Timor Baasov

List of Publications by Year in descending order

113 papers	5,312 citations	61984 43 h-index	91884 69 g-index
120 all docs	120 docs citations	120 times ranked	4166 citing authors

#	Article	IF	Citations
1	Programmable One-Pot Oligosaccharide Synthesis. Journal of the American Chemical Society, 1999, 121, 734-753.	13.7	817
2	Development of Novel Aminoglycoside (NB54) with Reduced Toxicity and Enhanced Suppression of Disease-Causing Premature Stop Mutations. Journal of Medicinal Chemistry, 2009, 52, 2836-2845.	6.4	169
3	Factors affecting the C:N stretching in protonated retinal Schiff base: a model study for bacteriorhodopsin and visual pigments. Biochemistry, 1987, 26, 3210-3217.	2.5	166
4	Design, Synthesis, and Evaluation of Novel Fluoroquinoloneâ"Aminoglycoside Hybrid Antibiotics. Journal of Medicinal Chemistry, 2009, 52, 2243-2254.	6.4	131
5	Synthetic Aminoglycosides Efficiently Suppress Cystic Fibrosis Transmembrane Conductance Regulator Nonsense Mutations and Are Enhanced by Ivacaftor. American Journal of Respiratory Cell and Molecular Biology, 2014, 50, 805-816.	2.9	131
6	Crystal structure and snapshots along the reaction pathway of a family 51 Â-L-arabinofuranosidase. EMBO Journal, 2003, 22, 4922-4932.	7.8	127
7	Repairing faulty genes by aminoglycosides: Development of new derivatives of geneticin (G418) with enhanced suppression of diseases-causing nonsense mutations. Bioorganic and Medicinal Chemistry, 2010, 18, 3735-3746.	3.0	118
8	Designer aminoglycosides: the race to develop improved antibiotics and compounds for the treatment of human genetic diseases. Organic and Biomolecular Chemistry, 2008, 6, 227-239.	2.8	104
9	Designer Aminoglycosides That Selectively Inhibit Cytoplasmic Rather than Mitochondrial Ribosomes Show Decreased Ototoxicity. Journal of Biological Chemistry, 2014, 289, 2318-2330.	3.4	97
10	A comparative evaluation of NB30, NB54 and PTC124 in translational readâ€through efficacy for treatment of an USH1C nonsense mutation. EMBO Molecular Medicine, 2012, 4, 1186-1199.	6.9	95
11	Biochemical Characterization and Identification of the Catalytic Residues of a Family 43 Î²-d-Xylosidase fromGeobacillus stearothermophilusT-6â€. Biochemistry, 2005, 44, 387-397.	2.5	93
12	Dual-acting hybrid antibiotics: a promising strategy to combat bacterial resistance. Expert Opinion on Drug Discovery, 2010, 5, 883-902.	5.0	92
13	Alteration of pKa of the bacteriorhodopsin protonated Schiff base. A study with model compounds. Biochemistry, 1986, 25, 5249-5258.	2.5	90
14	Readthrough of nonsense mutations in Rett syndrome: evaluation of novel aminoglycosides and generation of a new mouse model. Journal of Molecular Medicine, 2011, 89, 389-398.	3.9	90
15	Attenuation of Nonsense-Mediated mRNA Decay Enhances In Vivo Nonsense Suppression. PLoS ONE, 2013, 8, e60478.	2.5	89
16	Detailed Kinetic Analysis and Identification of the Nucleophile in Î±-l-Arabinofuranosidase from Geobacillus stearothermophilus T-6, a Family 51 Glycoside Hydrolase. Journal of Biological Chemistry, 2002, 277, 43667-43673.	3.4	83
17	Targeting Nonsense Mutations in Diseases with Translational Read-Through-Inducing Drugs (TRIDs). BioDrugs, 2016, 30, 49-74.	4.6	82
18	Model compounds for the study of spectroscopic properties of visual pigments and bacteriorhodopsin. Journal of the American Chemical Society, 1985, 107, 7524-7533.	13.7	77

