

Donald S. Backos

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

4,421
citations

32
h-index

66
g-index

103
ext. papers

5,178
ext. citations

7
avg, IF

5.4
L-index

#	Paper	IF	Citations
87	Lysine glutarylation is a protein posttranslational modification regulated by SIRT5. <i>Cell Metabolism</i> , 2014 , 19, 605-17	24.6	496
86	Complement proteins bind to nanoparticle protein corona and undergo dynamic exchange in vivo. <i>Nature Nanotechnology</i> , 2017 , 12, 387-393	28.7	299
85	Structure, function, and post-translational regulation of the catalytic and modifier subunits of glutamate cysteine ligase. <i>Molecular Aspects of Medicine</i> , 2009 , 30, 86-98	16.7	262
84	Strategies and Approaches of Targeting STAT3 for Cancer Treatment. <i>ACS Chemical Biology</i> , 2016 , 11, 308-18	4.9	242
83	Motor protein-dependent transport of AMPA receptors into spines during long-term potentiation. <i>Nature Neuroscience</i> , 2008 , 11, 457-66	25.5	204
82	SIRT4 Is a Lysine Deacylase that Controls Leucine Metabolism and Insulin Secretion. <i>Cell Metabolism</i> , 2017 , 25, 838-855.e15	24.6	188
81	Targeting WEE1 Kinase in Cancer. <i>Trends in Pharmacological Sciences</i> , 2016 , 37, 872-881	13.2	188
80	Brain-derived neurotrophic factor regulates the expression and synaptic delivery of alpha-amino-3-hydroxy-5-methyl-4-isoxazole propionic acid receptor subunits in hippocampal neurons. <i>Journal of Biological Chemistry</i> , 2007 , 282, 12619-28	5.4	179
79	NMDA receptor-dependent activation of the small GTPase Rab5 drives the removal of synaptic AMPA receptors during hippocampal LTD. <i>Neuron</i> , 2005 , 45, 81-94	13.9	179
78	Formation of 17-allylamino-demethoxygeldanamycin (17-AAG) hydroquinone by NAD(P)H:quinone oxidoreductase 1: role of 17-AAG hydroquinone in heat shock protein 90 inhibition. <i>Cancer Research</i> , 2005 , 65, 10006-15	10.1	151
77	A Class of Reactive Acyl-CoA Species Reveals the Non-enzymatic Origins of Protein Acylation. <i>Cell Metabolism</i> , 2017 , 25, 823-837.e8	24.6	130
76	The role of glutathione in brain tumor drug resistance. <i>Biochemical Pharmacology</i> , 2012 , 83, 1005-12	6	126
75	Dual role of the exocyst in AMPA receptor targeting and insertion into the postsynaptic membrane. <i>EMBO Journal</i> , 2006 , 25, 1623-34	13	120
74	Local control of AMPA receptor trafficking at the postsynaptic terminal by a small GTPase of the Rab family. <i>Journal of Biological Chemistry</i> , 2004 , 279, 43870-8	5.4	113
73	4-Hydroxynonenal inhibits SIRT3 via thiol-specific modification. <i>Chemical Research in Toxicology</i> , 2011 , 24, 651-62	4	93
72	Inhibition of Wee1 sensitizes cancer cells to antimetabolite chemotherapeutics in vitro and in vivo, independent of p53 functionality. <i>Molecular Cancer Therapeutics</i> , 2013 , 12, 2675-84	6.1	85
71	Oxidative Stress and the ER Stress Response in a Murine Model for Early-Stage Alcoholic Liver Disease. <i>Journal of Toxicology</i> , 2012 , 2012, 207594	3.1	73

