Albert M Berghuis

List of Publications by Year in descending order

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108 papers 6,024 citations

38 h-index 74 g-index

109 all docs

109 docs citations

109 times ranked 7799 citing authors

#	Article	IF	CITATIONS
1	Structure of the first C2 domain of synaptotagmin I: A novel Ca2+/phospholipid-binding fold. Cell, 1995, 80, 929-938.	28.9	698
2	<i>IRF8</i> Mutations and Human Dendritic-Cell Immunodeficiency. New England Journal of Medicine, 2011, 365, 127-138.	27.0	564
3	Oxidation state-dependent conformational changes in cytochrome c. Journal of Molecular Biology, 1992, 223, 959-976.	4.2	391
4	Structure of an Enzyme Required for Aminoglycoside Antibiotic Resistance Reveals Homology to Eukaryotic Protein Kinases. Cell, 1997, 89, 887-895.	28.9	236
5	Lactose binding to heat-labile enterotoxin revealed by X-ray crystallography. Nature, 1992, 355, 561-564.	27.8	223
6	Crystal Structures of Cyclohexanone Monooxygenase Reveal Complex Domain Movements and a Sliding Cofactor. Journal of the American Chemical Society, 2009, 131, 8848-8854.	13.7	151
7	Germline and somatic FGFR1 abnormalities in dysembryoplastic neuroepithelial tumors. Acta Neuropathologica, 2016, 131, 847-863.	7.7	143
8	Crystal structure of an aminoglycoside 6′-N-acetyltransferase: defining the GCN5-related N-acetyltransferase superfamily fold. Structure, 1999, 7, 497-507.	3.3	137
9	A Recurrent PDGFRB Mutation Causes Familial Infantile Myofibromatosis. American Journal of Human Genetics, 2013, 92, 996-1000.	6.2	135
10	Substrate promiscuity of an aminoglycoside antibiotic resistance enzyme via target mimicry. EMBO Journal, 2002, 21, 2323-2331.	7.8	132
11	The Role of a Conserved Internal Water Molecule and Its Associated Hydrogen Bond Network in Cytochrfome c. Journal of Molecular Biology, 1994, 236, 786-799.	4.2	119
12	A Single Bifunctional UDP-GlcNAc/Glc 4-Epimerase Supports the Synthesis of Three Cell Surface Glycoconjugates in Campylobacter jejuni. Journal of Biological Chemistry, 2005, 280, 4792-4802.	3.4	117
13	Aminoglycoside Antibiotics. Advances in Experimental Medicine and Biology, 1998, , 27-69.	1.6	116
14	Structural Basis for Ubiquitin-Mediated Dimerization and Activation of the Ubiquitin Protein Ligase Cbl-b. Molecular Cell, 2007, 27, 474-485.	9.7	107
15	Overlapping and Distinct Roles of Aspergillus fumigatus UDP-glucose 4-Epimerases in Galactose Metabolism and the Synthesis of Galactose-containing Cell Wall Polysaccharides. Journal of Biological Chemistry, 2014, 289, 1243-1256.	3.4	102
16	Histone H3.3G34-Mutant Interneuron Progenitors Co-opt PDGFRA for Gliomagenesis. Cell, 2020, 183, 1617-1633.e22.	28.9	93
17	Mutation of Tyrosine-67 to Phenylalanine in Cytochrome c Significantly Alters the Local Heme Environment. Journal of Molecular Biology, 1994, 235, 1326-1341.	4.2	91
18	The Substrate-Bound Crystal Structure of a Baeyerâ€"Villiger Monooxygenase Exhibits a Criegee-like Conformation. Journal of the American Chemical Society, 2012, 134, 7788-7795.	13.7	81

