

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

87 papers	2,165 citations	28 h-index	42 g-index
87 ext. papers	2,233 ext. citations	5.1 avg, IF	4.83 L-index

#	Paper	IF	Citations
87	Crystallographic structure of a phosphonate derivative of the Enterobacter cloacae P99 cephalosporinase: mechanistic interpretation of a beta-lactamase transition-state analog. <i>Biochemistry</i> , <b>1994</b> , 33, 6762-72	3.2	158
86	Inhibition of a class C beta-lactamase by a specific phosphonate monoester. <i>Science</i> , <b>1989</b> , 246, 917-9	33.3	119
85	Kinetics and mechanism of the serine beta-lactamase catalyzed hydrolysis of depsipeptides. <i>Biochemistry</i> , <b>1987</b> , 26, 3385-95	3.2	80
84	Structures of two kinetic intermediates reveal species specificity of penicillin-binding proteins. <i>Journal of Molecular Biology</i> , <b>2002</b> , 322, 111-22	6.5	78
83	Substrate specificity of bacterial DD-peptidases (penicillin-binding proteins). <i>Cellular and Molecular Life Sciences</i> , <b>2008</b> , 65, 2138-55	10.3	71
82	beta-Lactamase-catalyzed hydrolysis of acyclic depsipeptides and acyl transfer to specific amino acid acceptors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>1984</b> , 81, 1302-6	11.5	58
81	Effectiveness of Tetrahedral Adducts as Transition-State Analogs and Inhibitors of the Class C Lactamase of Enterobacter cloacae P99. <i>Journal of the American Chemical Society</i> , <b>1997</b> , 119, 1529-1538	16.4	56
80	The crystal structure of phosphonate-inhibited D-Ala-D-Ala peptidase reveals an analogue of a tetrahedral transition state. <i>Biochemistry</i> , <b>2003</b> , 42, 1199-208	3.2	55
79	Crystal structures of complexes between the R61 DD-peptidase and peptidoglycan-mimetic beta-lactams: a non-covalent complex with a "perfect penicillin". <i>Journal of Molecular Biology</i> , <b>2005</b> , 345, 521-33	6.5	53
78	Mechanism of inhibition of the class C beta-lactamase of Enterobacter cloacae P99 by phosphonate monoesters. <i>Biochemistry</i> , <b>1992</b> , 31, 5869-78	3.2	49
77	Crystal structure of the Bacillus subtilis penicillin-binding protein 4a, and its complex with a peptidoglycan mimetic peptide. <i>Journal of Molecular Biology</i> , <b>2007</b> , 371, 528-39	6.5	48
76	Reaction of soluble penicillin-binding protein 2a of methicillin-resistant Staphylococcus aureus with beta-lactams and acyclic substrates: kinetics in homogeneous solution. <i>Biochemical Journal</i> , <b>1998</b> , 332 ( Pt 3), 755-61	3.8	48
75	Functional evolution of the serine Lactamase active site. <i>Perkin Transactions II RSC</i> , <b>2002</b> , 851-861		41
74	Crystal structures of complexes of bacterial DD-peptidases with peptidoglycan-mimetic ligands: the substrate specificity puzzle. <i>Journal of Molecular Biology</i> , <b>2008</b> , 381, 383-93	6.5	40
73	Characterization of covalently bound enzyme inhibitors as transition-state analogs by protein stability measurements: phosphonate monoester inhibitors of a beta-lactamase. <i>Biochemistry</i> , <b>1994</b> , 33, 116-25	3.2	40
72	Crystal structures of covalent complexes of Lactam antibiotics with Escherichia coli penicillin-binding protein 5: toward an understanding of antibiotic specificity. <i>Biochemistry</i> , <b>2010</b> , 49, 8094-104	3.2	39
