

# Donald S. Backos

## List of Publications by Year in Descending Order

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**Version:** 2024-04-28

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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 | Deglutarylation of glutaryl-CoA dehydrogenase by deacylating enzyme SIRT5 promotes lysine oxidation in mice.. <i>Journal of Biological Chemistry</i> , <b>2022</b> , 101723   | 5.4  | 0         |
| 86 | 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> , <b>2022</b> , 13, 811430 | 8.4  | 1         |
| 85 | Statin therapy inhibits fatty acid synthase via dynamic protein modifications.. <i>Nature Communications</i> , <b>2022</b> , 13, 2542   | 17.4 | 0         |
| 84 | Persistent, Progressive Pulmonary Fibrosis and Epithelial Remodeling in Mice. <i>American Journal of Respiratory Cell and Molecular Biology</i> , <b>2021</b> , 64, 669-676   | 5.7  | 7         |
| 83 | Maneb adducts human peroxiredoxin 3 through thiol interactions. <i>Advances in Redox Research</i> , <b>2021</b> , 2, 100008   |      |           |
| 82 | N-Substituted pyrrolopyrimidines and purines as p90 ribosomal S6 protein kinase-2 (RSK2) inhibitors. <i>Bioorganic and Medicinal Chemistry</i> , <b>2021</b> , 41, 116220   | 3.4  | 1         |
| 81 | Maneb alters central carbon metabolism and thiol redox status in a toxicant model of Parkinson's disease. <i>Free Radical Biology and Medicine</i> , <b>2021</b> , 162, 65-76   | 7.8  | 5         |
| 80 | Inhibition of BRAF and ERK1/2 has synergistic effects on thyroid cancer growth in vitro and in vivo. <i>Molecular Carcinogenesis</i> , <b>2021</b> , 60, 201-212  | 5    | 3         |
| 79 | The STAT3-MYC Axis Promotes Survival of Leukemia Stem Cells by Regulating SLC1A5 and Oxidative Phosphorylation. <i>Blood</i> , <b>2021</b> ,  | 2.2  | 4         |
| 78 | Evaluation of Thymidine Phosphorylase Inhibitors in Glioblastoma and Their Capacity for Temozolomide Potentiation. <i>ACS Chemical Neuroscience</i> , <b>2021</b> , 12, 3477-3486   | 5.7  | 1         |
| 77 | Substituted pteridinones, pyrimidines, pyrrolopyrimidines, and purines as p90 ribosomal S6 protein kinase-2 (RSK2) inhibitors: Pharmacophore modeling data. <i>Data in Brief</i> , <b>2021</b> , 38, 107433                         | 1.2  |           |
| 76 | 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> , <b>2020</b> , 29, 105347         | 1.2  | 11        |
| 75 | 4-Hydroxy-2-nonenal attenuates 8-oxoguanine DNA glycosylase 1 activity. <i>Journal of Cellular Biochemistry</i> , <b>2020</b> , 121, 4887   | 4.7  | 6         |
| 74 | Characterization and Optimization of the Novel Transient Receptor Potential Melastatin 2 Antagonist tatM2NX. <i>Molecular Pharmacology</i> , <b>2020</b> , 97, 102-111  | 4.3  | 7         |
| 73 | Substituted pteridinones as p90 ribosomal S6 protein kinase (RSK) inhibitors: A structure-activity study. <i>Bioorganic and Medicinal Chemistry</i> , <b>2020</b> , 28, 115303  | 3.4  | 5         |
| 72 | 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> , <b>2020</b> , 28, 115781  | 3.4  | 2         |
| 71 | Genetic Variants of Lipoprotein Lipase and Regulatory Factors Associated with Alzheimer's Disease Risk. <i>International Journal of Molecular Sciences</i> , <b>2020</b> , 21,  | 6.3  | 7         |