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19	Crystal Structure of WbpP, a Genuine UDP-N-acetylglucosamine 4-Epimerase from Pseudomonas aeruginosa. Journal of Biological Chemistry, 2004, 279, 22635-22642.	3.4	80
20	X-ray structure of the AAC(6')-li antibiotic resistance enzyme at 1.8 A resolution; examination of oligomeric arrangements in GNAT superfamily members. Protein Science, 2003, 12, 426-437.	7.6	78
21	Competing allosteric mechanisms modulate substrate binding in a dimeric enzyme. Nature Structural and Molecular Biology, 2011, 18, 288-294.	8.2	75
22	Synthesis and Structureâ^'Activity Relationships of Truncated Bisubstrate Inhibitors of Aminoglycoside 6â€~-N-Acetyltransferases. Journal of Medicinal Chemistry, 2006, 49, 5273-5281.	6.4	74
23	Look and Outlook on Enzyme-Mediated Macrolide Resistance. Frontiers in Microbiology, 2018, 9, 1942.	3.5	69
24	Structure of the GDP–Pi complex of Gly203→Ala Giα1: a mimic of the ternary product complex of Gα-catalyzed GTP hydrolysis. Structure, 1996, 4, 1277-1290.	3.3	67
25	Functional characterization of the human dendritic cell immunodeficiency associated with the IRF8K108E mutation. Blood, 2014, 124, 1894-1904.	1.4	65
26	TRPV4 and KRAS and FGFR1 gain-of-function mutations drive giant cell lesions of the jaw. Nature Communications, 2018, 9, 4572.	12.8	58
27	Regio- and Chemoselective 6′-N-Derivatization of Aminoglycosides: Bisubstrate Inhibitors as Probes To Study Aminoglycoside 6′-N-Acetyltransferases. Angewandte Chemie - International Edition, 2005, 44, 6859-6862.	13.8	54
28	Prospects for circumventing aminoglycoside kinase mediated antibiotic resistance. Frontiers in Cellular and Infection Microbiology, 2013, 3, 22.	3.9	54
29	Crystallization and Preliminary Crystallographic Studies of $Gil\pm 1$ and Mutants of $Gil\pm 1$ in the GTP and GDP-bound States. Journal of Molecular Biology, 1994, 238, 630-634.	4.2	50
30	Crystal structures of homoserine dehydrogenase suggest a novel catalytic mechanism for oxidoreductases. Nature Structural Biology, 2000, 7, 238-244.	9.7	48
31	Structural Studies of FlaA1 from Helicobacter pylori Reveal the Mechanism for Inverting 4,6-Dehydratase Activity. Journal of Biological Chemistry, 2006, 281, 24489-24495.	3.4	48
32	Design and Synthesis of Active Site Inhibitors of the Human Farnesyl Pyrophosphate Synthase: Apoptosis and Inhibition of ERK Phosphorylation in Multiple Myeloma Cells. Journal of Medicinal Chemistry, 2012, 55, 3201-3215.	6.4	46
33	The Role of a Conserved Water Molecule in the Redox-dependent Thermal Stability of Iso-1-cytochrome c. Journal of Biological Chemistry, 1996, 271, 29088-29093.	3.4	45
34	Crystal Structure of Homoserine Transacetylase fromHaemophilus influenzaeReveals a New Family of α∫β-Hydrolasesâ€,‡. Biochemistry, 2005, 44, 15768-15773.	2.5	44
35	Flagellin Glycosylation in Pseudomonas aeruginosa PAK Requires the O-antigen Biosynthesis Enzyme WbpO. Journal of Biological Chemistry, 2008, 283, 3507-3518.	3.4	44
36	Thienopyrimidine Bisphosphonate (ThPBP) Inhibitors of the Human Farnesyl Pyrophosphate Synthase: Optimization and Characterization of the Mode of Inhibition. Journal of Medicinal Chemistry, 2013, 56, 7939-7950.	6.4	43

