Arnon Lavie

List of Publications by Year
in descending order

87 papers	3,038 citations	126907 33 h-index	182427 51 g-index
88 all docs	88 docs citations	88 times ranked	3508 citing authors

#	Article	IF	Citations
1	Structure of human dCK suggests strategies to improve anticancer and antiviral therapy. Nature Structural and Molecular Biology, 2003, 10, 513-519.	8.2	153
2	The bottleneck in AZT activation. Nature Medicine, 1997, 3, 922-924.	30.7	130
3	Therapeutic Target Metabolism Observed Using Hyperpolarized ¹⁵N Choline. Journal of the American Chemical Society, 2008, 130, 4598-4599.	13.7	116
4	The TRAPP Complex: Insights into its Architecture and Function. Traffic, 2008, 9, 2032-2042.	2.7	106
5	Structure of the Conserved Cytoplasmic C-terminal Domain of Occludin: Identification of the ZO-1 Binding Surface. Journal of Molecular Biology, 2005, 352, 151-164.	4.2	105
6	Engineered Human tmpk/AZT As a Novel Enzyme/Prodrug Axis for Suicide Gene Therapy. Molecular Therapy, 2007, 15, 962-970.	8.2	98
7	Insights into the phosphoryltransfer mechanism of human thymidylate kinase gained from crystal structures of enzyme complexes along the reaction coordinate. Structure, 2000, 8, 629-642.	3.3	96
8	Structure of thymidylate kinase reveals the cause behind the limiting step in AZT activation. Nature Structural Biology, 1997, 4, 601-604.	9.7	86
9	Elucidation of Human Choline Kinase Crystal Structures in Complex with the Products ADP or Phosphocholine. Journal of Molecular Biology, 2006, 364, 136-151.	4.2	72
10	[¹⁸ F]CFA as a clinically translatable probe for PET imaging of deoxycytidine kinase activity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4027-4032.	7.1	68
11	A Novel <scp>l</scp>-Asparaginase with low <scp>l</scp>-Glutaminase Coactivity Is Highly Efficacious against Both T- and B-cell Acute Lymphoblastic Leukemias In Vivo. Cancer Research, 2018, 78, 1549-1560.	0.9	67
12	The Src Homology 3 Domain Is Required for Junctional Adhesion Molecule Binding to the Third PDZ Domain of the Scaffolding Protein ZO-1. Journal of Biological Chemistry, 2011, 286, 43352-43360.	3.4	64
13	Structural Characterization of the Closed Conformation of Mouse Guanylate Kinase. Journal of Biological Chemistry, 2002, 277, 30236-30243.	3.4	61
14	Design and Characterization of Erwinia Chrysanthemi l-Asparaginase Variants with Diminished l-Glutaminase Activity. Journal of Biological Chemistry, 2016, 291, 17664-17676.	3.4	60
15	Modifying Human Thymidylate Kinase to Potentiate Azidothymidine Activation. Journal of Biological Chemistry, 1999, 274, 35289-35292.	3.4	56
16	A Novel Î±-Helix in the First Fibronectin Type III Repeat of the Neural Cell Adhesion Molecule Is Critical for N-Glycan Polysialylation. Journal of Biological Chemistry, 2006, 281, 36052-36059.	3.4	52
17	Structures of Apo and Product-Bound Human <scp>l</scp>-Asparaginase: Insights into the Mechanism of Autoproteolysis and Substrate Hydrolysis. Biochemistry, 2012, 51, 6816-6826.	2.5	50
18	Domain Swapping within PDZ2 Is Responsible for Dimerization of ZO Proteins. Journal of Biological Chemistry, 2007, 282, 37710-37716.	3.4	48

