Klaas M Pos

List of Publications by Year
in descending order

68 papers	5,016 citations	126907 33 h-index	98798 67 g-index
70 all docs	70 docs citations	70 times ranked	4538 citing authors

#	Article	IF	Citations
1	Multidrug efflux pumps: structure, function and regulation. Nature Reviews Microbiology, 2018, 16, 523-539.	28.6	580
2	Structural Asymmetry of AcrB Trimer Suggests a Peristaltic Pump Mechanism. Science, 2006, 313, 1295-1298.	12.6	512
3	Transport of drugs by the multidrug transporter AcrB involves an access and a deep binding pocket that are separated by a switch-loop. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 5687-5692.	7.1	285
4	Drug transport mechanism of the AcrB efflux pump. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2009, 1794, 782-793.	2.3	256
5	Mechanisms of envelope permeability and antibiotic influx and efflux in Gram-negative bacteria. Nature Microbiology, 2017, 2, 17001.	13.3	238
6	Molecular basis for inhibition of AcrB multidrug efflux pump by novel and powerful pyranopyridine derivatives. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3509-3514.	7.1	172
7	Tripartite assembly of RND multidrug efflux pumps. Nature Communications, 2016, 7, 10731.	12.8	166
8	Engineered disulfide bonds support the functional rotation mechanism of multidrug efflux pump AcrB. Nature Structural and Molecular Biology, 2008, 15, 199-205.	8.2	142
9	Coupling of remote alternating-access transport mechanisms for protons and substrates in the multidrug efflux pump AcrB. ELife, 2014, 3, .	6.0	137
10	Structure, mechanism and cooperation of bacterial multidrug transporters. Current Opinion in Structural Biology, 2015, 33, 76-91.	5.7	129
11	Approved Drugs Containing Thiols as Inhibitors of Metallo-Î²-lactamases: Strategy To Combat Multidrug-Resistant Bacteria. Journal of Medicinal Chemistry, 2015, 58, 3626-3630.	6.4	127
12	Site-Directed Mutagenesis Reveals Putative Substrate Binding Residues in the <i>Escherichia coli</i> RND Efflux Pump AcrB. Journal of Bacteriology, 2008, 190, 8225-8229.	2.2	126
13	RND Efflux Pumps: Structural Information Translated into Function and Inhibition Mechanisms. Current Topics in Medicinal Chemistry, 2013, 13, 3079-3100.	2.1	122
14	A natural prodrug activation mechanism in nonribosomal peptide synthesis. Nature Chemical Biology, 2011, 7, 888-890.	8.0	118
15	The AcrB Efflux Pump: Conformational Cycling and Peristalsis Lead to Multidrug Resistance. Current Drug Targets, 2008, 9, 729-749.	2.1	116
16	The <i>Escherichia coli</i> Citrate Carrier CitT: a Member of a Novel Eubacterial Transporter Family Related to the 2-Oxoglutarate/Malate Translocator from Spinach Chloroplasts. Journal of Bacteriology, 1998, 180, 4160-4165.	2.2	110
17	Structure, Assembly, and Function of Tripartite Efflux and Type 1 Secretion Systems in Gram-Negative Bacteria. Chemical Reviews, 2021, 121, 5479-5596.	47.7	103
18	AcrB: a mean, keen, drug efflux machine. Annals of the New York Academy of Sciences, 2020, 1459, 38-68.	3.8	99

