

Donald S. Backos

List of Publications by Year in descending order

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94
papers

5,748
citations

101543

36
h-index

76900

74
g-index

103
all docs

103
docs citations

103
times ranked

10149
citing authors

#	ARTICLE	IF	CITATIONS
1	Lysine Glutarylation Is a Protein Posttranslational Modification Regulated by SIRT5. <i>Cell Metabolism</i> , 2014, 19, 605-617.	16.2	647
2	Complement proteins bind to nanoparticle protein corona and undergo dynamic exchange in vivo. <i>Nature Nanotechnology</i> , 2017, 12, 387-393.	31.5	411
3	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.	6.4	330
4	Strategies and Approaches of Targeting STAT3 for Cancer Treatment. <i>ACS Chemical Biology</i> , 2016, 11, 308-318.	3.4	297
5	Targeting WEE1 Kinase in Cancer. <i>Trends in Pharmacological Sciences</i> , 2016, 37, 872-881.	8.7	294
6	SIRT4 Is a Lysine Deacetylase that Controls Leucine Metabolism and Insulin Secretion. <i>Cell Metabolism</i> , 2017, 25, 838-855.e15.	16.2	259
7	Motor protein-dependent transport of AMPA receptors into spines during long-term potentiation. <i>Nature Neuroscience</i> , 2008, 11, 457-466.	14.8	233
8	Brain-derived Neurotrophic Factor Regulates the Expression and Synaptic Delivery of α -Amino-3-hydroxy-5-methyl-4-isoxazole Propionic Acid Receptor Subunits in Hippocampal Neurons. <i>Journal of Biological Chemistry</i> , 2007, 282, 12619-12628.	3.4	212
9	A Class of Reactive Acyl-CoA Species Reveals the Non-enzymatic Origins of Protein Acylation. <i>Cell Metabolism</i> , 2017, 25, 823-837.e8.	16.2	205
10	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.	8.1	194
11	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, 10006-10015.	0.9	163
12	The role of glutathione in brain tumor drug resistance. <i>Biochemical Pharmacology</i> , 2012, 83, 1005-1012.	4.4	159
13	Dual role of the exocyst in AMPA receptor targeting and insertion into the postsynaptic membrane. <i>EMBO Journal</i> , 2006, 25, 1623-1634.	7.8	130
14	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, 43870-43878.	3.4	125
15	4-Hydroxynonenal Inhibits SIRT3 via Thiol-Specific Modification. <i>Chemical Research in Toxicology</i> , 2011, 24, 651-662.	3.3	107
16	Inhibition of Wee1 Sensitizes Cancer Cells to Antimetabolite Chemotherapeutics <i>In Vitro</i> and <i>In Vivo</i> , Independent of p53 Functionality. <i>Molecular Cancer Therapeutics</i> , 2013, 12, 2675-2684.	4.1	104
17	Investigating the Sensitivity of NAD ⁺ -dependent Sirtuin Deacetylation Activities to NADH. <i>Journal of Biological Chemistry</i> , 2016, 291, 7128-7141.	3.4	91
18	Oxidative Stress and the ER Stress Response in a Murine Model for Early-Stage Alcoholic Liver Disease. <i>Journal of Toxicology</i> , 2012, 2012, 1-12.	3.0	85

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19	Independent Functions of hsp90 in Neurotransmitter Release and in the Continuous Synaptic Cycling of AMPA Receptors. <i>Journal of Neuroscience</i> , 2004, 24, 4758-4766.	3.6	79
20	Diindolylmethane Analogs Bind NR4A1 and Are NR4A1 Antagonists in Colon Cancer Cells. <i>Molecular Endocrinology</i> , 2014, 28, 1729-1739.	3.7	79
21	Post-Translational Oxidative Modification and Inactivation of Mitochondrial Complex I in Epileptogenesis. <i>Journal of Neuroscience</i> , 2012, 32, 11250-11258.	3.6	77
22	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.	2.9	66
23	Integrated genomic analysis identifies the mitotic checkpoint kinase WEE1 as a novel therapeutic target in medulloblastoma. <i>Molecular Cancer</i> , 2014, 13, 72.	19.2	62
24	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, 1194-1203.	2.3	60
25	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, 2050-2057.	3.3	54
26	Posttranslational modification and regulation of glutamate cysteine ligase by the α,β -unsaturated aldehyde 4-hydroxy-2-nonenal. <i>Free Radical Biology and Medicine</i> , 2011, 50, 14-26.	2.9	54
27	Selective Targeting of RSK Isoforms in Cancer. <i>Trends in Cancer</i> , 2017, 3, 302-312.	7.4	52
28	The STAT3-MYC axis promotes survival of leukemia stem cells by regulating SLC1A5 and oxidative phosphorylation. <i>Blood</i> , 2022, 139, 584-596.	1.4	51
29	Characterization of 4-HNE Modified L-FABP Reveals Alterations in Structural and Functional Dynamics. <i>PLoS ONE</i> , 2012, 7, e38459.	2.5	51
30	Identification of 5 α -AMP-activated Kinase as a Target of Reactive Aldehydes during Chronic Ingestion of High Concentrations of Ethanol. <i>Journal of Biological Chemistry</i> , 2014, 289, 15449-15462.	3.4	50
31	In Vitro and in Silico Characterization of Peroxiredoxin 6 Modified by 4-Hydroxynonenal and 4-Oxononenal. <i>Chemical Research in Toxicology</i> , 2008, 21, 2289-2299.	3.3	47
32	Allosteric Inhibitors of the Eya2 Phosphatase Are Selective and Inhibit Eya2-mediated Cell Migration. <i>Journal of Biological Chemistry</i> , 2014, 289, 16349-16361.	3.4	46
33	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, 5941-5950.	2.5	42
34	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, 921-930.	3.4	42
35	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, 411-420.	2.9	40
36	Compensatory Expression of Nur77 and Nurr1 Regulates NF- κ B-Dependent Inflammatory Signaling in Astrocytes. <i>Molecular Pharmacology</i> , 2018, 94, 1174-1186.	2.3	40

