Joseph S Beckman

List of Publications by Year
in descending order

92 papers	21,272 citations	47409 49 h-index	51423 90 g-index
95 all docs	95 docs citations	95 times ranked	19586 citing authors

#	Article	IF	Citations
1	Strategies to protect against age-related mitochondrial decay: Do natural products and their derivatives help?. Free Radical Biology and Medicine, 2022, 178, 330-346.	1.3	17
2	Enhanced Top-Down Protein Characterization with Electron Capture Dissociation and Cyclic Ion Mobility Spectrometry. Analytical Chemistry, 2022, 94, 3888-3896.	3.2	14
3	Nanobody assemblies with fully flexible topology enabled by genetically encoded tetrazine amino acids. Science Advances, 2022, 8, eabm6909.	4.7	7
4	Capillary Zone Electrophoresis-Electron-Capture Collision-Induced Dissociation on a Quadrupole Time-of-Flight Mass Spectrometer for Top-Down Characterization of Intact Proteins. Journal of the American Society for Mass Spectrometry, 2021, 32, 1361-1369.	1.2	14
5	Improved Protein and PTM Characterization with a Practical Electron-Based Fragmentation on Q-TOF Instruments. Journal of the American Society for Mass Spectrometry, 2021, 32, 2081-2091.	1.2	14
6	Genetic Incorporation of Two Mutually Orthogonal Bioorthogonal Amino Acids That Enable Efficient Protein Dual-Labeling in Cells. ACS Chemical Biology, 2021, 16, 2612-2622.	1.6	27
7	Schwann cells orchestrate peripheral nerve inflammation through the expression of CSF1, ILâ€34, and SCF in amyotrophic lateral sclerosis. Glia, 2020, 68, 1165-1181.	2.5	42
8	Direct Determination of Antibody Chain Pairing by Top-down and Middle-down Mass Spectrometry Using Electron Capture Dissociation and Ultraviolet Photodissociation. Analytical Chemistry, 2020, 92, 766-773.	3.2	50
9	Top-Down Characterization of Denatured Proteins and Native Protein Complexes Using Electron Capture Dissociation Implemented within a Modified Ion Mobility-Mass Spectrometer. Analytical Chemistry, 2020, 92, 3674-3681.	3.2	35
10	Comparative Structural Analysis of 20S Proteasome Ortholog Protein Complexes by Native Mass Spectrometry. ACS Central Science, 2020, 6, 573-588.	5.3	37
11	CD34 Identifies a Subset of Proliferating Microglial Cells Associated with Degenerating Motor Neurons in ALS. International Journal of Molecular Sciences, 2019, 20, 3880.	1.8	9
12	Neuroprotective effect of CuATSM on neurotoxin-induced motor neuron loss in an ALS mouse model. Neurobiology of Disease, 2019, 130, 104495.	2.1	24
13	Ligand-independent activation of the P2X7 receptor by Hsp90 inhibition stimulates motor neuron apoptosis. Experimental Biology and Medicine, 2019, 244, 901-914.	1.1	5
14	Emergence of Microglia Bearing Senescence Markers During Paralysis Progression in a Rat Model of Inherited ALS. Frontiers in Aging Neuroscience, 2019, 11, 42.	1.7	50
15	Exploring ECD on a Benchtop Q Exactive Orbitrap Mass Spectrometer. Journal of Proteome Research, 2018, 17, 926-933.	1.8	52
16	Nitration and Glycation Turn Mature NGF into a Toxic Factor for Motor Neurons: A Role for p75^{NTR}and RAGE Signaling in ALS. Antioxidants and Redox Signaling, 2018, 28, 1587-1602.	2.5	18
17	Sequencing Grade Tandem Mass Spectrometry for Topâ€“Down Proteomics Using Hybrid Electron Capture Dissociation Methods in a Benchtop Orbitrap Mass Spectrometer. Analytical Chemistry, 2018, 90, 10819-10827.	3.2	54
18	Rust never sleeps: The continuing story of the Iron Bolt. Free Radical Biology and Medicine, 2018, 124, 353-357.	1.3	1