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19	Localization of Peptidases in Lactococci. Applied and Environmental Microbiology, 1992, 58, 285-290.	3.1	96
20	Basolateral aromatic amino acid transporter TAT1 (Slc16a10) functions as an efflux pathway. Journal of Cellular Physiology, 2006, 206, 771-779.	4.1	81
21	Effect of the F610A Mutation on Substrate Extrusion in the AcrB Transporter: Explanation and Rationale by Molecular Dynamics Simulations. Journal of the American Chemical Society, 2011, 133, 10704-10707.	13.7	79
22	Crucial Role of Asp408 in the Proton Translocation Pathway of Multidrug Transporter AcrB: Evidence from Site-Directed Mutagenesis and Carbodiimide Labeling. Biochemistry, 2009, 48, 5801-5812.	2.5	74
23	Crystal structure and mechanistic basis of a functional homolog of the antigen transporter TAP. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E438-E447.	7.1	67
24	BGA66 and BGA71 facilitate complement resistance of <i>Borrelia bavariensis</i> by inhibiting assembly of the membrane attack complex. Molecular Microbiology, 2016, 99, 407-424.	2.5	63
25	Switch-Loop Flexibility Affects Transport of Large Drugs by the Promiscuous AcrB Multidrug Efflux Transporter. Antimicrobial Agents and Chemotherapy, 2014, 58, 4767-4772.	3.2	52
26	Detecting Substrates Bound to the Secondary Multidrug Efflux Pump EmrE by DNP-Enhanced Solid-State NMR. Journal of the American Chemical Society, 2013, 135, 15754-15762.	13.7	51
27	Transport of lipophilic carboxylates is mediated by transmembrane helix 2 in multidrug transporter AcrB. Nature Communications, 2016, 7, 13819.	12.8	51
28	Structural and functional aspects of the multidrug efflux pump AcrB. Biological Chemistry, 2009, 390, 693-699.	2.5	50
29	An antibody library for stabilizing and crystallizing membrane proteins - selecting binders to the citrate carrier CitS. FEBS Letters, 2004, 564, 340-348.	2.8	43
30	Allosteric drug transport mechanism of multidrug transporter AcrB. Nature Communications, 2021, 12, 3889.	12.8	41
31	Purification, crystallization and preliminary diffraction studies of AcrB, an inner-membrane multi-drug efflux protein. Acta Crystallographica Section D: Biological Crystallography, 2002, 58, 1865-1867.	2.5	40
32	Binding and Transport of Carboxylated Drugs by the Multidrug Transporter AcrB. Journal of Molecular Biology, 2020, 432, 861-877.	4.2	37
33	Crystallographic analysis of AcrB. FEBS Letters, 2004, 564, 333-339.	2.8	36
34	Tigecycline efflux in Acinetobacter baumannii is mediated by TetA in synergy with RND-type efflux transporters. Journal of Antimicrobial Chemotherapy, 2020, 75, 1135-1139.	3.0	36
35	Purification of two active fusion proteins of the Na+-dependent citrate carrier ofKlebsiella pneumoniae. FEBS Letters, 1994, 347, 37-41.	2.8	33
36	Switch Loop Flexibility Affects Substrate Transport of the AcrB Efflux Pump. Journal of Molecular Biology, 2017, 429, 3863-3874.	4.2	33

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37	Dynamics of Intact MexAB-OprM Efflux Pump: Focusing on the MexA-OprM Interface. Scientific Reports, 2017, 7, 16521.	3.3	30
38	Pyridylpiperazine-based allosteric inhibitors of RND-type multidrug efflux pumps. Nature Communications, 2022, 13, 115.	12.8	28
39	A New Critical Conformational Determinant of Multidrug Efflux by an MFS Transporter. Journal of Molecular Biology, 2018, 430, 1368-1385.	4.2	27
40	Editorial: Bad Bugs in the XXIst Century: Resistance Mediated by Multi-Drug Efflux Pumps in Gram-Negative Bacteria. Frontiers in Microbiology, 2016, 7, 833.	3.5	26
41	Structural and functional analysis of the promiscuous AcrB and AdeB efflux pumps suggests different drug binding mechanisms. Nature Communications, 2021, 12, 6919.	12.8	25
42	Molecular basis of polyspecificity of the Small Multidrug Resistance Efflux Pump AbeS from Acinetobacter baumannii. Journal of Molecular Biology, 2016, 428, 644-657.	4.2	24
43	Molecular Analysis of BcrR, a Membrane-bound Bacitracin Sensor and DNA-binding Protein from Enterococcus faecalis. Journal of Biological Chemistry, 2008, 283, 8591-8600.	3.4	23
44	The assembly and disassembly of the AcrAB-TolC three-component multidrug efflux pump. Biological Chemistry, 2015, 396, 1083-1089.	2.5	23
45	Cytochrome c Oxidase Biogenesis and Metallochaperone Interactions: Steps in the Assembly Pathway of a Bacterial Complex. PLoS ONE, 2017, 12, e0170037.	2.5	23
46	The Outer Membrane TolC-like Channel HgdD Is Part of Tripartite Resistance-Nodulation-Cell Division (RND) Efflux Systems Conferring Multiple-drug Resistance in the Cyanobacterium Anabaena sp. PCC7120. Journal of Biological Chemistry, 2013, 288, 31192-31205.	3.4	22
47	Analysis of AcrB and AcrB/DARPin ligand complexes by LILBID MS. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 2189-2196.	2.6	20
48	Characterization of the citrate/acetate antiporter CitW of Klebsiella pneumoniae. Archives of Microbiology, 2002, 177, 500-506.	2.2	19
49	Trinity revealed: Stoichiometric complex assembly of a bacterial multidrug efflux pump. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 6893-6894.	7.1	18
50	The use of novel organic gels and hydrogels in protein crystallization. Journal of Applied Crystallography, 2010, 43, 58-63.	4.5	18
51	Identification and characterization of carbapenem binding sites within the RND-transporter AcrB. Biochimica Et Biophysica Acta - Biomembranes, 2019, 1861, 62-74.	2.6	18
52	Role of conserved residues within helices IV and VIII of the oxaloacetate decarboxylase Î²â€Šsubunit in the energy coupling mechanism of the Na+pump. FEBS Journal, 2002, 269, 2997-3004.	0.2	17
53	Functional characterization of a NapA Na+/H+antiporter fromThermus thermophilus. FEBS Letters, 2007, 581, 572-578.	2.8	17
54	Structural characterization of the EmrAB-TolC efflux complex from E. coli. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183488.	2.6	17