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19	Characterization of new-generation aminoglycoside promoting premature termination codon readthrough in cancer cells. RNA Biology, 2017, 14, 378-388.	3.1	74
20	The identification of the acid-base catalyst of Î±-arabinofuranosidase fromGeobacillus stearothermophilusT-6, a family 51 glycoside hydrolase. FEBS Letters, 2002, 514, 163-167.	2.8	72
21	Redesign of aminoglycosides for treatment of human genetic diseases caused by premature stop mutations. Bioorganic and Medicinal Chemistry Letters, 2006, 16, 6310-6315.	2.2	71
22	Suppression of CFTR premature termination codons and rescue of CFTR protein and function by the synthetic aminoglycoside NB54. Journal of Molecular Medicine, 2011, 89, 1149-1161.	3.9	67
23	The designer aminoglycoside NB84 significantly reduces glycosaminoglycan accumulation associated with MPS I-H in the Idua-W392X mouse. Molecular Genetics and Metabolism, 2012, 105, 116-125.	1.1	67
24	In vitro and ex vivo suppression by aminoglycosides of PCDH15 nonsense mutations underlying type 1 Usher syndrome. Human Genetics, 2007, 122, 373-381.	3.8	65
25	A Snapshot of Enzyme Catalysis Using Electrospray Ionization Mass Spectrometry. Journal of the American Chemical Society, 2003, 125, 9938-9939.	13.7	64
26	Dual Effect of Synthetic Aminoglycosides: Antibacterial Activity againstBacillus anthracis and Inhibition of Anthrax Lethal Factor. Angewandte Chemie - International Edition, 2005, 44, 447-452.	13.8	63
27	One-Pot Synthesis of Glucosamine Oligosaccharides. Organic Letters, 2002, 4, 281-283.	4.6	62
28	Crystal Structures of Geobacillus stearothermophilus Î±-Glucuronidase Complexed with Its Substrate and Products. Journal of Biological Chemistry, 2004, 279, 3014-3024.	3.4	62
29	Stereochemistry of the KDO8P synthase. An efficient synthesis of the 3-fluoro analogues of KDO8P. Bioorganic and Medicinal Chemistry Letters, 1993, 3, 1577-1582.	2.2	61
30	Increased Selectivity toward Cytoplasmic versus Mitochondrial Ribosome Confers Improved Efficiency of Synthetic Aminoglycosides in Fixing Damaged Genes: A Strategy for Treatment of Genetic Diseases Caused by Nonsense Mutations. Journal of Medicinal Chemistry, 2012, 55, 10630-10643.	6.4	57
31	A New Class of Branched Aminoglycosides:â€‰ Pseudo-Pentasaccharide Derivatives of Neomycin B. Organic Letters, 2003, 5, 3575-3578.	4.6	56
32	Differential Selectivity of Natural and Synthetic Aminoglycosides towards the Eukaryotic and Prokaryotic Decoding A Sites. ChemBioChem, 2007, 8, 1700-1709.	2.6	56
33	Detailed Kinetic Analysis of a Family 52 Glycoside Hydrolase:â€‰ A Î²-Xylosidase from Geobacillus stearothermophilus. Biochemistry, 2003, 42, 10528-10536.	2.5	54
34	Identification of the Catalytic Residues in Family 52 Glycoside Hydrolase, a Î²-Xylosidase from Geobacillus stearothermophilus T-6. Journal of Biological Chemistry, 2003, 278, 26742-26749.	3.4	53
35	New inducible genetic method reveals critical roles of GABA in the control of feeding and metabolism. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3645-3650.	7.1	53
36	Mechanistic studies of 3-deoxy-d-manno-2-octulosonate-8-phosphate synthase from Escherichia coli. FEBS Journal, 1992, 208, 443-449.	0.2	52