#	Article	IF	Citations
19	Identification and Structural Analysis of an l-Asparaginase Enzyme from Guinea Pig with Putative Tumor Cell Killing Properties. Journal of Biological Chemistry, 2014, 289, 33175-33186.	3.4	48
20	Structural Basis of a Key Factor Regulating the Affinity between the Zonula Occludens First PDZ Domain and Claudins. Journal of Biological Chemistry, 2015, 290, 16595-16606.	3.4	46
21	Structural basis for activation of the therapeutic L-nucleoside analogs 3TC and troxacitabine by human deoxycytidine kinase. Nucleic Acids Research, 2006, 35, 186-192.	14.5	45
22	Structure-guided Engineering of Human Thymidine Kinase 2 as a Positron Emission Tomography Reporter Gene for Enhanced Phosphorylation of Non-natural Thymidine Analog Reporter Probe*. Journal of Biological Chemistry, 2012, 287, 446-454.	3.4	45
23	Potentiating AZT activation: structures of wild-type and mutant human thymidylate kinase suggest reasons for the mutantsâ€™ improved kinetics with the HIV prodrug metabolite AZTMP 1 1Edited by J. Karn. Journal of Molecular Biology, 2000, 304, 43-53.	4.2	44
24	Substrate-induced Conformational Changes in Human UMP/CMP Kinase. Journal of Biological Chemistry, 2004, 279, 33882-33889.	3.4	42
25	Nonenantioselectivity Property of Human Deoxycytidine Kinase Explained by Structures of the Enzyme in Complex with l- and d-Nucleosides. Journal of Medicinal Chemistry, 2007, 50, 3004-3014.	6.4	42
26	Structures of Human Thymidylate Kinase in Complex with Prodrugs:Â Implications for the Structure-Based Design of Novel Compoundsâ€. Biochemistry, 2003, 42, 2568-2577.	2.5	40
27	Structural Basis for Substrate Promiscuity of dCK. Journal of Molecular Biology, 2008, 378, 607-621.	4.2	40
28	Discovery of human-like L-asparaginases with potential clinical use by directed evolution. Scientific Reports, 2017, 7, 10224.	3.3	39
29	Novel Insights on the Use of L-Asparaginase as an Efficient and Safe Anti-Cancer Therapy. Cancers, 2022, 14, 902.	3.7	39
30	Structural basis for L27 domain-mediated assembly of signaling and cell polarity complexes. EMBO Journal, 2004, 23, 2723-2733.	7.8	38
31	Balance of human choline kinase isoforms is critical for cell cycle regulation. FEBS Journal, 2012, 279, 1915-1928.	4.7	38
32	Structural Insight into Substrate Selectivity of Erwinia chrysanthemi <scp>l</scp>-Asparaginase. Biochemistry, 2016, 55, 1246-1253.	2.5	38
33	Insights into Regulated Ligand Binding Sites from the Structure of ZO-1 Src Homology 3-Guanylate Kinase Module. Journal of Biological Chemistry, 2010, 285, 13907-13917.	3.4	37
34	Structural and Kinetic Characterization of Human Deoxycytidine Kinase Variants Able To Phosphorylate 5-Substituted Deoxycytidine and Thymidine Analogues,. Biochemistry, 2010, 49, 6784-6790.	2.5	35
35	Extending Thymidine Kinase Activity to the Catalytic Repertoire of Human Deoxycytidine Kinase. Biochemistry, 2009, 48, 1256-1263.	2.5	34
36	Post-Translational Phosphorylation of Serine 74 of Human Deoxycytidine Kinase Favors the Enzyme Adopting the Open Conformation Making It Competent for Nucleoside Binding and Release. Biochemistry, 2011, 50, 2870-2880.	2.5	34