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55	Identification of a domain in the Î±-subunit of the oxaloacetate decarboxylase Na+ pump that accomplishes complex formation with the Î³-subunit. FEBS Journal, 2005, 272, 846-855.	4.7	16
56	The Na + -dependent citrate carrier of Klebsiella pneumoniae : high-level expression and site-directed mutagenesis of asparagine-185 and glutamate-194. Archives of Microbiology, 2000, 174, 67-73.	2.2	15
57	Identification of an Na ⁺ -Dependent Malonate Transporter of <i>Malonomonas rubra</i> and Its Dependence on Two Separate Genes. Journal of Bacteriology, 1998, 180, 2689-2693.	2.2	14
58	A novel method to determine antibiotic sensitivity in Bdellovibrio bacteriovorus reveals a DHFR-dependent natural trimethoprim resistance. Scientific Reports, 2020, 10, 5315.	3.3	12
59	The chloramphenicol/H+ antiporter CraA of Acinetobacter baumannii AYE reveals a broad substrate specificity. Journal of Antimicrobial Chemotherapy, 2019, 74, 1192-1201.	3.0	11
60	Oxaloacetate decarboxylase of Archaeoglobus fulgidus: cloning of genes and expression in Escherichia coli. Archives of Microbiology, 2004, 182, 414-420.	2.2	7
61	Identification of the novel class D Î²-lactamase OXA-679 involved in carbapenem resistance in Acinetobacter calcoaceticus. Journal of Antimicrobial Chemotherapy, 2019, 74, 1494-1502.	3.0	7
62	Binding of Tetracyclines to Acinetobacter baumannii TetR Involves Two Arginines as Specificity Determinants. Frontiers in Microbiology, 2021, 12, 711158.	3.5	7
63	Drug Resistance: A Periplasmic MÃ©nage Ã Trois. Chemistry and Biology, 2011, 18, 405-407.	6.0	4
64	Characterization and Molecular Determinants for Î²-Lactam Specificity of the Multidrug Efflux Pump AcrD from Salmonella typhimurium. Antibiotics, 2021, 10, 1494.	3.7	4
65	High-Resolution Crystallographic Analysis of AcrB Using Designed Ankyrin Repeat Proteins (DARPins). Methods in Molecular Biology, 2018, 1700, 3-24.	0.9	3
66	Unidirectional mannitol synthesis of<i>Acinetobacter baumannii</i>MtlD is facilitated by the helixâ€“loopâ€“helix-mediated dimer formation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2107994119.	7.1	2
67	Bacterial efflux transporters in the limelight. Research in Microbiology, 2018, 169, 349-350.	2.1	0
68	Antimicrobial Sensitivity Assay for Bdellovibrio bacteriovorus. Bio-protocol, 2020, 10, e3865.	0.4	0