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37	Biochemical characterization and identification of catalytic residues in Î±-glucuronidase from Bacillus stearothermophilus T-6. FEBS Journal, 2001, 268, 3006-3016.	0.2	51
38	Crystal Structures of KDOP Synthase in Its Binary Complexes with the Substrate Phosphoenolpyruvate and with a Mechanism-Based Inhibitorâ€,â€¡. Biochemistry, 2001, 40, 6326-6334.	2.5	50
39	Beneficial Read-Through of aUSH1CNonsense Mutation by Designed Aminoglycoside NB30 in the Retina. , 2010, 51, 6671.		50
40	Towards the development of novel antibiotics: synthesis and evaluation of a mechanism-based inhibitor of Kdo8P synthase. Bioorganic and Medicinal Chemistry, 1999, 7, 2671-2682.	3.0	49
41	Catalytic Mechanism of Kdo8P Synthase:Â Transient Kinetic Studies and Evaluation of a Putative Reaction Intermediateâ€. Biochemistry, 1998, 37, 16390-16399.	2.5	48
42	Ex Vivo Treatment with a Novel Synthetic Aminoglycoside NB54 in Primary Fibroblasts from Rett Syndrome Patients Suppresses MECP2 Nonsense Mutations. PLoS ONE, 2011, 6, e20733.	2.5	46
43	Catalytic mechanism of 3-deoxy-d-manno-2-octulosonate-8-phosphate synthase. The use of synthetic analogues to probe the structure of the putative reaction intermediate. FEBS Journal, 1993, 217, 991-999.	0.2	44
44	Aminoglycosides Affect IntracellularSalmonella entericaSerovars Typhimurium and Virchow. Antimicrobial Agents and Chemotherapy, 2008, 52, 920-926.	3.2	44
45	Long-term nonsense suppression therapy moderates MPS I-H disease progression. Molecular Genetics and Metabolism, 2014, 111, 374-381.	1.1	44
46	Biotransformations of propenylbenzenes by an Arthrobacter sp. and its t-anethole blocked mutants. Journal of Biotechnology, 2003, 105, 61-70.	3.8	43
47	Covalently linked kanamycin â€“ Ciprofloxacin hybrid antibiotics as a tool to fight bacterial resistance. Bioorganic and Medicinal Chemistry, 2017, 25, 2917-2925.	3.0	42
48	Stereochemistry of family 52 glycosyl hydrolases: a Î²-xylosidase fromBacillus stearothermophilusT-6 is a retaining enzyme. FEBS Letters, 2001, 495, 39-43.	2.8	41
49	When proteins start to make sense: fine-tuning of aminoglycosides for PTC suppression therapy. MedChemComm, 2014, 5, 1092-1105.	3.4	40
50	Synthesis, Inhibition, and Acid-Catalyzed Hydrolysis Studies of Model Compounds of the Proposed Intermediate in the Kdo8P-Synthase-Catalyzed Reaction. Journal of the American Chemical Society, 1995, 117, 6165-6174.	13.7	37
51	Branched aminoglycosides: Biochemical studies and antibacterial activity of neomycin B derivatives. Bioorganic and Medicinal Chemistry, 2005, 13, 5797-5807.	3.0	37
52	Glutamic acid 160 is the acid-base catalyst of Î²-xylosidase fromBacillus stearothermophilusT-6: a family 39 glycoside hydrolase. FEBS Letters, 2001, 495, 115-119.	2.8	36
53	The trans-Anethole Degradation Pathway in an Arthrobacter sp.. Journal of Biological Chemistry, 2002, 277, 11866-11872.	3.4	34
54	Inhibition Mode of a Bisubstrate Inhibitor of KDO8P Synthase:â€‰ A Frequency-Selective REDOR Solid-State and Solution NMR Characterization. Journal of the American Chemical Society, 2003, 125, 4662-4669.	13.7	33

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55	Insight into the catalytic mechanism of KDO8P synthase. Synthesis and evaluation of the isosteric phosphonate mimic of the putative cyclic intermediate. Bioorganic and Medicinal Chemistry Letters, 1993, 3, 1583-1588.	2.2	32