71	N-(phenylacetyl)glycyl-D-aziridine-2-carboxylate, an acyclic amide substrate of beta-lactamases: importance of the shape of the substrate in beta-lactamase evolution. <i>Biochemistry</i> , <b>1991</b> , 30, 3640-9	3.2	38

70	Reactivity of penicillin-binding proteins with peptidoglycan-mimetic beta-lactams: what's wrong with these enzymes?. <i>Biochemistry</i> , <b>2006</b> , 45, 15873-83	3.2	36
69	Effect of the 3'-leaving group on turnover of cephem antibiotics by a class C beta-lactamase. <i>Biochemical Journal</i> , <b>1989</b> , 259, 255-60	3.8	36
68	Beta-ketophosphonates as beta-lactamase inhibitors: Intramolecular cooperativity between the hydrophobic subsites of a class D beta-lactamase. <i>Bioorganic and Medicinal Chemistry</i> , <b>2008</b> , 16, 6987-94	3.4	35
67	Synthesis and Reactivity with beta-Lactamases of "Penicillin-like" Cyclic Depsipeptides. <i>Journal of Organic Chemistry</i> , <b>1999</b> , 64, 713-720	4.2	35
66	Unexpected tricovalent binding mode of boronic acids within the active site of a penicillin-binding protein. <i>Journal of the American Chemical Society</i> , <b>2011</b> , 133, 10839-48	16.4	34
65	Dipeptide binding to the extended active site of the Streptomyces R61 D-alanyl-D-alanine-peptidase: the path to a specific substrate. <i>Biochemistry</i> , <b>2000</b> , 39, 12200-9	3.2	34
64	Kinetics and mechanism of the hydrolysis of depsipeptides catalyzed by the beta-lactamase of Enterobacter cloacae P99. <i>Biochemistry</i> , <b>1996</b> , 35, 3595-603	3.2	34
63	Structural relationship between the active sites of $\beta$ -lactam-recognizing and amidase signature enzymes: convergent evolution?. <i>Biochemistry</i> , <b>2010</b> , 49, 9688-97	3.2	32
62	The perfect penicillin? Inhibition of a bacterial DD-peptidase by peptidoglycan-mimetic beta-lactams. <i>Journal of the American Chemical Society</i> , <b>2004</b> , 126, 8122-3	16.4	32
61	On the importance of a methyl group in beta-lactamase evolution: free energy profiles and molecular modeling. <i>Biochemistry</i> , <b>1999</b> , 38, 10499-510	3.2	32
60	Beta-secondary and solvent deuterium kinetic isotope effects on beta-lactamase catalysis. <i>Biochemistry</i> , <b>1996</b> , 35, 3604-13	3.2	32
59	Crystal structure of a complex between the Actinomadura R39 DD-peptidase and a peptidoglycan-mimetic boronate inhibitor: interpretation of a transition state analogue in terms of catalytic mechanism. <i>Biochemistry</i> , <b>2010</b> , 49, 6411-9	3.2	28
58	Approaches to the simultaneous inactivation of metallo- and serine-beta-lactamases. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2009</b> , 19, 1618-22	2.9	28
57	The synthesis and evaluation of benzofuranones as beta-lactamase substrates. <i>Bioorganic and Medicinal Chemistry</i> , <b>2001</b> , 9, 1175-83	3.4	28
56	O-aryloxycarbonyl hydroxamates: new beta-lactamase inhibitors that cross-link the active site. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 9548-9	16.4	27
55	$\beta$ -Lactamases: Why and How. <i>Journal of Medicinal Chemistry</i> , <b>2016</b> , 59, 8207-20	8.3	27