#	Article	IF	Citations
37	Co-targeting of convergent nucleotide biosynthetic pathways for leukemia eradication. Journal of Experimental Medicine, 2014, 211, 473-486.	8.5	34
38	Formation of Complexes between Ca2+Â·Calmodulin and the Synapse-associated Protein SAP97 Requires the SH3 Domain-Guanylate Kinase Domain-connecting HOOK Region. Journal of Biological Chemistry, 2002, 277, 40832-40838.	3.4	33
39	Specific Amino Acids in the First Fibronectin Type III Repeat of the Neural Cell Adhesion Molecule Play a Role in Its Recognition and Polysialylation by the Polysialyltransferase ST8Sia IV/PST. Journal of Biological Chemistry, 2005, 280, 32340-32348.	3.4	33
40	Elucidation of the Active Conformation of the APS-Kinase Domain of Human PAPS Synthetase 1. Journal of Molecular Biology, 2007, 367, 488-500.	4.2	33
41	Elucidation of the Specific Function of the Conserved Threonine Triad Responsible for Human l-Asparaginase Autocleavage and Substrate Hydrolysis. Journal of Molecular Biology, 2014, 426, 2471-2485.	4.2	33
42	Structural Requirements for Efficient Phosphorylation of Nucleotide Analogs by Human Thymidylate Kinase. Mini-Reviews in Medicinal Chemistry, 2004, 4, 351-9.	2.4	31
43	Structural Basis for Nucleotide-dependent Regulation of Membrane-associated Guanylate Kinase-like Domains. Journal of Biological Chemistry, 2002, 277, 4159-4165.	3.4	30
44	Binding of ATP to TK1-like Enzymes Is Associated with a Conformational Change in the Quaternary Structure. Journal of Molecular Biology, 2007, 369, 129-141.	4.2	30
45	Structural and Kinetic Characterization of Guinea Pig <scp>l</scp>-Asparaginase Type III. Biochemistry, 2014, 53, 2318-2328.	2.5	29
46	Free Glycine Accelerates the Autoproteolytic Activation of Human Asparaginase. Chemistry and Biology, 2013, 20, 533-540.	6.0	28
47	The Engineered Thymidylate Kinase (TMPK)/AZT Enzyme-Prodrug Axis Offers Efficient Bystander Cell Killing for Suicide Gene Therapy of Cancer. PLoS ONE, 2013, 8, e78711.	2.5	28
48	Mimicking phosphorylation of Serâ€74 on human deoxycytidine kinase selectively increases catalytic activity for dC and dC analogues. FEBS Letters, 2008, 582, 720-724.	2.8	27
49	Insights into the Mechanism of Type I Dehydroquinate Dehydratases from Structures of Reaction Intermediates. Journal of Biological Chemistry, 2011, 286, 3531-3539.	3.4	27
50	Structural Basis for the Dual Thymidine and Thymidylate Kinase Activity of Herpes Thymidine Kinases. Structure, 2003, 11, 1265-1277.	3.3	26
51	Experimental Data in Support of a Direct Displacement Mechanism for Type I/II l-Asparaginases. Journal of Biological Chemistry, 2016, 291, 5088-5100.	3.4	26
52	Quaternary Structure Change as a Mechanism for the Regulation of Thymidine Kinase 1-Like Enzymes. Structure, 2007, 15, 1555-1566.	3.3	25
53	Development of New Deoxycytidine Kinase Inhibitors and Noninvasive in Vivo Evaluation Using Positron Emission Tomography. Journal of Medicinal Chemistry, 2013, 56, 6696-6708.	6.4	25
54	The differential ability of asparagine and glutamine in promoting the closed/active enzyme conformation rationalizes the Wolinella succinogenes L-asparaginase substrate specificity. Scientific Reports, 2017, 7, 41643.	3.3	23

#	Article	IF	Citations
55	Structure and Mutagenesis of Neural Cell Adhesion Molecule Domains. Journal of Biological Chemistry, 2010, 285, 27360-27371.	3.4	22
56	Identification of a Unique Inhibitor-Binding Site on Choline Kinase Î±. Biochemistry, 2018, 57, 1316-1325.	2.5	21
57	Structural Mechanism for Substrate Inhibition of the Adenosine 5â€²-Phosphosulfate Kinase Domain of Human 3â€²-Phosphoadenosine 5â€²-Phosphosulfate Synthetase 1 and Its Ramifications for Enzyme Regulation. Journal of Biological Chemistry, 2007, 282, 22112-22121.	3.4	20
58	Cell Fate Control Gene Therapy Based on Engineered Variants of Human Deoxycytidine Kinase. Molecular Therapy, 2012, 20, 1002-1013.	8.2	20
59	pH-Dependent Mechanisms of Influenza Infection Mediated by Hemagglutinin. Frontiers in Molecular Biosciences, 2021, 8, 777095.	3.5	19
60	Binding of Nucleotides to Guanylate Kinase, p21 , and Nucleoside-diphosphate Kinase Studied by Nano-electrospray Mass Spectrometry. Journal of Biological Chemistry, 1999, 274, 35337-35342.	3.4	16
61	Elucidation of Different Binding Modes of Purine Nucleosides to Human Deoxycytidine Kinase. Journal of Medicinal Chemistry, 2008, 51, 4219-4225.	6.4	16
62	Metabolic Modifier Screen Reveals Secondary Targets of Protein Kinase Inhibitors within Nucleotide Metabolism. Cell Chemical Biology, 2020, 27, 197-205.e6.	5.2	16
63	Structural requirements for calmodulin binding to membraneâ€associated guanylate kinase homologs. Protein Science, 2008, 17, 1946-1954.	7.6	15
64	Structure-Guided Development of Deoxycytidine Kinase Inhibitors with Nanomolar Affinity and Improved Metabolic Stability. Journal of Medicinal Chemistry, 2014, 57, 9480-9494.	6.4	13
65	Structure of avian influenza hemagglutinin in complex with a small molecule entry inhibitor. Life Science Alliance, 2020, 3, e202000724.	2.8	13
66	A Conserved Surface Loop in Type I Dehydroquinate Dehydratases Positions an Active Site Arginine and Functions in Substrate Binding. Biochemistry, 2011, 50, 2357-2363.	2.5	12
67	Discovery of Selective Inhibitors of the Clostridium difficile Dehydroquinate Dehydratase. PLoS ONE, 2014, 9, e89356.	2.5	12
68	Crystal Structures of Type I Dehydroquinate Dehydratase in Complex with Quinate and Shikimate Suggest a Novel Mechanism of Schiff Base Formation. Biochemistry, 2014, 53, 872-880.	2.5	10
69	Identification of two distinct peptide-binding pockets in the SH3 domain of human mixed-lineage kinase 3. Journal of Biological Chemistry, 2018, 293, 13553-13565.	3.4	9
70	The spleen as a sanctuary site for residual leukemic cells following ABT-199 monotherapy in ETP-ALL. Blood Advances, 2021, 5, 1963-1976.	5.2	9
71	The Sugar Ring of the Nucleoside Is Required for Productive Substrate Positioning in the Active Site of Human Deoxycytidine Kinase (dCK): Implications for the Development of dCK-Activated Acyclic Guanine Analogues. Journal of Medicinal Chemistry, 2010, 53, 5792-5800.	6.4	8
72	Structural characterization of new deoxycytidine kinase inhibitors rationalizes the affinity-determining moieties of the molecules. Acta Crystallographica Section D: Biological Crystallography, 2014, 70, 68-78.	2.5	7