56	Design of Novel Aminoglycoside Derivatives with Enhanced Suppression of Diseases-Causing Nonsense Mutations. ACS Medicinal Chemistry Letters, 2016, 7, 418-423.	2.8	32
57	Identification of the molecular attributes required for aminoglycoside activity against Leishmania. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13333-13338.	7.1	31
58	Factors affecting the rate of thermal isomerization of 13-cis-bacteriorhodopsin to all trans. Journal of the American Chemical Society, 1984, 106, 6840-6841.	13.7	30
59	Synthesis and evaluation of a mechanism-based inhibitor of KDO8P synthase. Carbohydrate Research, 2004, 339, 385-392.	2.3	29
60	An efficient chemical-enzymatic synthesis of 4-nitrophenyl Î²-xylobioside: a chromogenic substrate for xylanases. Carbohydrate Research, 1997, 304, 111-115.	2.3	28
61	Structural basis for selective targeting of leishmanial ribosomes: aminoglycoside derivatives as promising therapeutics. Nucleic Acids Research, 2015, 43, 8601-8613.	14.5	28
62	On the binding site of bacteriorhodopsin. A study with artificial pigments. Journal of the American Chemical Society, 1984, 106, 2435-2437.	13.7	27
63	A Reciprocal Single Mutation Affects the Metal Requirement of 3-Deoxy-d-manno-2-octulosonate-8-phosphate (KDO8P) Synthases from Aquifex pyrophilus and Escherichia coli. Journal of Biological Chemistry, 2004, 279, 45110-45120.	3.4	27
64	Overproduction and characterization of seleno-methionine xylanase T-6. Journal of Biotechnology, 2000, 78, 83-86.	3.8	26
65	Structural and Mechanistic Investigation of 3-Deoxy-d-manno-octulosonate-8-phosphate Synthase by Solid-State REDOR NMR. Biochemistry, 2000, 39, 14865-14876.	2.5	24
66	Aminoglycosides. Methods in Enzymology, 2010, 478, 437-462.	1.0	24
67	A Hybrid Drug Limits Resistance by Evading the Action of the Multiple Antibiotic Resistance Pathway. Molecular Biology and Evolution, 2016, 33, 492-500.	8.9	24
68	Structureâ€“toxicity relationship of aminoglycosides: Correlation of 2â€²-amine basicity with acute toxicity in pseudo-disaccharide scaffolds. Bioorganic and Medicinal Chemistry, 2008, 16, 8940-8951.	3.0	22
69	Repairing faulty genes by aminoglycosides: Identification of new pharmacophore with enhanced suppression of disease-causing nonsense mutations. MedChemComm, 2011, 2, 165.	3.4	21
70	A Synthetic Pentasaccharide with GTPase Activity. Organic Letters, 2001, 3, 4311-4314.	4.6	19
71	Probing the binding site of bacteriorhodopsin with a fluorescent chromophore. Journal of the American Chemical Society, 1987, 109, 1594-1596.	13.7	18
72	Synthesis and evaluation of putative oxocarbenium intermediate mimic in the KDO8P synthase-catalyzed reaction as a tool for the design of potent inhibitors for lipopolysaccharide biosynthesis. Bioorganic and Medicinal Chemistry Letters, 1997, 7, 2469-2472.	2.2	17

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73	Catalytic mechanism of KDO8P synthase. Pre-steady-state kinetic analysis using rapid chemical quench flow methods. Bioorganic and Medicinal Chemistry Letters, 1997, 7, 2463-2468.	2.2	17
74	Aminoglycoside-Induced Premature Stop Codon Read-Through of Mucopolysaccharidosis Type I Patient Q70X and W402X Mutations in Cultured Cells. JIMD Reports, 2013, 13, 139-147.	1.5	16
75	Catalytic mechanism of KDO8P synthase: synthesis and evaluation of a putative reaction intermediate. Bioorganic and Medicinal Chemistry Letters, 1997, 7, 2457-2462.	2.2	15