54	Relative specificities of a series of beta-lactam-recognizing enzymes towards the side-chains of penicillins and of acyclic thioldepsipeptides. <i>Biochemical Journal</i> , <b>1994</b> , 302 ( Pt 3), 851-6	3.8	26
53	Structure-activity studies of the inhibition of serine beta-lactamases by phosphonate monoesters. <i>Bioorganic and Medicinal Chemistry</i> , <b>1997</b> , 5, 1783-8	3.4	24

52	Transpeptidation reactions of a specific substrate catalyzed by the streptomyces R61 DD-peptidase: characterization of a chromogenic substrate and acyl acceptor design. <i>Biochemistry</i> , <b>2005</b> , 44, 9971-9	3.2	24
51	Beta-secondary and solvent deuterium kinetic isotope effects on catalysis by the Streptomyces R61 DD-peptidase: comparisons with a structurally similar class C beta-lactamase. <i>Biochemistry</i> , <b>1999</b> , 38, 1469-77	3.2	24
50	Accumulation of acyl-enzyme intermediates during turnover of penicillins by the class A beta-lactamase of Staphylococcus aureus PC1. <i>Biochemical Journal</i> , <b>1988</b> , 254, 919-22	3.8	23
49	Inhibition of bacterial DD-peptidases (penicillin-binding proteins) in membranes and in vivo by peptidoglycan-mimetic boronic acids. <i>Biochemistry</i> , <b>2012</b> , 51, 2804-11	3.2	21
48	Mechanism of reaction of acyl phosph(on)ates with the beta-lactamase of Enterobacter cloacae P99. <i>Biochemistry</i> , <b>2001</b> , 40, 4610-21	3.2	21
47	Kinetics and mechanism of inhibition of a serine beta-lactamase by O-aryloxycarbonyl hydroxamates. <i>Biochemistry</i> , <b>2008</b> , 47, 12037-46	3.2	20
46	Synthesis and evaluation of ketophosph(on)ates as beta-lactamase inhibitors. <i>Journal of Organic Chemistry</i> , <b>2006</b> , 71, 4778-85	4.2	19
45	Inhibition of class D beta-lactamases by acyl phosphates and phosphonates. <i>Antimicrobial Agents and Chemotherapy</i> , <b>2005</b> , 49, 4410-2	5.9	18
44	Inhibition of Serine $\beta$ -Lactamases by Acyl Phosph(on)ates: A New Source of Inert Acyl [and Phosphyl] Enzymes. <i>Journal of the American Chemical Society</i> , <b>1998</b> , 120, 4264-4268	16.4	18
43	Interactions of cephalosporins with the Streptomyces R61 DD-transpeptidase/carboxypeptidase. Influence of the 3'-substituent. <i>Biochemical Journal</i> , <b>1986</b> , 238, 309-12	3.8	18
42	Substrate specificity of low-molecular mass bacterial DD-peptidases. <i>Biochemistry</i> , <b>2011</b> , 50, 10091-101	3.2	17
41	Transpeptidation reactions of a specific substrate catalyzed by the Streptomyces R61 DD-peptidase: the structural basis of acyl acceptor specificity. <i>Biochemistry</i> , <b>2005</b> , 44, 9961-70	3.2	17
40	A Lysine-Targeted Affinity Label for Serine- $\beta$ -Lactamase Also Covalently Modifies New Delhi Metallo- $\beta$ -Lactamase-1 (NDM-1). <i>Biochemistry</i> , <b>2019</b> , 58, 2834-2843	3.2	16
39	Inhibition of class D beta-lactamases by diaroyl phosphates. <i>Biochemistry</i> , <b>2005</b> , 44, 16121-9	3.2	16
38	4-quinolones as noncovalent inhibitors of high molecular mass penicillin-binding proteins. <i>ACS Medicinal Chemistry Letters</i> , <b>2012</b> , 3, 592-5	4.3	15
37	Synthesis and beta-lactamase reactivity of alpha-substituted phenaceturates. <i>Bioorganic and Medicinal Chemistry</i> , <b>2006</b> , 14, 7023-33	3.4	15