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|----|---|------|-----|
| 70 | Computational Modeling of NLRP3 Identifies Enhanced ATP Binding and Multimerization in Cryopyrin-Associated Periodic Syndromes. <i>Frontiers in Immunology</i> , <b>2020</b> , 11, 584364   | 8.4  | 1   |
| 69 | Substituted oxindol-3-ylidenes as AMP-activated protein kinase (AMPK) inhibitors. <i>European Journal of Medicinal Chemistry</i> , <b>2020</b> , 197, 112316  | 6.8  | 6   |
| 68 | Complement therapeutics meets nanomedicine: overcoming human complement activation and leukocyte uptake of nanomedicines with soluble domains of CD55. <i>Journal of Controlled Release</i> , <b>2019</b> , 302, 181-189                  | 11.7 | 14  |
| 67 | 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> , <b>2019</b> , 17, 1036-1048         | 6.6  | 5   |
| 66 | Developing selective L-Amino Acid Transport 1 (LAT1) inhibitors: A Structure-Activity Relationship overview. <i>Medical Research Archives</i> , <b>2019</b> , 7,  | 2.1  | 3   |
| 65 | 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> , <b>2018</b> , 365, 636-651 | 4.7  | 24  |
| 64 | Isoxazolo[3,4-d]pyridazinones positively modulate the metabotropic glutamate subtypes 2 and 4. <i>Bioorganic and Medicinal Chemistry</i> , <b>2018</b> , 26, 4797-4803  | 3.4  | 1   |
| 63 | Compensatory Expression of Nur77 and Nurr1 Regulates NF- $\kappa$ -B-Dependent Inflammatory Signaling in Astrocytes. <i>Molecular Pharmacology</i> , <b>2018</b> , 94, 1174-1186  | 4.3  | 31  |
| 62 | Redox modulation of NQO1. <i>PLoS ONE</i> , <b>2018</b> , 13, e0190717  | 3.7  | 23  |
| 61 | Identification and characterization of novel mutations implicated in congenital fibrinogen disorders. <i>Research and Practice in Thrombosis and Haemostasis</i> , <b>2018</b> , 2, 800-811   | 5.1  | 18  |
| 60 | Development of Potent Pyrazolopyrimidinone-Based WEE1 Inhibitors with Limited Single-Agent Cytotoxicity for Cancer Therapy. <i>ChemMedChem</i> , <b>2018</b> , 13, 1681-1694  | 3.7  | 7   |
| 59 | Characterizing Sirtuin 3 Deacetylase Affinity for Aldehyde Dehydrogenase 2. <i>Chemical Research in Toxicology</i> , <b>2017</b> , 30, 785-793  | 4    | 8   |
| 58 | Dimeric isoxazolyl-1,4-dihydropyridines have enhanced binding at the multi-drug resistance transporter. <i>Bioorganic and Medicinal Chemistry</i> , <b>2017</b> , 25, 3223-3234   | 3.4  | 11  |
| 57 | Selective Targeting of RSK Isoforms in Cancer. <i>Trends in Cancer</i> , <b>2017</b> , 3, 302-312   | 12.5 | 29  |
| 56 | SIRT4 Is a Lysine Deacetylase that Controls Leucine Metabolism and Insulin Secretion. <i>Cell Metabolism</i> , <b>2017</b> , 25, 838-855.e15  | 24.6 | 188 |
| 55 | A Class of Reactive Acyl-CoA Species Reveals the Non-enzymatic Origins of Protein Acylation. <i>Cell Metabolism</i> , <b>2017</b> , 25, 823-837.e8  | 24.6 | 130 |
| 54 | Complement proteins bind to nanoparticle protein corona and undergo dynamic exchange in vivo. <i>Nature Nanotechnology</i> , <b>2017</b> , 12, 387-393  | 28.7 | 299 |
| 53 | Novel Molecule Exhibiting Selective Affinity for GABA Receptor Subtypes. <i>Scientific Reports</i> , <b>2017</b> , 7, 6230  | 4.9  | 6   |