76	Direct Identification of Enzyme Active Site Residues by Solid-State REDOR NMR:â€‰ Application to KDO8P Synthase. Journal of the American Chemical Society, 2000, 122, 2649-2650.	13.7	15
77	Overexpression and Initial Characterization of the Chromosomal Aminoglycoside 3â€²- O -Phosphotransferase APH(3â€²)-IIb from Pseudomonas aeruginosa. Antimicrobial Agents and Chemotherapy, 2007, 51, 774-776.	3.2	15
78	Development of generic immunoassay for the detection of a series of aminoglycosides with 6â€²-OH group for the treatment of genetic diseases in biological samples. Journal of Pharmaceutical and Biomedical Analysis, 2013, 75, 33-40.	2.8	15
79	Crystal Structures of Escherichia coli KDO8P Synthase Complexes Reveal the Source of Catalytic Irreversibility. Journal of Molecular Biology, 2005, 351, 641-652.	4.2	14
80	Anomeric specificity of 3-deoxy-D-manno-2-octulosonate 8-phosphate phosphatase from Escherichia coli. Journal of the American Chemical Society, 1990, 112, 4972-4974.	13.7	13
81	Cloning, expression, and biochemical characterization of 3-deoxy-d- manno -2-octulosonate-8-phosphate (KDO8P) synthase from the hyperthermophilic bacterium Aquifex pyrophilus. Extremophiles, 2003, 7, 471-481.	2.3	13
82	1-(Dihydroxyphosphynyl)vinyl phosphate: The phosphonate analogue of phosphoenolpyruvate is a pH-dependent substrate of Kdo8P synthase. Bioorganic and Medicinal Chemistry Letters, 1996, 6, 2901-2906.	2.2	12
83	Crystallization and preliminary X-ray analysis of a family 51 glycoside hydrolase, the Î±-L-arabinofuranosidase fromGeobacillus stearothermophilusT-6. Acta Crystallographica Section D: Biological Crystallography, 2003, 59, 913-915.	2.5	12
84	First Nonenzymatic Synthesis of Kdo8P through a Mechanism Similar to That Suggested for the Enzyme Kdo8P Synthase. Journal of Organic Chemistry, 1997, 62, 794-804.	3.2	11
85	Therapy Strategies for Usher Syndrome Type 1C in the Retina. Advances in Experimental Medicine and Biology, 2014, 801, 741-747.	1.6	11
86	Towards the synthesis of the putative reaction intermediate in the Kdo8P synthase-catalyzed reaction. Synthesis and evaluation of 3-deoxy--manno-2-octulosonate-2-phosphate. Tetrahedron Letters, 1994, 35, 3179-3182.	1.4	9
87	A blue shift of protonated retinal schiff base. A model study for bacteriorhodopsin. Tetrahedron Letters, 1983, 24, 1745-1748.	1.4	8
88	Synthesis of novel phosphonate analogue of Kdo as a tool for the design of potent inhibitors for lipopolysaccharide biosynthesis. Tetrahedron Letters, 1994, 35, 5077-5080.	1.4	8
89	Towards a new class of synthetic antibacterials acting on lipopolysaccharide biosynthesis. Drug Development Research, 2000, 50, 416-424.	2.9	8
90	Family of thiomercuric derivatives of sugars: Synthesis, fungicidal/herbicidal activity, and application to the X-ray structure determination of the corresponding enzymes. Israel Journal of Chemistry, 2000, 40, 177-188.	2.3	8

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91	The Use of (E)- and (Z)-Phosphoenol-3-fluoropyruvate as Mechanistic Probes Reveals Significant Differences between the Active Sites of KDO8P and DAHP Synthasesâ€. Biochemistry, 2005, 44, 7326-7335.	2.5	8
92	Combined Chemicalâ€Enzymatic Assembly of Aminoglycoside Derivatives with Nâ€1â€AHB Side Chain. Advanced Synthesis and Catalysis, 2008, 350, 1682-1688.	4.3	8
