapenem-hydrolysing class D Î²-lactamase from aCitrobacter freundiiisolated from a hospital wastewater plant. Journal of Antimicrobial Chemotherapy, 2015, 70, 2749-2756.	3.0	27
52	Effect of High N -Acetylcysteine Concentrations on Antibiotic Activity against a Large Collection of Respiratory Pathogens. Antimicrobial Agents and Chemotherapy, 2016, 60, 7513-7517.	3.2	27
53	Characteristics of clinical isolates of Acinetobacter genomospecies 10 carrying two different metallo-Î²-lactamases. International Journal of Antimicrobial Agents, 2010, 36, 259-263.	2.5	26
54	Biochemical Characterization of the THIN-B Metallo-Î²-Lactamase of Janthinobacterium lividum. Antimicrobial Agents and Chemotherapy, 2004, 48, 4778-4783.	3.2	25

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55	Genetic and Biochemical Characterization of FUS-1 (OXA-85), a Narrow-Spectrum Class D Î²-Lactamase from Fusobacterium nucleatum subsp. polymorphum. Antimicrobial Agents and Chemotherapy, 2006, 50, 2673-2679.	3.2	25
56	Virtual screening identifies broad-spectrum Î²-lactamase inhibitors with activity on clinically relevant serine- and metallo-carbapenemases. Scientific Reports, 2020, 10, 12763.	3.3	25
57	Purification and Characterization of PBP4a, a New Low-Molecular-Weight Penicillin-Binding Protein from Bacillus subtilis. Journal of Bacteriology, 2001, 183, 1595-1599.	2.2	23
58	Identification, synthesis and biological activity of alkyl-guanidine oligomers as potent antibacterial agents. Scientific Reports, 2017, 7, 8251.	3.3	23
59	IND-6, a Highly Divergent IND-Type Metallo-Î²-Lactamase fromChryseobacterium indologenesStrain 597 Isolated in Burkina Faso. Antimicrobial Agents and Chemotherapy, 2009, 53, 4320-4326.	3.2	22
60	BEL-2, an Extended-Spectrum Î²-Lactamase with Increased Activity toward Expanded-Spectrum Cephalosporins in Pseudomonas aeruginosa. Antimicrobial Agents and Chemotherapy, 2010, 54, 533-535.	3.2	21
61	Intercontinental Dissemination of IMP-13-Producing Pseudomonas aeruginosa Belonging in Sequence Type 621. Journal of Clinical Microbiology, 2010, 48, 4342-4343.	3.9	21
62	Targeting clinically-relevant metallo-Î²-lactamases: from high-throughput docking to broad-spectrum inhibitors. Journal of Enzyme Inhibition and Medicinal Chemistry, 2016, 31, 98-109.	5.2	19
63	Discovery of ANT3310, a Novel Broad-Spectrum Serine Î²-Lactamase Inhibitor of the Diazabicyclooctane Class, Which Strongly Potentiates Meropenem Activity against Carbapenem-Resistant Enterobacterales and Acinetobacter baumannii. Journal of Medicinal Chemistry, 2020, 63, 15802-15820.	6.4	19
64	Biochemical Characterization of the POM-1 Metallo-Î²-Lactamase from Pseudomonas otitidis. Antimicrobial Agents and Chemotherapy, 2015, 59, 1755-1758.	3.2	18
65	Expanding the Repertoire of Carbapenem-Hydrolyzing Metallo-ÃŸ-Lactamases by Functional Metagenomic Analysis of Soil Microbiota. Frontiers in Microbiology, 2016, 7, 1985.	3.5	18
66	Biological Characterization and in Vivo Assessment of the Activity of a New Synthetic Macrocyclic Antifungal Compound. Journal of Medicinal Chemistry, 2016, 59, 3854-3866.	6.4	18
67	Identification and Characterization of a New Metallo-Î²-Lactamase, IND-5, from a Clinical Isolate of Chryseobacterium indologenes. Antimicrobial Agents and Chemotherapy, 2007, 51, 2988-2990.	3.2	17