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|----|---|------|-----|
| 52 | Chronic Ethanol Metabolism Inhibits Hepatic Mitochondrial Superoxide Dismutase via Lysine Acetylation. <i>Alcoholism: Clinical and Experimental Research</i> , <b>2017</b> , 41, 1705-1714  | 3.7  | 12  |
| 51 | Targeting WEE1 Kinase in Cancer. <i>Trends in Pharmacological Sciences</i> , <b>2016</b> , 37, 872-881  | 13.2 | 188 |
| 50 | Strategies and Approaches of Targeting STAT3 for Cancer Treatment. <i>ACS Chemical Biology</i> , <b>2016</b> , 11, 308-18   | 4.9  | 242 |
| 49 | Investigating the Sensitivity of NAD <sup>+</sup> -dependent Sirtuin Deacetylation Activities to NADH. <i>Journal of Biological Chemistry</i> , <b>2016</b> , 291, 7128-41  | 5.4  | 71  |
| 48 | A WEE1 Inhibitor Analog of AZD1775 Maintains Synergy with Cisplatin and Demonstrates Reduced Single-Agent Cytotoxicity in Medulloblastoma Cells. <i>ACS Chemical Biology</i> , <b>2016</b> , 11, 921-30                                   | 4.9  | 28  |
| 47 | Structure-Based Screen Identification of a Mammalian Ste20-like Kinase 4 (MST4) Inhibitor with Therapeutic Potential for Pituitary Tumors. <i>Molecular Cancer Therapeutics</i> , <b>2016</b> , 15, 412-20                                | 6.1  | 10  |
| 46 | 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> , <b>2016</b> , 11, e0158269  | 3.7  | 8   |
| 45 | Deacetylation by SIRT3 Relieves Inhibition of Mitochondrial Protein Function <b>2016</b> , 105-138  |      | 3   |
| 44 | Evaluation of quantitative assays for the identification of direct signal transducer and activator of transcription 3 (STAT3) inhibitors. <i>Oncotarget</i> , <b>2016</b> , 7, 77998-78008  | 3.3  | 15  |
| 43 | ROCK and Rho: Promising therapeutic targets to ameliorate pulmonary fibrosis. <i>American Journal of Pathology</i> , <b>2015</b> , 185, 909-12  | 5.8  | 12  |
| 42 | AIMing towards improved antitumor efficacy. <i>Bioorganic and Medicinal Chemistry Letters</i> , <b>2015</b> , 25, 1765-1770   | 3.7  | 5   |
| 41 | RSK3: A regulator of pathological cardiac remodeling. <i>IUBMB Life</i> , <b>2015</b> , 67, 331-7   | 4.7  | 10  |
| 40 | 19-substituted benzoquinone ansamycin heat shock protein-90 inhibitors: biological activity and decreased off-target toxicity. <i>Molecular Pharmacology</i> , <b>2014</b> , 85, 849-57   | 4.3  | 13  |
| 39 | Integrated genomic analysis identifies the mitotic checkpoint kinase WEE1 as a novel therapeutic target in medulloblastoma. <i>Molecular Cancer</i> , <b>2014</b> , 13, 72  | 42.1 | 47  |
| 38 | Allosteric inhibitors of the Eya2 phosphatase are selective and inhibit Eya2-mediated cell migration. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 16349-61  | 5.4  | 37  |
| 37 | 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> , <b>2014</b> , 73, 411-20 | 7.8  | 35  |
| 36 | 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> , <b>2014</b> , 289, 15449-62                               | 5.4  | 43  |
| 35 | Diindolylmethane analogs bind NR4A1 and are NR4A1 antagonists in colon cancer cells. <i>Molecular Endocrinology</i> , <b>2014</b> , 28, 1729-39   |      | 62  |