70	Investigating the Sensitivity of NAD ⁺ -dependent Sirtuin Deacylation Activities to NADH. <i>Journal of Biological Chemistry</i> , 2016 , 291, 7128-41	5.4	71
69	Independent functions of hsp90 in neurotransmitter release and in the continuous synaptic cycling of AMPA receptors. <i>Journal of Neuroscience</i> , 2004 , 24, 4758-66	6.6	68
68	Diindolylmethane analogs bind NR4A1 and are NR4A1 antagonists in colon cancer cells. <i>Molecular Endocrinology</i> , 2014 , 28, 1729-39		62
67	Increased carbonylation of the lipid phosphatase PTEN contributes to Akt2 activation in a murine model of early alcohol-induced steatosis. <i>Free Radical Biology and Medicine</i> , 2013 , 65, 680-692	7.8	60
66	Post-translational oxidative modification and inactivation of mitochondrial complex I in epileptogenesis. <i>Journal of Neuroscience</i> , 2012 , 32, 11250-8	6.6	60
65	The bioreduction of a series of benzoquinone ansamycins by NAD(P)H:quinone oxidoreductase 1 to more potent heat shock protein 90 inhibitors, the hydroquinone ansamycins. <i>Molecular Pharmacology</i> , 2006 , 70, 1194-203	4.3	57
64	Enzymatic reduction and glutathione conjugation of benzoquinone ansamycin heat shock protein 90 inhibitors: relevance for toxicity and mechanism of action. <i>Drug Metabolism and Disposition</i> , 2008 , 36, 2050-7	4	53
63	Integrated genomic analysis identifies the mitotic checkpoint kinase WEE1 as a novel therapeutic target in medulloblastoma. <i>Molecular Cancer</i> , 2014 , 13, 72	42.1	47
62	Posttranslational modification and regulation of glutamate-cysteine ligase by the α -unsaturated aldehyde 4-hydroxy-2-nonenal. <i>Free Radical Biology and Medicine</i> , 2011 , 50, 14-26	7.8	47
61	In vitro and in silico characterization of peroxiredoxin 6 modified by 4-hydroxynonenal and 4-oxononenal. <i>Chemical Research in Toxicology</i> , 2008 , 21, 2289-99	4	45
60	Identification of 5SAMP-activated kinase as a target of reactive aldehydes during chronic ingestion of high concentrations of ethanol. <i>Journal of Biological Chemistry</i> , 2014 , 289, 15449-62	5.4	43
59	Characterization of 4-HNE modified L-FABP reveals alterations in structural and functional dynamics. <i>PLoS ONE</i> , 2012 , 7, e38459	3.7	42
58	Development of indolequinone mechanism-based inhibitors of NAD(P)H:quinone oxidoreductase 1 (NQO1): NQO1 inhibition and growth inhibitory activity in human pancreatic MIA PaCa-2 cancer cells. <i>Biochemistry</i> , 2007 , 46, 5941-50	3.2	40
57	Allosteric inhibitors of the Eya2 phosphatase are selective and inhibit Eya2-mediated cell migration. <i>Journal of Biological Chemistry</i> , 2014 , 289, 16349-61	5.4	37
56	Oxidative stress-mediated aldehyde adduction of GRP78 in a mouse model of alcoholic liver disease: functional independence of ATPase activity and chaperone function. <i>Free Radical Biology and Medicine</i> , 2014 , 73, 411-20	7.8	35
55	Compensatory Expression of Nur77 and Nurr1 Regulates NF- κ B-Dependent Inflammatory Signaling in Astrocytes. <i>Molecular Pharmacology</i> , 2018 , 94, 1174-1186	4.3	31
54	Inhibition of hydrogen peroxide signaling by 4-hydroxynonenal due to differential regulation of Akt1 and Akt2 contributes to decreases in cell survival and proliferation in hepatocellular carcinoma cells. <i>Free Radical Biology and Medicine</i> , 2012 , 53, 1-11	7.8	30
53	Selective Targeting of RSK Isoforms in Cancer. <i>Trends in Cancer</i> , 2017 , 3, 302-312	12.5	29