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37	Persistent, Progressive Pulmonary Fibrosis and Epithelial Remodeling in Mice. <i>American Journal of Respiratory Cell and Molecular Biology</i> , 2021, 64, 669-676.	2.9	39
38	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.	2.9	37
39	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.	4.0	35
40	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.	2.5	34
41	Redox modulation of NQO1. <i>PLoS ONE</i> , 2018, 13, e0190717.	2.5	31
42	Identification and characterization of novel mutations implicated in congenital fibrinogen disorders. <i>Research and Practice in Thrombosis and Haemostasis</i> , 2018, 2, 800-811.	2.3	28
43	Chronic Ethanol Metabolism Inhibits Hepatic Mitochondrial Superoxide Dismutase via Lysine Acetylation. <i>Alcoholism: Clinical and Experimental Research</i> , 2017, 41, 1705-1714.	2.4	24
44	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.	9.9	24
45	2,5-Dihydroxychalcone-induced glutathione is mediated by oxidative stress and kinase signaling pathways. <i>Free Radical Biology and Medicine</i> , 2011, 51, 1146-1154.	2.9	22
46	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.	1.0	22
47	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.	2.9	22
48	Mechanism-Based Inhibition of Quinone Reductase 2 (NQO2): Selectivity for NQO2 over NQO1 and Structural Basis for Flavoprotein Inhibition. <i>ChemBioChem</i> , 2011, 12, 1203-1208.	2.6	20
49	Glycation of Glutamate Cysteine Ligase by 2-Deoxy-d-Ribose and its Potential Impact on Chemoresistance in Glioblastoma. <i>Neurochemical Research</i> , 2013, 38, 1838-1849.	3.3	20
50	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.	1.8	18
51	Comparative genomics, molecular evolution and computational modeling of ALDH1B1 and ALDH2. <i>Chemico-Biological Interactions</i> , 2013, 202, 11-21.	4.0	17
52	19-Substituted Benzoquinone Ansamycin Heat Shock Protein-90 Inhibitors: Biological Activity and Decreased Off-Target Toxicity. <i>Molecular Pharmacology</i> , 2014, 85, 849-857.	2.3	17
53	ROCK and Rho. <i>American Journal of Pathology</i> , 2015, 185, 909-912.	3.8	17
54	RSK3: A regulator of pathological cardiac remodeling. <i>IUBMB Life</i> , 2015, 67, 331-337.	3.4	16