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37	Mechanism of Aminoglycoside Antibiotic Kinase APH(3â€~)-Illa: Role of the Nucleotide Positioning Loopâ€. Biochemistry, 2002, 41, 7001-7007.	2.5	42
38	Structural basis for streptogramin B resistance in Staphylococcus aureus by virginiamycin B lyase. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10388-10393.	7.1	42
39	Identification and Characterization of a Protein-tyrosine Phosphatase in Leishmania. Journal of Biological Chemistry, 2006, 281, 36257-36268.	3.4	39
40	Lactone-Bound Structures of Cyclohexanone Monooxygenase Provide Insight into the Stereochemistry of Catalysis. ACS Chemical Biology, 2014, 9, 2843-2851.	3.4	39
41	The COOH Terminus of Aminoglycoside Phosphotransferase ($3\hat{a}\in^2$)-Illa Is Critical for Antibiotic Recognition and Resistance. Journal of Biological Chemistry, 1999, 274, 30697-30706.	3.4	37
42	Human isoprenoid synthase enzymes as therapeutic targets. Frontiers in Chemistry, 2014, 2, 50.	3.6	37
43	Structure of the Antibiotic Resistance Factor Spectinomycin Phosphotransferase from Legionella pneumophila. Journal of Biological Chemistry, 2010, 285, 9545-9555.	3.4	36
44	Functionally Null <i>RAD51D</i> Missense Mutation Associates Strongly with Ovarian Carcinoma. Cancer Research, 2017, 77, 4517-4529.	0.9	34
45	Multiple Conformers in Active Site of Human Dihydrofolate Reductase F31R/Q35E Double Mutant Suggest Structural Basis for Methotrexate Resistance. Journal of Biological Chemistry, 2009, 284, 20079-20089.	3.4	33
46	Unraveling the Prenylation–Cancer Paradox in Multiple Myeloma with Novel Geranylgeranyl Pyrophosphate Synthase (GGPPS) Inhibitors. Journal of Medicinal Chemistry, 2018, 61, 6904-6917.	6.4	33
47	Human farnesyl pyrophosphate synthase is allosterically inhibited by its own product. Nature Communications, 2017, 8, 14132.	12.8	32
48	DGCR8 microprocessor defect characterizes familial multinodular goiter with schwannomatosis. Journal of Clinical Investigation, 2020, 130, 1479-1490.	8.2	31
49	Magnesium and Phosphate Ions Enable NAD Binding to Methylenetetrahydrofolate Dehydrogenase-Methenyltetrahydrofolate Cyclohydrolase. Journal of Biological Chemistry, 2005, 280, 34316-34323.	3.4	30
50	Mechanistic and Structural Contributions of Critical Surface and Internal Residues to CytochromecElectron Transfer Reactivityâ€. Biochemistry, 1996, 35, 10784-10792.	2.5	29
51	Maintenance of Native-like Protein Dynamics May Not Be Required for Engineering Functional Proteins. Chemistry and Biology, 2014, 21, 1330-1340.	6.0	29
52	Multistage Screening Reveals Chameleon Ligands of the Human Farnesyl Pyrophosphate Synthase: Implications to Drug Discovery for Neurodegenerative Diseases. Journal of Medicinal Chemistry, 2014, 57, 5764-5776.	6.4	29
53	Enzyme-Assisted Suicide. Chemistry and Biology, 2003, 10, 989-995.	6.0	28
54	Protein Tyrosine Phosphatases Are Regulated by Mononuclear Iron Dicitrate. Journal of Biological Chemistry, 2010, 285, 24620-24628.	3.4	25

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55	Drug-target networks in aminoglycoside resistance: hierarchy of priority in structural drug design. MedChemComm, 2016, 7, 103-113.	3.4	25
56	New phenolic inhibitors of yeast homoserine dehydrogenase. Bioorganic and Medicinal Chemistry, 2004, 12, 3825-3830.	3.0	24
57	Structural Basis for Dual Nucleotide Selectivity of Aminoglycoside 2″-Phosphotransferase IVa Provides Insight on Determinants of Nucleotide Specificity of Aminoglycoside Kinases. Journal of Biological Chemistry, 2012, 287, 13094-13102.	3.4	24
58	Protein kinase inhibitors and antibiotic resistance. , 2002, 93, 283-292.		23
59	Structures of aminoglycoside acetyltransferase AAC($6\hat{a}\in^2$)-li in a novel crystal form: structural and normal-mode analyses. Acta Crystallographica Section D: Biological Crystallography, 2005, 61, 1273-1279.	2.5	23
60	Structural Basis of APH(3′)-IIIa-Mediated Resistance to N1-Substituted Aminoglycoside Antibiotics. Antimicrobial Agents and Chemotherapy, 2009, 53, 3049-3055.	3.2	23
61	Small-Angle X-Ray Scattering Analysis of the Bifunctional Antibiotic Resistance Enzyme Aminoglycoside ($6\hat{a} \in 2$) Acetyltransferase-le/Aminoglycoside ($2\hat{a} \in 3$) Phosphotransferase-la Reveals a Rigid Solution Structure. Antimicrobial Agents and Chemotherapy, 2012, 56, 1899-1906.	3.2	23
62	Substrate-dependent switching of the allosteric binding mechanism of a dimeric enzyme. Nature Chemical Biology, 2014, 10, 937-942.	8.0	23
63	Structural Analysis of the Tobramycin and Gentamicin Clinical Resistome Reveals Limitations for Next-generation Aminoglycoside Design. ACS Chemical Biology, 2016, 11, 1339-1346.	3.4	23
64	Structural Basis for Kinase-Mediated Macrolide Antibiotic Resistance. Structure, 2017, 25, 750-761.e5.	3.3	23
65	Crystal Structures of Two Aminoglycoside Kinases Bound with a Eukaryotic Protein Kinase Inhibitor. PLoS ONE, 2011, 6, e19589.	2.5	23
66	Towards a better understanding of the substrate specificity of the UDP-N-acetylglucosamine C4 epimerase WbpP. Biochemical Journal, 2005, 389, 173-180.	3.7	22
67	Structural Analysis of a Novel Cyclohexylamine Oxidase from Brevibacterium oxydans IH-35A. PLoS ONE, 2013, 8, e60072.	2.5	22
68	Inhibition of Outer Membrane Proteases of the Omptin Family by Aprotinin. Infection and Immunity, 2015, 83, 2300-2311.	2.2	22
69	Ternary complex structures of human farnesyl pyrophosphate synthase bound with a novel inhibitor and secondary ligands provide insights into the molecular details of the enzyme's active site closure. BMC Structural Biology, 2012, 12, 32.	2.3	21
70	The role of conformational flexibility in Baeyer-Villiger monooxygenase catalysis and structure. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2016, 1864, 1641-1648.	2.3	21
71	Pharmacophore Mapping of Thienopyrimidine-Based Monophosphonate (ThP-MP) Inhibitors of the Human Farnesyl Pyrophosphate Synthase. Journal of Medicinal Chemistry, 2017, 60, 2119-2134.	6.4	21
72	A potential gain-of-function variant of SLC9A6 leads to endosomal alkalinization and neuronal atrophy associated with Christianson Syndrome. Neurobiology of Disease, 2019, 121, 187-204.	4.4	21