36	Kinetics of turnover of cefotaxime by the Enterobacter cloacae P99 and GCL beta-lactamases: two free enzyme forms of the P99 beta-lactamase detected by a combination of pre- and post-steady state kinetics. <i>Biochemistry</i> , <b>2004</b> , 43, 2664-72	3.2	13
35	Synthesis, Hydrolysis, and Evaluation of 3-Acylamino-3,4-dihydro-2-oxo-2H-1,3-benzoxazinecarboxylic Acids and Linear Azadepsipeptides as Potential Substrates/Inhibitors of $\beta$ -Lactam-Recognizing Enzymes. <i>European Journal of Organic Chemistry</i> , <b>2001</b> , 2001, 1411-1419	3.2	13

34	Reactions of peptidoglycan-mimetic beta-lactams with penicillin-binding proteins in vivo and in membranes. <i>ACS Chemical Biology</i> , <b>2007</b> , 2, 620-4	4.9	12
33	Synthesis and evaluation of new substrate analogues of streptomyces R61 DD-peptidase: dissection of a specific ligand. <i>Journal of Organic Chemistry</i> , <b>2004</b> , 69, 7472-8	4.2	12
32	Salicyloyl Cyclic Phosphate, a Penicillin-Like Inhibitor of $\beta$ -Lactamases. <i>Journal of the American Chemical Society</i> , <b>1998</b> , 120, 3004-3006	16.4	12
31	The D-methyl group in beta-lactamase evolution: evidence from the Y221G and GC1 mutants of the class C beta-lactamase of <i>Enterobacter cloacae</i> P99. <i>Biochemistry</i> , <b>2005</b> , 44, 7543-52	3.2	11
30	Nucleophilic re-activation of the PC1 beta-lactamase of <i>Staphylococcus aureus</i> and of the DD-peptidase of <i>Streptomyces</i> R61 after their inactivation by cephalosporins and cephamycins. <i>Biochemical Journal</i> , <b>1987</b> , 246, 651-8	3.8	11
29	Kinetics of action of a two-stage pro-inhibitor of serine $\beta$ -lactamases. <i>Biochemistry</i> , <b>2013</b> , 52, 7060-70	3.2	10
28	Inhibition of class A and C beta-lactamases by diaroyl phosphates. <i>Biochemistry</i> , <b>2009</b> , 48, 8285-92	3.2	10
27	Kinetic and structural consequences of the leaving group in substrates of a class C beta-lactamase. <i>Bioorganic and Medicinal Chemistry</i> , <b>2004</b> , 12, 1537-42	3.4	10
26	Kinetics of reactions of the Actinomadura R39 DD-peptidase with specific substrates. <i>Biochemistry</i> , <b>2011</b> , 50, 376-87	3.2	9
25	Crossover inhibition as an indicator of convergent evolution of enzyme mechanisms: a $\beta$ -lactamase and a N-terminal nucleophile hydrolase. <i>FEBS Letters</i> , <b>2012</b> , 586, 4186-9	3.8	8
24	Covalent inhibition of serine $\beta$ -lactamases by novel hydroxamic acid derivatives. <i>Biochemistry</i> , <b>2013</b> , 52, 3712-20	3.2	8
23	Inverse acyl phosph(on)ates: substrates or inhibitors of beta-lactam-recognizing enzymes?. <i>Bioorganic Chemistry</i> , <b>2001</b> , 29, 271-81	5.1	8
22	8-Hydroxypenicillic Acid from 6-Aminopenicillanic Acid: A New Reaction Catalyzed by a Class C $\beta$ -Lactamase. <i>Journal of the American Chemical Society</i> , <b>1996</b> , 118, 8207-8212	16.4	8
21	A New Covalent Inhibitor of Class C $\beta$ -Lactamases Reveals Extended Active Site Specificity. <i>Biochemistry</i> , <b>2015</b> , 54, 7375-84	3.2	7
20	Substituted aryl malonamates as new serine beta-lactamase substrates: structure-activity studies. <i>Bioorganic and Medicinal Chemistry</i> , <b>2010</b> , 18, 282-91	3.4	7
19	Deacylation transition states of a bacterial DD-peptidase. <i>Biochemistry</i> , <b>2006</b> , 45, 13074-82	3.2	7