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55	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, 412-420.	4.1	16
56	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, 823-832.	2.3	15
57	Inhibition of BRAF and ERK1/2 has synergistic effects on thyroid cancer growth <i>in vitro</i> and <i>in vivo</i> . <i>Molecular Carcinogenesis</i> , 2021, 60, 201-212.	2.7	15
58	Dimeric isoxazolyl-1,4-dihydropyridines have enhanced binding at the multi-drug resistance transporter. <i>Bioorganic and Medicinal Chemistry</i> , 2017, 25, 3223-3234.	3.0	13
59	Genetic Variants of Lipoprotein Lipase and Regulatory Factors Associated with Alzheimer's Disease Risk. <i>International Journal of Molecular Sciences</i> , 2020, 21, 8338.	4.1	13
60	Substituted oxindol-3-ylidenes as AMP-activated protein kinase (AMPK) inhibitors. <i>European Journal of Medicinal Chemistry</i> , 2020, 197, 112316.	5.5	13
61	Characterizing Sirtuin 3 Deacetylase Affinity for Aldehyde Dehydrogenase 2. <i>Chemical Research in Toxicology</i> , 2017, 30, 785-793.	3.3	12
62	Development of Potent Pyrazolopyrimidinone-Based WEE1 Inhibitors with Limited Single-Agent Cytotoxicity for Cancer Therapy. <i>ChemMedChem</i> , 2018, 13, 1681-1694.	3.2	11
63	Substituted pteridinones as p90 ribosomal S6 protein kinase (RSK) inhibitors: A structure-activity study. <i>Bioorganic and Medicinal Chemistry</i> , 2020, 28, 115303.	3.0	11
64	Characterization and Optimization of the Novel Transient Receptor Potential Melastatin 2 Antagonist tatM2NX. <i>Molecular Pharmacology</i> , 2020, 97, 102-111.	2.3	11
65	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.	3.4	10
66	4-Hydroxy-2-nonenal attenuates 8-oxoguanine DNA glycosylase 1 activity. <i>Journal of Cellular Biochemistry</i> , 2020, 121, 4887-4897.	2.6	10
67	Computational Modeling of NLRP3 Identifies Enhanced ATP Binding and Multimerization in Cryopyrin-Associated Periodic Syndromes. <i>Frontiers in Immunology</i> , 2020, 11, 584364.	4.8	9
68	AIMing towards improved antitumor efficacy. <i>Bioorganic and Medicinal Chemistry Letters</i> , 2015, 25, 1765-1770.	2.2	8
69	Novel Molecule Exhibiting Selective Affinity for GABAA Receptor Subtypes. <i>Scientific Reports</i> , 2017, 7, 6230.	3.3	8
70	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.	2.5	8
71	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.	4.8	8
72	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.	2.8	7

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73	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.	3.0	7
74	Statin therapy inhibits fatty acid synthase via dynamic protein modifications. <i>Nature Communications</i> , 2022, 13, 2542.	12.8	7
75	Identification of Functionally Relevant Lysine Residues That Modulate Human Farnesoid X Receptor Activation. <i>Molecular Pharmacology</i> , 2013, 83, 1078-1086.	2.3	6
76	Auriculocondylar syndrome 2 results from the dominant-negative action of <i>PLCB4</i> variants. <i>DMM Disease Models and Mechanisms</i> , 2022, 15, .	2.4	6
77	N-Substituted pyrrolopyrimidines and purines as p90 ribosomal S6 protein kinase-2 (RSK2) inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , 2021, 41, 116220.	3.0	5
78	Deglutarylation of glutaryl-CoA dehydrogenase by deacylating enzyme SIRT5 promotes lysine oxidation in mice. <i>Journal of Biological Chemistry</i> , 2022, 298, 101723.	3.4	5
79	Developing selective L-Amino Acid Transport 1 (LAT1) inhibitors: A Structure-Activity Relationship overview. <i>Medical Research Archives</i> , 2019, 7, .	0.2	4
80	Multifunctional role of thymidine phosphorylase in cancer. <i>Trends in Cancer</i> , 2022, 8, 482-493.	7.4	4
81	Deacetylation by SIRT3 Relieves Inhibition of Mitochondrial Protein Function. , 2016, , 105-138.		3
82	Isoxazolo[3,4-d]pyridazinones positively modulate the metabotropic glutamate subtypes 2 and 4. <i>Bioorganic and Medicinal Chemistry</i> , 2018, 26, 4797-4803.	3.0	2
83	Evaluation of Thymidine Phosphorylase Inhibitors in Glioblastoma and Their Capacity for Temozolomide Potentiation. <i>ACS Chemical Neuroscience</i> , 2021, 12, 3477-3486.	3.5	2
84	Abstract B102: Targeting the SIX1/EYA transcriptional complex as a potential anti-cancer therapy.. , 2013, , .		1
85	407 Mutation in SASH1 causes human skin hyperpigmentation. <i>Journal of Investigative Dermatology</i> , 2016, 136, S72.	0.7	0
86	524 SASH1 is a novel gene involved in human pigmentation disorders. <i>Journal of Investigative Dermatology</i> , 2017, 137, S90.	0.7	0
87	Maneb adducts human peroxiredoxin 3 through thiol interactions. <i>Advances in Redox Research</i> , 2021, 2, 100008.	2.1	0
88	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.	1.0	0
89	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.	1.4	0
90	Abstract 1788: 19-Substituted benzoquinone ansamycins. Hsp90 inhibitors with decreased off-target toxicity. , 2014, , .		0

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91	Abstract 233: Prostacyclin analogs, iloprost and treprostinil, differentially influence proliferation of lung tumor cells. , 2014, , .		0
92	Abstract LB-303: Identification of a mammalian sterile-20 like kinase 4 (MST4) inhibitor to target pituitary tumorigenesis. , 2015, , .		0
93	Abstract C195: A Wee1 inhibitor analog of AZD1775 demonstrates synergy with cisplatin with reduced single-agent toxicity in medulloblastoma. , 2015, , .		0
94	Redox Modulation of NQO1. FASEB Journal, 2018, 32, .	0.5	0