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19	Mast cells and neutrophils mediate peripheral motor pathway degeneration in ALS. JCI Insight, 2018, 3, .	2.3	101
20	CuII(atsm) improves the neurological phenotype and survival of SOD1G93A mice and selectively increases enzymatically active SOD1 in the spinal cord. Scientific Reports, 2017, 7, 42292.	1.6	70
21	Characterization and Identification of Dityrosine Cross-Linked Peptides Using Tandem Mass Spectrometry. Analytical Chemistry, 2017, 89, 6136-6145.	3.2	70
22	Evidence for mast cells contributing to neuromuscular pathology in an inherited model of ALS. JCI Insight, 2017, 2, .	2.3	68
23	Post-paralysis tyrosine kinase inhibition with masitinib abrogates neuroinflammation and slows disease progression in inherited amyotrophic lateral sclerosis. Journal of Neuroinflammation, 2016, 13, 177.	3.1	116
24	Copper delivery to the CNS by CuATSM effectively treats motor neuron disease in SODG93A mice co-expressing the Copper-Chaperone-for-SOD. Neurobiology of Disease, 2016, 89, 1-9.	2.1	126
25	Imidazole catalyzes chlorination by unreactive primary chloramines. Free Radical Biology and Medicine, 2015, 82, 167-178.	1.3	5
26	Electron Capture Dissociation of Sodium-Adducted Peptides on a Modified Quadrupole/Time-of-Flight Mass Spectrometer. Journal of the American Society for Mass Spectrometry, 2015, 26, 2096-2104.	1.2	21
27	The â€˜mitoflashâ€™ probe cpYFP does not respond to superoxide. Nature, 2014, 514, E12-E14.	13.7	109
28	ECD of Tyrosine Phosphorylation in a Triple Quadrupole Mass Spectrometer with a Radio-Frequency-Free Electromagnetostatic Cell. Journal of the American Society for Mass Spectrometry, 2014, 25, 1730-1738.	1.2	19
29	Oral Treatment with CuII(atsm) Increases Mutant SOD1 In Vivo but Protects Motor Neurons and Improves the Phenotype of a Transgenic Mouse Model of Amyotrophic Lateral Sclerosis. Journal of Neuroscience, 2014, 34, 8021-8031.	1.7	161
30	P2X7 receptorâ€induced death of motor neurons by a peroxynitrite/<scp>FAS</scp>â€dependent pathway. Journal of Neurochemistry, 2013, 126, 382-388.	2.1	46
31	Using Theoretical Protein Isotopic Distributions to Parse Small-Mass-Difference Post-Translational Modifications via Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2013, 24, 115-124.	1.2	22
32	Expression of zinc-deficient human superoxide dismutase in Drosophila neurons produces a locomotor defect linked to mitochondrial dysfunction. Neurobiology of Aging, 2013, 34, 2322-2330.	1.5	36
33	Nitration of Hsp90 induces cell death. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, E1102-11.	3.3	122
34	Phenotypic transition of microglia into astrocyte-like cells associated with disease onset in a model of inherited ALS. Frontiers in Cellular Neuroscience, 2013, 7, 274.	1.8	50
35	Nitric Oxide-Mediated Oxidative Damage and the Progressive Demise of Motor Neurons in ALS. Neurotoxicity Research, 2012, 22, 251-264.	1.3	103
36	Diapocynin and apocynin administration fails to significantly extend survival in G93A SOD1 ALS mice. Neurobiology of Disease, 2012, 45, 137-144.	2.1	44