#	Article	IF	Citations
73	Molecular basis for the interaction between human choline kinase alpha and the SH3 domain of the c-Src tyrosine kinase. Scientific Reports, 2019, 9, 17121.	3.3	7
74	Identifying small molecule probes of ENTPD5 through high throughput screening. PLoS ONE, 2019, 14, e0210305.	2.5	6
75	NMR-based metabolite studies with 15N amino acids. Scientific Reports, 2019, 9, 12798.	3.3	6
76	Identification of a pH sensor in Influenza hemagglutinin using X-ray crystallography. Journal of Structural Biology, 2020, 209, 107412.	2.8	6
77	Restoration of the antiviral activity of 3â€²-azido-3â€²-deoxythymidine (AZT) against AZT-resistant human immunodeficiency virus by delivery of engineered thymidylate kinase to T cells. Journal of General Virology, 2008, 89, 1672-1679.	2.9	5
78	Reassessing the type I dehydroquinate dehydratase catalytic triad: Kinetic and structural studies of Glu86 mutants. Protein Science, 2013, 22, 418-424.	7.6	5
79	Targeted Delivery of Deoxycytidine Kinase to Her2-Positive Cells Enhances the Efficacy of the Nucleoside Analog Fludarabine. PLoS ONE, 2016, 11, e0157114.	2.5	4
80	Transgenic cardiac-targeted overexpression of human thymidylate kinase. Laboratory Investigation, 2010, 90, 383-390.	3.7	3
81	Probing the metastable state of influenza hemagglutinin. Journal of Biological Chemistry, 2017, 292, 21590-21597.	3.4	3
82	Generating a recombinant phosphothreonine-binding domain for a phosphopeptide of the human transcription factor, c-Myc. New Biotechnology, 2018, 45, 36-44.	4.4	2
83	Crystal structure of a type II dehydroquinate dehydratase-like protein from Bifidobacterium longum. Journal of Structural and Functional Genomics, 2013, 14, 25-30.	1.2	0
84	Improved Suicide Gene Therapy: Lentiviral Gene Transfer of Equine Herpes Virus Type 4 Thymidine Kinase into Target Cells.. Blood, 2005, 106, 5251-5251.	1.4	0
85	A Novel Suicide Gene Therapy Approach for Reduction of GvHD Using Lentiviral Delivery of a Modified Human Thymidylate Monophosphate Kinase.. Blood, 2005, 106, 5252-5252.	1.4	0
86	Development of Improved Lentiviral â€˜Suicideâ€™ Gene Therapy for the Management of GvHD and GvL/GvT Responses in Allogeneic BMT.. Blood, 2006, 108, 3256-3256.	1.4	0
87	Metabolic Modifier Screen Reveals Secondary Targets of Protein Kinase Inhibitors within Nucleotide Metabolism. SSRN Electronic Journal, 0, , .	0.4	0