18	New substrates for beta-lactam-recognizing enzymes: aryl malonamates. <i>Biochemistry</i> , <b>2003</b> , 42, 6719-25	3.2	7
17	Inhibition of DD-peptidases by a specific trifluoroketone: crystal structure of a complex with the Actinomadura R39 DD-peptidase. <i>Biochemistry</i> , <b>2013</b> , 52, 2128-38	3.2	5

16	Dual substrate specificity of <i>Bacillus subtilis</i> PBP4a. <i>Biochemistry</i> , <b>2013</b> , 52, 2627-37	3.2	5
15	Synthesis and reactivity with beta-lactamases of a monobactam bearing a retro-amide side chain. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2006</b> , 16, 869-71	2.9	5
14	Penicillin acylase and O-aryloxycarbonyl hydroxamates: Two acyl-enzymes, one leading to hydrolysis, the other to inactivation. <i>Archives of Biochemistry and Biophysics</i> , <b>2017</b> , 614, 65-71	4.1	4
13	Neutral $\beta$ -lactams Inactivate High Molecular Mass Penicillin-Binding Proteins of Class B1, Including PBP2a of MRSA. <i>ACS Medicinal Chemistry Letters</i> , <b>2014</b> , 5, 154-7	4.3	4
12	Intramolecular cooperativity in the reaction of diacyl phosphates with serine beta-lactamases. <i>Biochemistry</i> , <b>2009</b> , 48, 8293-8	3.2	4
11	Benzopyranones with retro-amide side chains as (inhibitory) beta-lactamase substrates. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2004</b> , 14, 5117-20	2.9	4
10	A "cephalosporin-like" cyclic depsipeptide: synthesis and reaction with beta-lactam-recognizing enzymes. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>1999</b> , 9, 341-6	2.9	4
9	Effect of side-chain amide thionation on turnover of beta-lactam substrates by beta-lactamases. Further evidence on the question of side-chain hydrogen-bonding in catalysis. <i>Biochemical Journal</i> , <b>1992</b> , 286 ( Pt 3), 857-62	3.8	4
8	Elusive structural changes of New Delhi metallo- $\beta$ -lactamase revealed by ultraviolet photodissociation mass spectrometry. <i>Chemical Science</i> , <b>2020</b> , 11, 8999-9010	9.4	4
7	Kinetic Evidence for a Second Ligand Binding Site on <i>Streptococcus pneumoniae</i> Penicillin-Binding Protein 2x. <i>Biochemistry</i> , <b>2018</b> , 57, 1758-1766	3.2	2
6	Specificity of extended O-aryloxycarbonyl hydroxamates as inhibitors of a class C $\beta$ -lactamase. <i>Bioorganic and Medicinal Chemistry</i> , <b>2019</b> , 27, 1430-1436	3.4	2
5	Synthesis and Kinetic Analysis of Two Conformationally Restricted Peptide Substrates of <i>Escherichia coli</i> Penicillin-Binding Protein 5. <i>Biochemistry</i> , <b>2016</b> , 55, 4065-76	3.2	1
4	Serendipitous discovery of $\beta$ -hydroxyalkyl esters as $\beta$ -lactamase substrates. <i>Biochemistry</i> , <b>2010</b> , 49, 10496-506	3.6	1
3	Detection of an enzyme isomechanism by means of the kinetics of covalent inhibition. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , <b>2021</b> , 1869, 140681	4	0
2	Specificity and mechanism of mandelamide hydrolase catalysis. <i>Archives of Biochemistry and Biophysics</i> , <b>2017</b> , 618, 23-31	4.1	
1	Kinetics and stereochemistry of hydrolysis of an N-(phenylacetyl)- $\beta$ -hydroxyglycine ester catalyzed by serine $\beta$ -lactamases and DD-peptidases. <i>Organic and Biomolecular Chemistry</i> , <b>2012</b> , 10, 7356-62	3.9	