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37	Electron Capture, Collision-Induced, and Electron Capture-Collision Induced Dissociation in Q-TOF. Journal of the American Society for Mass Spectrometry, 2011, 22, 607-611.	1.2	25
38	Measuring copper and zinc superoxide dismutase from spinal cord tissue using electrospray mass spectrometry. Analytical Biochemistry, 2011, 415, 52-58.	1.1	25
39	Phenotypically aberrant astrocytes that promote motoneuron damage in a model of inherited amyotrophic lateral sclerosis. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 18126-18131.	3.3	167
40	Cu,Zn-Superoxide Dismutase Increases Toxicity of Mutant and Zinc-deficient Superoxide Dismutase by Enhancing Protein Stability*. Journal of Biological Chemistry, 2010, 285, 33885-33897.	1.6	37
41	Extracellular ATP and the P2X7receptor in astrocyte-mediated motor neuron death: implications for amyotrophic lateral sclerosis. Journal of Neuroinflammation, 2010, 7, 33.	3.1	135
42	A Role for Copper in the Toxicity of Zinc-Deficient Superoxide Dismutase to Motor Neurons in Amyotrophic Lateral Sclerosis. Antioxidants and Redox Signaling, 2009, 11, 1627-1639.	2.5	65
43	Electronâ€capture dissociation (ECD), collisionâ€induced dissociation (CID) and ECD/CID in a linear radioâ€frequencyâ€free magnetic cell. Rapid Communications in Mass Spectrometry, 2009, 23, 3028-3030.	0.7	28
44	Understanding peroxynitrite biochemistry and its potential for treating human diseases. Archives of Biochemistry and Biophysics, 2009, 484, 114-116.	1.4	51
45	Mitochondrial Dysfunction in SOD1^{G93A}-Bearing Astrocytes Promotes Motor Neuron Degeneration: Prevention by Mitochondrial-Targeted Antioxidants. Journal of Neuroscience, 2008, 28, 4115-4122.	1.7	285
46	Mitochondrial Superoxide Production and Nuclear Factor Erythroid 2-Related Factor 2 Activation in p75 Neurotrophin Receptor-Induced Motor Neuron Apoptosis. Journal of Neuroscience, 2007, 27, 7777-7785.	1.7	110
47	Nitric Oxide and Peroxynitrite in Health and Disease. Physiological Reviews, 2007, 87, 315-424.	13.1	5,209
48	Prevention of Peroxynitrite-induced Apoptosis of Motor Neurons and PC12 Cells by Tyrosine-containing Peptides. Journal of Biological Chemistry, 2007, 282, 6324-6337.	1.6	53
49	Structural Characterization of Zinc-deficient Human Superoxide Dismutase and Implications for ALS. Journal of Molecular Biology, 2007, 373, 877-890.	2.0	122
50	Modulation of p75NTR-dependent motor neuron death by a small non-peptidyl mimetic of the neurotrophin loop 1 domain. European Journal of Neuroscience, 2006, 24, 1575-1580.	1.2	43
51	Increased glutathione biosynthesis by Nrf2 activation in astrocytes prevents p75NTR-dependent motor neuron apoptosis. Journal of Neurochemistry, 2006, 97, 687-696.	2.1	173
52	Peroxynitrite transforms nerve growth factor into an apoptotic factor for motor neurons. Free Radical Biology and Medicine, 2006, 41, 1632-1644.	1.3	41
53	Astrocyte activation by fibroblast growth factor-1 and motor neuron apoptosis: implications for amyotrophic lateral sclerosis. Journal of Neurochemistry, 2005, 93, 38-46.	2.1	101
54	Protection by dietary zinc in ALS mutant G93A SOD transgenic mice. Neuroscience Letters, 2005, 379, 42-46.	1.0	48

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55	Complexity of Astrocyte-Motor Neuron Interactions in Amyotrophic Lateral Sclerosis. Neurodegenerative Diseases, 2005, 2, 139-146.	0.8	69
56	Astrocytic production of nerve growth factor in motor neuron apoptosis: implications for amyotrophic lateral sclerosis. Journal of Neurochemistry, 2004, 89, 464-473.	2.1	200
57	Aggregation of ALS mutant superoxide dismutase expressed in Escherichia coli. Free Radical Biology and Medicine, 2004, 36, 911-918.	1.3	36
58	A role for astrocytes in motor neuron loss in amyotrophic lateral sclerosis. Brain Research Reviews, 2004, 47, 263-274.	9.1	274
59	Triuret: a novel product of peroxynitrite-mediated oxidation of urate. Archives of Biochemistry and Biophysics, 2004, 423, 213-217.	1.4	59
60	Stimulation of nerve growth factor expression in astrocytes by peroxynitrite. In Vivo, 2004, 18, 269-74.	0.6	25
61	Cyclic guanosine 5â€² monophosphate (GMP) prevents expression of neuronal nitric oxide synthase and apoptosis in motor neurons deprived of trophic factors in rats. Neuroscience Letters, 2002, 326, 201-205.	1.0	21
62	Peroxynitrite and injury to the vasculature and central nervous system in stroke and neurodegeneration. , 2002, , 23-46.		1
63	Urate produced during hypoxia protects heart proteins from peroxynitrite-mediated protein nitration. Free Radical Biology and Medicine, 2002, 33, 1243-1249.	1.3	60
64	CCS knockout mice establish an alternative source of copper for SOD in ALS. Free Radical Biology and Medicine, 2002, 33, 1433-1435.	1.3	31
65	Peroxynitrite triggers a phenotypic transformation in spinal cord astrocytes that induces motor neuron apoptosis. Journal of Neuroscience Research, 2002, 67, 21-29.	1.3	161
66	Nitric Oxide, Peroxynitrite and Ageing. , 2002, , 54-83.		0
67	Superoxide dismutase and the death of motoneurons in ALS. Trends in Neurosciences, 2001, 24, S15-S20.	4.2	171
68	Superoxide dismutase and the death of motoneurons in ALS. Trends in Neurosciences, 2001, 24, 15-20.	4.2	118
69	Liposome-delivered superoxide dismutase prevents nitric oxideâ€"dependent motor neuron death induced by trophic factor withdrawal. Free Radical Biology and Medicine, 2000, 28, 437-446.	1.3	49
70	Superoxide Reacts with Nitric Oxide to Nitrate Tyrosine at Physiological pH via Peroxynitrite. Journal of Biological Chemistry, 2000, 275, 32460-32466.	1.6	350
71	Evidence for peroxynitrite as a signaling molecule in flow-dependent activation of c-Jun NH2-terminal kinase. American Journal of Physiology - Heart and Circulatory Physiology, 1999, 277, H1647-H1653.	1.5	81
72	Parsing the Effects of Nitric Oxide, S -Nitrosothiols, and Peroxynitrite on Inducible Nitric Oxide Synthaseâ€"Dependent Cardiac Myocyte Apoptosis. Circulation Research, 1999, 85, 870-871.	2.0	28