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73	Structural and functional insights into esterase-mediated macrolide resistance. Nature Communications, 2021, 12, 1732.	12.8	21
74	Crystal Structures of Antibiotic-Bound Complexes of Aminoglycoside 2′′-Phosphotransferase IVa Highlight the Diversity in Substrate Binding Modes among Aminoglycoside Kinases. Biochemistry, 2011, 50, 6237-6244.	2.5	19
75	The Structural Dynamics of Engineered \hat{l}^2 -Lactamases Vary Broadly on Three Timescales yet Sustain Native Function. Scientific Reports, 2019, 9, 6656.	3.3	19
76	Phosphonate and Bisphosphonate Inhibitors of Farnesyl Pyrophosphate Synthases: A Structure-Guided Perspective. Frontiers in Chemistry, 2020, 8, 612728.	3.6	19
77	Identification of the Adenovirus E4orf4 Protein Binding Site on the B55α and Cdc55 Regulatory Subunits of PP2A: Implications for PP2A Function, Tumor Cell Killing and Viral Replication. PLoS Pathogens, 2013, 9, e1003742.	4.7	17
78	Crystal structure of CTP:glycerol-3-phosphate cytidylyltransferase from Staphylococcus aureus: Examination of structural basis for kinetic mechanism. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 63-69.	2.3	16
79	Expression and purification of recombinant M-Pol I from Saccharomyces cerevisiae with α-1,6 mannosylpolymerase activity. Protein Expression and Purification, 2009, 66, 1-6.	1.3	16
80	Probing the molecular and structural elements of ligands binding to the active site versus an allosteric pocket of the human farnesyl pyrophosphate synthase. Bioorganic and Medicinal Chemistry Letters, 2015, 25, 1117-1123.	2.2	15
81	Derivatives of Mesoxalic Acid Block Translocation of HIV-1 Reverse Transcriptase. Journal of Biological Chemistry, 2015, 290, 1474-1484.	3.4	14
82	Genetic Analysis of B55 \hat{l} ±/Cdc55 Protein Phosphatase 2A Subunits: Association with the Adenovirus E4orf4 Protein. Journal of Virology, 2011, 85, 286-295.	3.4	13
83	Structural basis for plazomicin antibiotic action and resistance. Communications Biology, 2021, 4, 729.	4.4	13
84	The type IA topoisomerase catalytic cycle: A normal mode analysis and molecular dynamics simulation. Proteins: Structure, Function and Bioinformatics, 2008, 71, 1984-1994.	2.6	12
85	Antibiotic Binding Drives Catalytic Activation of Aminoglycoside Kinase APH(2″)-la. Structure, 2016, 24, 935-945.	3.3	10
86	Chirality-Driven Mode of Binding of \hat{l}_{\pm} -Aminophosphonic Acid-Based Allosteric Inhibitors of the Human Farnesyl Pyrophosphate Synthase (hFPPS). Journal of Medicinal Chemistry, 2019, 62, 9691-9702.	6.4	10
87	Isolation, Crystallization and Preliminary Diffraction Analyses of Human Pancreatic α-Amylase. Journal of Molecular Biology, 1993, 230, 1084-1085.	4.2	9
88	Structure of human farnesyl pyrophosphate synthase in complex with an aminopyridine bisphosphonate and two molecules of inorganic phosphate. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 299-304.	0.8	9
89	Structural and phylogenetic analyses of resistance to next-generation aminoglycosides conferred by AAC($2\hat{a} \in ^2$) enzymes. Scientific Reports, 2021, 11, 11614.	3.3	9
90	Novel crystallization conditions for tandem variant R67 DHFR yield a wild-type crystal structure. Acta Crystallographica Section F: Structural Biology Communications, 2011, 67, 1316-1322.	0.7	8