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|----|--|------|-----|
| 34 | Lysine glutarylation is a protein posttranslational modification regulated by SIRT5. <i>Cell Metabolism</i> , <b>2014</b> , 19, 605-17   | 24.6 | 496 |
| 33 | The Role of Glutathione and the Glutathione-Linked Enzyme Systems in Brain Tumor Drug Resistance. <i>Tumors of the Central Nervous System</i> , <b>2014</b> , 277-290  |      | 1   |
| 32 | Glycation of glutamate cysteine ligase by 2-deoxy-d-ribose and its potential impact on chemoresistance in glioblastoma. <i>Neurochemical Research</i> , <b>2013</b> , 38, 1838-49  | 4.6  | 17  |
| 31 | 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> , <b>2013</b> , 65, 680-692  | 7.8  | 60  |
| 30 | 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> , <b>2013</b> , 202, 22-31   | 5    | 28  |
| 29 | Comparative genomics, molecular evolution and computational modeling of ALDH1B1 and ALDH2. <i>Chemico-Biological Interactions</i> , <b>2013</b> , 202, 11-21   | 5    | 11  |
| 28 | Identification of functionally relevant lysine residues that modulate human farnesoid X receptor activation. <i>Molecular Pharmacology</i> , <b>2013</b> , 83, 1078-86   | 4.3  | 5   |
| 27 | Inhibition of Wee1 sensitizes cancer cells to antimetabolite chemotherapeutics in vitro and in vivo, independent of p53 functionality. <i>Molecular Cancer Therapeutics</i> , <b>2013</b> , 12, 2675-84  | 6.1  | 85  |
| 26 | The role of glutathione in brain tumor drug resistance. <i>Biochemical Pharmacology</i> , <b>2012</b> , 83, 1005-12  | 6    | 126 |
| 25 | Post-translational oxidative modification and inactivation of mitochondrial complex I in epileptogenesis. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 11250-8   | 6.6  | 60  |
| 24 | Oxidative Stress and the ER Stress Response in a Murine Model for Early-Stage Alcoholic Liver Disease. <i>Journal of Toxicology</i> , <b>2012</b> , 2012, 207594   | 3.1  | 73  |
| 23 | 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> , <b>2012</b> , 53, 1-11 | 7.8  | 30  |
| 22 | Characterization of 4-HNE modified L-FABP reveals alterations in structural and functional dynamics. <i>PLoS ONE</i> , <b>2012</b> , 7, e38459   | 3.7  | 42  |
| 21 | Posttranslational modification and regulation of glutamate-cysteine ligase by the $\alpha$ -unsaturated aldehyde 4-hydroxy-2-nonenal. <i>Free Radical Biology and Medicine</i> , <b>2011</b> , 50, 14-26   | 7.8  | 47  |
| 20 | 2S5SDihydroxychalcone-induced glutathione is mediated by oxidative stress and kinase signaling pathways. <i>Free Radical Biology and Medicine</i> , <b>2011</b> , 51, 1146-54  | 7.8  | 19  |
| 19 | Mechanism-based inhibition of quinone reductase 2 (NQO2): selectivity for NQO2 over NQO1 and structural basis for flavoprotein inhibition. <i>ChemBioChem</i> , <b>2011</b> , 12, 1203-8   | 3.8  | 17  |
| 18 | 4-Hydroxynonenal inhibits SIRT3 via thiol-specific modification. <i>Chemical Research in Toxicology</i> , <b>2011</b> , 24, 651-62   | 4    | 93  |
| 17 | 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> , <b>2011</b> , 79, 823-32   | 4.3  | 15  |

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|----|---|------|-----|
| 16 | 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> , <b>2011</b> , 118, 856-856  | 2.2  |     |
| 15 | 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> , <b>2010</b> , 243, 35-45 | 4.6  | 7   |
| 14 | Structure, function, and post-translational regulation of the catalytic and modifier subunits of glutamate cysteine ligase. <i>Molecular Aspects of Medicine</i> , <b>2009</b> , 30, 86-98  | 16.7 | 262 |
| 13 | Motor protein-dependent transport of AMPA receptors into spines during long-term potentiation. <i>Nature Neuroscience</i> , <b>2008</b> , 11, 457-66  | 25.5 | 204 |
| 12 | In vitro and in silico characterization of peroxiredoxin 6 modified by 4-hydroxynonenal and 4-oxononenal. <i>Chemical Research in Toxicology</i> , <b>2008</b> , 21, 2289-99  | 4    | 45  |
| 11 | 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> , <b>2008</b> , 36, 2050-7   | 4    | 53  |
| 10 | 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> , <b>2007</b> , 46, 5941-50   | 3.2  | 40  |
| 9  | 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> , <b>2007</b> , 282, 12619-28                                    | 5.4  | 179 |
| 8  | 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> , <b>2006</b> , 70, 1194-203  | 4.3  | 57  |
| 7  | Dual role of the exocyst in AMPA receptor targeting and insertion into the postsynaptic membrane. <i>EMBO Journal</i> , <b>2006</b> , 25, 1623-34   | 13   | 120 |
| 6  | NMDA receptor-dependent activation of the small GTPase Rab5 drives the removal of synaptic AMPA receptors during hippocampal LTD. <i>Neuron</i> , <b>2005</b> , 45, 81-94   | 13.9 | 179 |
| 5  | 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> , <b>2005</b> , 65, 10006-15  | 10.1 | 151 |
| 4  | Local control of AMPA receptor trafficking at the postsynaptic terminal by a small GTPase of the Rab family. <i>Journal of Biological Chemistry</i> , <b>2004</b> , 279, 43870-8  | 5.4  | 113 |
| 3  | Independent functions of hsp90 in neurotransmitter release and in the continuous synaptic cycling of AMPA receptors. <i>Journal of Neuroscience</i> , <b>2004</b> , 24, 4758-66   | 6.6  | 68  |
| 2  | Deglutarylation of GCDH by SIRT5 controls lysine metabolism in mice   |      | 2   |
| 1  | 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   |