52	A WEE1 Inhibitor Analog of AZD1775 Maintains Synergy with Cisplatin and Demonstrates Reduced Single-Agent Cytotoxicity in Medulloblastoma Cells. <i>ACS Chemical Biology</i> , 2016 , 11, 921-30	4.9	28
51	ALDH16A1 is a novel non-catalytic enzyme that may be involved in the etiology of gout via protein-protein interactions with HPRT1. <i>Chemico-Biological Interactions</i> , 2013 , 202, 22-31	5	28
50	The Nurr1 Ligand, 1,1-bis(3-Indolyl)-1-(4-Chlorophenyl)Methane, Modulates Glial Reactivity and Is Neuroprotective in MPTP-Induced Parkinsonism. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2018 , 365, 636-651	4.7	24
49	Redox modulation of NQO1. <i>PLoS ONE</i> , 2018 , 13, e0190717	3.7	23
48	2S5SDihydroxychalcone-induced glutathione is mediated by oxidative stress and kinase signaling pathways. <i>Free Radical Biology and Medicine</i> , 2011 , 51, 1146-54	7.8	19
47	Identification and characterization of novel mutations implicated in congenital fibrinogen disorders. <i>Research and Practice in Thrombosis and Haemostasis</i> , 2018 , 2, 800-811	5.1	18
46	Glycation of glutamate cysteine ligase by 2-deoxy-d-ribose and its potential impact on chemoresistance in glioblastoma. <i>Neurochemical Research</i> , 2013 , 38, 1838-49	4.6	17
45	Mechanism-based inhibition of quinone reductase 2 (NQO2): selectivity for NQO2 over NQO1 and structural basis for flavoprotein inhibition. <i>ChemBioChem</i> , 2011 , 12, 1203-8	3.8	17
44	A mechanistic and structural analysis of the inhibition of the 90-kDa heat shock protein by the benzoquinone and hydroquinone ansamycins. <i>Molecular Pharmacology</i> , 2011 , 79, 823-32	4.3	15
43	Evaluation of quantitative assays for the identification of direct signal transducer and activator of transcription 3 (STAT3) inhibitors. <i>Oncotarget</i> , 2016 , 7, 77998-78008	3.3	15
42	Complement therapeutics meets nanomedicine: overcoming human complement activation and leukocyte uptake of nanomedicines with soluble domains of CD55. <i>Journal of Controlled Release</i> , 2019 , 302, 181-189	11.7	14
41	19-substituted benzoquinone ansamycin heat shock protein-90 inhibitors: biological activity and decreased off-target toxicity. <i>Molecular Pharmacology</i> , 2014 , 85, 849-57	4.3	13
40	ROCK and Rho: Promising therapeutic targets to ameliorate pulmonary fibrosis. <i>American Journal of Pathology</i> , 2015 , 185, 909-12	5.8	12
39	Chronic Ethanol Metabolism Inhibits Hepatic Mitochondrial Superoxide Dismutase via Lysine Acetylation. <i>Alcoholism: Clinical and Experimental Research</i> , 2017 , 41, 1705-1714	3.7	12
38	Dimeric isoxazolyl-1,4-dihydropyridines have enhanced binding at the multi-drug resistance transporter. <i>Bioorganic and Medicinal Chemistry</i> , 2017 , 25, 3223-3234	3.4	11
37	Molecular docking of substituted pteridinones and pyrimidines to the ATP-binding site of the N-terminal domain of RSK2 and associated MM/GBSA and molecular field datasets. <i>Data in Brief</i> , 2020 , 29, 105347	1.2	11
36	Comparative genomics, molecular evolution and computational modeling of ALDH1B1 and ALDH2. <i>Chemico-Biological Interactions</i> , 2013 , 202, 11-21	5	11
35	Structure-Based Screen Identification of a Mammalian Ste20-like Kinase 4 (MST4) Inhibitor with Therapeutic Potential for Pituitary Tumors. <i>Molecular Cancer Therapeutics</i> , 2016 , 15, 412-20	6.1	10

34	RSK3: A regulator of pathological cardiac remodeling. <i>IUBMB Life</i> , 2015 , 67, 331-7	4.7	10
33	Characterizing Sirtuin 3 Deacetylase Affinity for Aldehyde Dehydrogenase 2. <i>Chemical Research in Toxicology</i> , 2017 , 30, 785-793	4	8
32	A Novel Di-Leucine Motif at the N-Terminus of Human Organic Solute Transporter Beta Is Essential for Protein Association and Membrane Localization. <i>PLoS ONE</i> , 2016 , 11, e0158269	3.7	8
31	Characterization and Optimization of the Novel Transient Receptor Potential Melastatin 2 Antagonist tatM2NX. <i>Molecular Pharmacology</i> , 2020 , 97, 102-111	4.3	7
30	Manipulation of cellular GSH biosynthetic capacity via TAT-mediated protein transduction of wild-type or a dominant-negative mutant of glutamate cysteine ligase alters cell sensitivity to oxidant-induced cytotoxicity. <i>Toxicology and Applied Pharmacology</i> , 2010 , 243, 35-45	4.6	7
29	Genetic Variants of Lipoprotein Lipase and Regulatory Factors Associated with Alzheimer's Disease Risk. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	7
28	Persistent, Progressive Pulmonary Fibrosis and Epithelial Remodeling in Mice. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2021 , 64, 669-676	5.7	7
27	Development of Potent Pyrazolopyrimidinone-Based WEE1 Inhibitors with Limited Single-Agent Cytotoxicity for Cancer Therapy. <i>ChemMedChem</i> , 2018 , 13, 1681-1694	3.7	7
26	4-Hydroxy-2-nonenal attenuates 8-oxoguanine DNA glycosylase 1 activity. <i>Journal of Cellular Biochemistry</i> , 2020 , 121, 4887	4.7	6
25	Novel Molecule Exhibiting Selective Affinity for GABA Receptor Subtypes. <i>Scientific Reports</i> , 2017 , 7, 6230	4.9	6
24	Substituted oxindol-3-ylidenes as AMP-activated protein kinase (AMPK) inhibitors. <i>European Journal of Medicinal Chemistry</i> , 2020 , 197, 112316	6.8	6
23	Establishment and Characterization of Four Novel Thyroid Cancer Cell Lines and PDX Models Expressing the RET/PTC1 Rearrangement, BRAFV600E, or RASQ61R as Drivers. <i>Molecular Cancer Research</i> , 2019 , 17, 1036-1048	6.6	5
22	AIMing towards improved antitumor efficacy. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2015 , 25, 1765-1770	4.7	5
21	Identification of functionally relevant lysine residues that modulate human farnesoid X receptor activation. <i>Molecular Pharmacology</i> , 2013 , 83, 1078-86	4.3	5
20	Substituted pteridinones as p90 ribosomal S6 protein kinase (RSK) inhibitors: A structure-activity study. <i>Bioorganic and Medicinal Chemistry</i> , 2020 , 28, 115303	3.4	5
19	Maneb alters central carbon metabolism and thiol redox status in a toxicant model of Parkinson's disease. <i>Free Radical Biology and Medicine</i> , 2021 , 162, 65-76	7.8	5
18	The STAT3-MYC Axis Promotes Survival of Leukemia Stem Cells by Regulating SLC1A5 and Oxidative Phosphorylation. <i>Blood</i> , 2021 ,	2.2	4
17	Developing selective L-Amino Acid Transport 1 (LAT1) inhibitors: A Structure-Activity Relationship overview. <i>Medical Research Archives</i> , 2019 , 7,	2.1	3