93	Post-transcriptionally Regulated Expression System in Human Xenogeneic Transplantation Models. Molecular Therapy, 2011, 19, 1645-1655.	8.2	7
94	Exploring eukaryotic versus prokaryotic ribosomal RNA recognition with aminoglycoside derivatives. MedChemComm, 2018, 9, 503-508.	3.4	7
95	Towards Catalytic Antibiotics: Redesign of Aminoglycosides To Catalytically Disable Bacterial Ribosomes. ChemBioChem, 2019, 20, 247-259.	2.6	7
96	Catalytic Mechanism of 3-Deoxy-D-manno-2-octulosonate-8-phosphate Synthase. Current Organic Chemistry, 2001, 5, 127-138.	1.6	7
97	Photochemistry of thioanhydrides. Photofragmentation of -1,2-dihydrophthalic thioanhydrides. Tetrahedron Letters, 1982, 23, 1373-1376.	1.4	6
98	Cï£¾C Stretching Frequencies in Model Compounds of the Protonated Retinal Schiff Base. Angewandte Chemie International Edition in English, 1984, 23, 803-804.	4.4	5
99	A combined chemical-enzymatic synthesis of a new phosphoramidate analogue of phosphoenolpyruvate. Bioorganic and Medicinal Chemistry Letters, 1993, 3, 1615-1618.	2.2	5
100	Binding of the natural substrates and products to KDO8P synthase: 31P and 13C solution NMR characterization. Bioorganic Chemistry, 2003, 31, 306-321.	4.1	5
101	Toward Catalytic Antibiotics: Redesign of Fluoroquinolones to Catalytically Fragment Chromosomal DNA. ACS Infectious Diseases, 2021, 7, 608-623.	3.8	5
102	On the Absorption Maxima of Protonated Retinal Schiff Bases. An Interaction with External Charges. Israel Journal of Chemistry, 1985, 25, 53-55.	2.3	4
103	A new model for the stereoselective construction of the Kdo structure through a mechanism similar to that suggested for the enzyme Kdo8P synthase. Tetrahedron Letters, 1996, 37, 3545-3548.	1.4	4
104	A remarkable blue shift of retinal protonated Schiff base due to electrostatic interaction of positive charges. Journal of the Chemical Society Chemical Communications, 1983, , 77.	2.0	3
105	C=Câ€Streckschwingungsfrequenzen in Modellverbindungen der Protonierten Schiffâ€Base des Retinals. Angewandte Chemie, 1984, 96, 786-787.	2.0	3
106	Preliminary crystallographic analysis of Xyn52B2, a GH52 Î²-<scp>D</scp>-xylosidase fromGeobacillus stearothermophilusT6. Acta Crystallographica Section F, Structural Biology Communications, 2014, 70, 1675-1682.	0.8	3
107	Long-term nonsense suppression therapy with NB84 moderates MPS IH disease progression. Molecular Genetics and Metabolism, 2014, 111, S50.	1.1	2
108	Cross-utilization of Î²-galactosides and cellobiose in Geobacillus stearothermophilus. Journal of Biological Chemistry, 2020, 295, 10766-10780.	3.4	2

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109	Interactions between protonated retinal schiff base and various counter ions: A study by two-dimensional NOE NMR spectroscopy. Magnetic Resonance in Chemistry, 1987, 25, 21-24.	1.9	1
110	Methyl 2,3-dideoxy-2-S-methylmercurio-2-thio-Î²-D-manno-oct-2-ulopyranosonate-(2,6). Acta Crystallographica Section C: Crystal Structure Communications, 2002, 58, m450-m452.	0.4	1
111	Carbohydrates themed issue. MedChemComm, 2014, 5, 1010-1013.	3.4	0
112	Forewordâ€"The 17th European Carbohydrate Symposiumâ€"EuroCarb17. Carbohydrate Research, 2014, 389, 1.	2.3	0
113	Carbohydrates:Special Issue in Honor of the 2014 Wolf Prize Laureate in Chemistry, Professor Chi-Huey Wong. Israel Journal of Chemistry, 2015, 55, 253-253.	2.3	0