68	Functional Diversity among Metallo-Î²-Lactamases: Characterization of the CAR-1 Enzyme of Erwinia carotovora. Antimicrobial Agents and Chemotherapy, 2008, 52, 2473-2479.	3.2	17
69	1,2,4-Triazole-3-thione compounds with a 4-ethyl alkyl/aryl sulfide substituent are broad-spectrum metallo-Î²-lactamase inhibitors with re-sensitization activity. European Journal of Medicinal Chemistry, 2021, 226, 113873.	5.5	16
70	Atomicâ€Resolution Structure of a Classâ€…C Î²â€Lactamase and Its Complex with Avibactam. ChemMedChem, 2018, 13, 1437-1446.	3.2	15
71	4-(N-Alkyl- and -Acyl-amino)-1,2,4-triazole-3-thione Analogs as Metallo-Î²-Lactamase Inhibitors: Impact of 4-Linker on Potency and Spectrum of Inhibition. Biomolecules, 2020, 10, 1094.	4.0	15
72	Structure of the extended-spectrum Î²-lactamase TEM-72 inhibited by citrate. Acta Crystallographica Section F: Structural Biology Communications, 2011, 67, 303-306.	0.7	14

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73	Synthesis of linear and cyclic guazatine derivatives endowed with antibacterial activity. Bioorganic and Medicinal Chemistry Letters, 2014, 24, 5525-5529.	2.2	14
74	New Î²-lactamases: a paradigm for the rapid response of bacterial evolution in the clinical setting. Future Microbiology, 2006, 1, 295-308.	2.0	13
75	Immunization with Toscana virus N-Gc proteins protects mice against virus challenge. Virology, 2008, 375, 521-528.	2.4	13
76	Genetic and Biochemical Characterization of TRU-1, the Endogenous Class C Î²-Lactamase from Aeromonas enteropelogenes. Antimicrobial Agents and Chemotherapy, 2010, 54, 1547-1554.	3.2	13
77	Biochemical Characterization of CPS-1, a Subclass B3 Metallo-Î²-Lactamase from a Chryseobacterium piscium Soil Isolate. Antimicrobial Agents and Chemotherapy, 2016, 60, 1869-1873.	3.2	13
78	Optimization of a direct spectrophotometric method to investigate the kinetics and inhibition of sialidases. BMC Biochemistry, 2012, 13, 19.	4.4	12
79	Isonitrile-Based Multicomponent Synthesis of Î²-Amino Boronic Acids as Î²-Lactamase Inhibitors. Antibiotics, 2020, 9, 249.	3.7	12
80	4-Alkyl-1,2,4-triazole-3-thione analogues as metallo-Î²-lactamase inhibitors. Bioorganic Chemistry, 2021, 113, 105024.	4.1	12
81	Molecular heterogeneity of blaVIM-2-containing integrons from Pseudomonas aeruginosa plasmids encoding the VIM-2 metallo-Î²-lactamase. FEMS Microbiology Letters, 2001, 195, 145-150.	1.8	11
82	Purification and Biochemical Characterization of IMP-13 Metallo-Î²-Lactamase. Antimicrobial Agents and Chemotherapy, 2011, 55, 399-401.	3.2	11
83	Occurrence of conjugative IncF-type plasmids harboring the blaCTX-M-15 gene in Enterobacteriaceae isolates from newborns in Tunisia. Pediatric Research, 2015, 77, 107-110.	2.3	11
84	Design and synthesis of a novel inhibitor of T. Viride chitinase through an in silico target fishing protocol. Bioorganic and Medicinal Chemistry Letters, 2017, 27, 3332-3336.	2.2	11
85	Class B Î²-Lactamases. , 0, , 115-144.		11
86	Structure-based approach for identification of novel phenylboronic acids as serine-Î²-lactamase inhibitors. Journal of Computer-Aided Molecular Design, 2016, 30, 851-861.	2.9	9
87	Crystal Structure of the Pseudomonas aeruginosa BEL-1 Extended-Spectrum Î²-Lactamase and Its Complexes with Moxalactam and Imipenem. Antimicrobial Agents and Chemotherapy, 2016, 60, 7189-7199.	3.2	9