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91	Structure-Based Design of Dimeric Bisbenzimidazole Inhibitors to an Emergent Trimethoprim-Resistant Type II Dihydrofolate Reductase Guides the Design of Monomeric Analogues. ACS Omega, 2019, 4, 10056-10069.	3.5	7
92	Bisphosphoglycerate Mutase Deficiency Protects against Cerebral Malaria and Severe Malaria-Induced Anemia. Cell Reports, 2020, 32, 108170.	6.4	7
93	Sustained Development in Baeyer-Villiger Biooxidation Technology. ACS Symposium Series, 2010, , 343-372.	0.5	6
94	ZBTB7B (ThPOK) Is Required for Pathogenesis of Cerebral Malaria and Protection against Pulmonary Tuberculosis. Infection and Immunity, 2020, 88, .	2.2	6
95	De novo <i>TRPV4</i> Leu619Pro variant causes a new channelopathy characterised by giant cell lesions of the jaws and skull, skeletal abnormalities and polyneuropathy. Journal of Medical Genetics, 2022, 59, 305-312.	3.2	6
96	Crystallization and preliminary crystallographic analysis of 3′-aminoglycoside kinase type Illa complexed with a eukaryotic protein kinase inhibitor, CKI-7. Acta Crystallographica Section D: Biological Crystallography, 2004, 60, 1897-1899.	2.5	5
97	Crystallographic and thermodynamic characterization of phenylaminopyridine bisphosphonates binding to human farnesyl pyrophosphate synthase. PLoS ONE, 2017, 12, e0186447.	2.5	5
98	Plasticity of Aminoglycoside Binding to Antibiotic Kinase APH($2\hat{a}\in ^3$)-la. Antimicrobial Agents and Chemotherapy, 2018, 62, .	3.2	5
99	Structural Aspects of Aminoglycoside-Modifying Enzymes. , 0, , 21-33.		5
100	Crystallization and preliminary crystallographic analysis of an aminoglycoside kinase fromLegionella pneumophila. Acta Crystallographica Section F: Structural Biology Communications, 2005, 61, 606-608.	0.7	4
101	Preparation and Characterization of Bacterial Protein Complexes for Structural Analysis. Advances in Protein Chemistry and Structural Biology, 2009, 76, 1-42.	2.3	4
102	Comprehensive characterization of ligandâ€induced plasticity changes in a dimeric enzyme. FEBS Journal, 2016, 283, 3029-3038.	4.7	4
103	Crystallization and preliminary X-ray diffraction studies of homoserine dehydrogenase from Saccharomyces cerevisiae. Acta Crystallographica Section D: Biological Crystallography, 1998, 54, 413-415.	2.5	3
104	Crystallization and preliminary X-ray diffraction studies of glycerol 3-phosphate cytidylyltransferase fromStaphylococcus aureus. Acta Crystallographica Section D: Biological Crystallography, 2001, 57, 918-920.	2.5	3
105	Effect of solvent and protein dynamics in ligand recognition and inhibition of aminoglycoside adenyltransferase 2″â€Ia. Protein Science, 2017, 26, 1852-1863.	7.6	2
106	An Entamoeba histolytica ADP-ribosyl transferase from the diphtheria toxin family modifies the bacterial elongation factor Tu. Molecular and Biochemical Parasitology, 2016, 207, 68-74.	1.1	1
107	Revisiting the Catalytic Cycle and Kinetic Mechanism of Aminoglycoside <i>>O</i> -Nucleotidyltransferase(2″): A Structural and Kinetic Study. ACS Chemical Biology, 2020, 15, 686-694.	3.4	0
108	Resistance to aminoglycoside Antibiotics: Function meets structure. Focus on Biotechnology, 2001, , 85-98.	0.4	0