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73	Induction of Nitric Oxide -- Dependent Apoptosis in Motor Neurons by Zinc-Deficient Superoxide Dismutase. Science, 1999, 286, 2498-2500.	6.0	563
74	Antioxidants Inhibit ATP-Sensitive Potassium Channels in Cerebral Arterioles. Stroke, 1998, 29, 817-823.	1.0	33
75	Chapter 19 Role of endogenous nitric oxide and peroxynitrite formation in the survival and death of motor neurons in culture. Progress in Brain Research, 1998, 118, 269-280.	0.9	81
76	Nitric Oxide-Dependent Production of cGMP Supports the Survival of Rat Embryonic Motor Neurons Cultured with Brain-Derived Neurotrophic Factor. Journal of Neuroscience, 1998, 18, 3708-3714.	1.7	161
77	Nitric Oxide and Superoxide Contribute to Motor Neuron Apoptosis Induced by Trophic Factor Deprivation. Journal of Neuroscience, 1998, 18, 923-931.	1.7	327
78	Widespread Peroxynitrite-Mediated Damage in Alzheimerâ€™s Disease. Journal of Neuroscience, 1997, 17, 2653-2657.	1.7	1,216
79	Decreased Zinc Affinity of Amyotrophic Lateral Sclerosisâ€Associated Superoxide Dismutase Mutants Leads to Enhanced Catalysis of Tyrosine Nitration by Peroxynitrite. Journal of Neurochemistry, 1997, 69, 1936-1944.	2.1	418
80	Superoxide Dismutase Catalyzes Nitration of Tyrosines by Peroxynitrite in the Rod and Head Domains of Neurofilamentâ€L. Journal of Neurochemistry, 1997, 69, 1945-1953.	2.1	226
81	Oxidative Damage and Tyrosine Nitration from Peroxynitrite. Chemical Research in Toxicology, 1996, 9, 836-844.	1.7	963
82	Ab Initioand NMR Study of Peroxynitrite and Peroxynitrous Acid:Â Important Biological Oxidants. The Journal of Physical Chemistry, 1996, 100, 15087-15095.	2.9	80
83	Peroxynitriteâ€Induced Cytotoxicity in PC12 Cells: Evidence for an Apoptotic Mechanism Differentially Modulated by Neurotrophic Factors. Journal of Neurochemistry, 1995, 65, 1543-1550.	2.1	269
84	On the pH-dependent yield of hydroxyl radical products from peroxynitrite. Free Radical Biology and Medicine, 1994, 16, 331-338.	1.3	183
85	The Reactions of Nitric Oxide with Superoxide in Cerebral Ischemic Injury.. Nosotchu, 1994, 16, 318-328.	0.0	0
86	ALS, SOD and peroxynitrite. Nature, 1993, 364, 584-584.	13.7	779
87	Crystal structure of peroxynitrite-modified bovine Cu,Zn superoxide dismutase. Archives of Biochemistry and Biophysics, 1992, 299, 350-355.	1.4	75
88	Peroxynitrite-mediated tyrosine nitration catalyzed by superoxide dismutase. Archives of Biochemistry and Biophysics, 1992, 298, 431-437.	1.4	1,516
89	Kinetics of superoxide dismutase- and iron-catalyzed nitration of phenolics by peroxynitrite. Archives of Biochemistry and Biophysics, 1992, 298, 438-445.	1.4	784
90	Peroxynitrite formation from macrophage-derived nitric oxide. Archives of Biochemistry and Biophysics, 1992, 298, 446-451.	1.4	1,128

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91	Peroxynitrite-induced membrane lipid peroxidation: The cytotoxic potential of superoxide and nitric oxide. Archives of Biochemistry and Biophysics, 1991, 288, 481-487.	1.4	2,105
92	Ischaemic injury mediator. Nature, 1990, 345, 27-28.	13.7	145