88	1,2,4â€Triazoleâ€3â€Thione Analogues with a 2â€Ethylbenzoic Acid at Position 4 as VIMâ€type Metalloâ€Î²â€Lactamase Inhibitors. ChemMedChem, 2022, 17, .	3.2	9
89	A fragment-based drug discovery strategy applied to the identification of NDM-1 Î²-lactamase inhibitors. European Journal of Medicinal Chemistry, 2022, 240, 114599.	5.5	9
90	Chryseobacterium gleum in a man with prostatectomy in Senegal: a case report and review of the literature. Journal of Medical Case Reports, 2017, 11, 118.	0.8	8

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91	Biochemical Characterization of VIM-39, a VIM-1-Like Metallo-Î²-Lactamase Variant from a Multidrug-Resistant Klebsiella pneumoniae Isolate from Greece. Antimicrobial Agents and Chemotherapy, 2015, 59, 7811-7814.	3.2	6
92	Screen of Unfocused Libraries Identified Compounds with Direct or Synergistic Antibacterial Activity. ACS Medicinal Chemistry Letters, 2020, 11, 899-905.	2.8	6
93	Expression, purification, crystallization and preliminary X-ray characterization of the class B acid phosphatase (AphA) fromEscherichia coli. Acta Crystallographica Section D: Biological Crystallography, 2003, 59, 1058-1060.	2.5	5
94	Antibacterial alkylguanidino ureas: Molecular simplification approach, searching for membrane-based MoA. European Journal of Medicinal Chemistry, 2022, 231, 114158.	5.5	5
95	Boric acid and acetate anion binding to subclass B3 metallo-Î²-lactamase BJP-1 provides clues for mechanism of action and inhibitor design. Inorganica Chimica Acta, 2018, 470, 331-341.	2.4	4
96	Intermolecular interactions of the extended recognition site of <scp>VIM</scp>â€2 <scp>metalloâ€Î²â€lactamase</scp> with 1,2,4â€triazoleâ€3â€thione inhibitors. Validations of a polarizable molecular mechanics potential by ab initio <scp>QC</scp>. Journal of Computational Chemistry, 2021, 42, 86-106.	3.3	4
97	Major Enzymatic Factors Involved in Bacterial Penicillin Resistance in Burkina Faso. Pakistan Journal of Biological Sciences, 2007, 10, 506-510.	0.5	4
98	Efficient Inactivation of SARS-CoV-2 and Other RNA or DNA Viruses with Blue LED Light. Pathogens, 2021, 10, 1590.	2.8	4
99	Inducible class C Î²-lactamases produced by psychrophilic bacteria. FEMS Microbiology Letters, 1998, 161, 311-315.	1.8	3
100	Biochemical Characterization of the TEM-107 Extended-Spectrum Î²-Lactamase in a Klebsiella pneumoniae Isolate from South Korea. Antimicrobial Agents and Chemotherapy, 2011, 55, 5930-5932.	3.2	3
101	Genetic and biochemical characterisation of CTX-M-37 extended-spectrum Î²-lactamase from an Enterobacter cloacae clinical isolate from Mongolia. Journal of Global Antimicrobial Resistance, 2017, 10, 3-7.	2.2	3
102	Towards Innovative Antibacterial Correctors for Cystic Fibrosis Targeting the Lung Microbiome with a Multifunctional Effect. ChemMedChem, 2022, 17, .	3.2	2
103	Editorial overview: Anti-infectives: Towards novel antiviral and antibacterial drugs? Current approaches to address a growing medical need. Current Opinion in Pharmacology, 2014, 18, iv-vi.	3.5	1
104	Amino Acid Replacement at Position 228 Induces Fluctuation in the â„¦-Loop of KPC-3 and Reduces the Affinity against Oxyimino Cephalosporins: Kinetic and Molecular Dynamics Studies. Catalysts, 2020, 10, 1474.	3.5	1
105	Editorial: Structural and Biochemical Aspects of the Interaction of Î²-Lactamases With State-of-the-Art Inhibitors. Frontiers in Microbiology, 2022, 13, 849324.	3.5	1