16	Deacetylation by SIRT3 Relieves Inhibition of Mitochondrial Protein Function 2016 , 105-138		3
15	Inhibition of BRAF and ERK1/2 has synergistic effects on thyroid cancer growth in vitro and in vivo. <i>Molecular Carcinogenesis</i> , 2021 , 60, 201-212	5	3
14	Deglutarylation of GCDH by SIRT5 controls lysine metabolism in mice		2
13	10-N-heterocyclic aryl-isoxazole-amides (AIMs) have robust anti-tumor activity against breast and brain cancer cell lines and useful fluorescence properties. <i>Bioorganic and Medicinal Chemistry</i> , 2020 , 28, 115781	3-4	2
12	Isoxazolo[3,4-d]pyridazinones positively modulate the metabotropic glutamate subtypes 2 and 4. <i>Bioorganic and Medicinal Chemistry</i> , 2018 , 26, 4797-4803	3-4	1
11	The Role of Glutathione and the Glutathione-Linked Enzyme Systems in Brain Tumor Drug Resistance. <i>Tumors of the Central Nervous System</i> , 2014 , 277-290		1
10	Computational Modeling of NLRP3 Identifies Enhanced ATP Binding and Multimerization in Cryopyrin-Associated Periodic Syndromes. <i>Frontiers in Immunology</i> , 2020 , 11, 584364	8.4	1
9	N-Substituted pyrrolopyrimidines and purines as p90 ribosomal S6 protein kinase-2 (RSK2) inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , 2021 , 41, 116220	3-4	1
8	A novel glucocorticoid and androgen receptor modulator reduces viral entry and innate immune inflammatory responses in the Syrian Hamster model of SARS-CoV-2		1
7	Evaluation of Thymidine Phosphorylase Inhibitors in Glioblastoma and Their Capacity for Temozolomide Potentiation. <i>ACS Chemical Neuroscience</i> , 2021 , 12, 3477-3486	5-7	1
6	A Novel Glucocorticoid and Androgen Receptor Modulator Reduces Viral Entry and Innate Immune Inflammatory Responses in the Syrian Hamster Model of SARS-CoV-2 Infection.. <i>Frontiers in Immunology</i> , 2022 , 13, 811430	8.4	1
5	Deglutarylation of glutaryl-CoA dehydrogenase by deacylating enzyme SIRT5 promotes lysine oxidation in mice.. <i>Journal of Biological Chemistry</i> , 2022 , 101723	5-4	0
4	Statin therapy inhibits fatty acid synthase via dynamic protein modifications.. <i>Nature Communications</i> , 2022 , 13, 2542	17.4	0
3	A Novel Missense Mutation in FGG (c.944C>A) Encodes for An Amino Acid Change (p.Ala315Asp) in the Gamma Chain of Fibrinogen Causing Hypofibrinogenemia and a Thrombotic Phenotype. <i>Blood</i> , 2011 , 118, 856-856	2.2	
2	Maneb adducts human peroxiredoxin 3 through thiol interactions. <i>Advances in Redox Research</i> , 2021 , 2, 100008		
1	Substituted pteridinones, pyrimidines, pyrrolopyrimidines, and purines as p90 ribosomal S6 protein kinase-2 (RSK2) inhibitors: Pharmacophore modeling data. <i>Data in Brief</i> , 2021 , 38, 107433	1.2	