

Bal-Ram Singh

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

2,219
citations

236925

25
h-index

243625

44
g-index

82
all docs

82
docs citations

82
times ranked

1472
citing authors

#	ARTICLE	IF	CITATIONS
1	Historical Perspectives and Guidelines for Botulinum Neurotoxin Subtype Nomenclature. <i>Toxins</i> , 2017, 9, 38.	3.4	232
2	Detection of Clostridium botulinum toxin A using a fiber optic-based biosensor. <i>Analytical Biochemistry</i> , 1992, 205, 306-312.	2.4	160
3	Intimate details of the most poisonous poison. , 2000, 7, 617-619.		120
4	Botulism Diagnostics: From Clinical Symptoms to in vitro Assays. <i>Critical Reviews in Microbiology</i> , 2007, 33, 109-125.	6.1	113
5	Probing the Mechanistic Role of Glutamate Residue in the Zinc-Binding Motif of Type A Botulinum Neurotoxin Light Chain. <i>Biochemistry</i> , 2000, 39, 2399-2405.	2.5	84
6	Role of Zinc in the Structure and Toxic Activity of Botulinum Neurotoxin. <i>Biochemistry</i> , 1998, 37, 5267-5278.	2.5	66
7	Enhancement of the Endopeptidase Activity of Botulinum Neurotoxin by Its Associated Proteins and Dithiothreitol. <i>Biochemistry</i> , 1999, 38, 6903-6910.	2.5	66
8	A protease-resistant novel hemagglutinin purified from type A Clostridium botulinum. <i>The Protein Journal</i> , 1998, 17, 53-60.	1.1	63
9	Centrifugal Microfluidic Platform for Ultrasensitive Detection of Botulinum Toxin. <i>Analytical Chemistry</i> , 2015, 87, 922-928.	6.5	63
10	Red light stimulates flowering and anthocyanin biosynthesis in American cranberry. <i>Plant Growth Regulation</i> , 2002, 38, 165-171.	3.4	58
11	Botulinum neurotoxin structure, engineering, and novel cellular trafficking and targeting. <i>Neurotoxicity Research</i> , 2006, 9, 73-92.	2.7	55
12	Molecular structure of tetanus neurotoxin as revealed by Fourier transform infrared and circular dichroic spectroscopy. <i>Biophysical Chemistry</i> , 1990, 36, 155-166.	2.8	54
13	Basic Aspects of the Technique and Applications of Infrared Spectroscopy of Peptides and Proteins. <i>ACS Symposium Series</i> , 1999, , 2-37.	0.5	54
14	Role of the Disulfide Cleavage Induced Molten Globule State of Type A Botulinum Neurotoxin in Its Endopeptidase Activity. <i>Biochemistry</i> , 2001, 40, 15327-15333.	2.5	49
15	Immunological characterization of the subunits of type A botulinum neurotoxin and different components of its associated proteins. <i>Toxicon</i> , 2009, 53, 616-624.	1.6	49
16	Botulinum versus tetanus neurotoxins: Why is botulinum neurotoxin but not tetanus neurotoxin a food poison?. <i>Toxicon</i> , 1995, 33, 1541-1547.	1.6	45
17	Spectroscopic Analysis of pH-Induced Changes in the Molecular Features of Type A Botulinum Neurotoxin Light Chain. <i>Biochemistry</i> , 2000, 39, 6466-6474.	2.5	44
18	In vitro selection of RNA aptamers that inhibit the activity of type A botulinum neurotoxin. <i>Biochemical and Biophysical Research Communications</i> , 2010, 396, 854-860.	2.1	44

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19	Botulinum Neurotoxin Light Chain Refolds at Endosomal pH for its Translocation. <i>Protein Journal</i> , 2006, 25, 455-462.	1.6	41
20	Structure-Function Relationship of Clostridial Neurotoxins. <i>Toxin Reviews</i> , 1999, 18, 95-112.	1.5	38
21	Role of Zinc Binding in Type A Botulinum Neurotoxin Light Chain's Toxic Structure. <i>Biochemistry</i> , 2000, 39, 10581-10586.	2.5	37
22	Molecular properties of a hemagglutinin purified from type A <i>Clostridium botulinum</i> . <i>The Protein Journal</i> , 1999, 18, 29-38.	1.1	31
23	Structure of heavy and light chain subunits of type A botulinum neurotoxin analyzed by circular dichroism and fluorescence measurements. <i>Molecular and Cellular Biochemistry</i> , 1989, 85, 67-73.	3.1	30
24	An efficient drug delivery vehicle for botulism countermeasure. <i>BMC Pharmacology</i> , 2009, 9, 12.	0.4	29
25	High-Level Expression, Purification, and Characterization of Recombinant Type A Botulinum Neurotoxin Light Chain. <i>Protein Expression and Purification</i> , 1999, 17, 339-344.	1.3	27
26	RNA aptasensor for rapid detection of natively folded type A botulinum neurotoxin. <i>Talanta</i> , 2013, 117, 273-280.	5.5	26
27	Spectroscopic analysis of low pH and lipid-induced structural changes in type A botulinum neurotoxin relevant to membrane channel formation and translocation. <i>Biophysical Chemistry</i> , 2002, 99, 17-29.	2.8	25
28	Clostridial neurotoxins as a drug delivery vehicle targeting nervous system. <i>Biochimie</i> , 2010, 92, 1252-1259.	2.6	25
29	Type A botulinum neurotoxin complex proteins differentially modulate host response of neuronal cells. <i>Toxicon</i> , 2014, 82, 52-60.	1.6	24
30	Microarray analysis of differentially regulated genes in human neuronal and epithelial cell lines upon exposure to type A botulinum neurotoxin. <i>Biochemical and Biophysical Research Communications</i> , 2011, 405, 684-690.	2.1	23
31	In vitro translation of type A <i>Clostridium botulinum</i> neurotoxin heavy chain and analysis of its binding to rat synaptosomes. <i>The Protein Journal</i> , 1999, 18, 89-95.	1.1	22
32	The identification and biochemical characterization of drug-like compounds that inhibit botulinum neurotoxin serotype A endopeptidase activity. <i>Toxicon</i> , 2010, 55, 818-826.	1.6	22
33	The Zinc-Dependent Protease Activity of the Botulinum Neurotoxins. <i>Toxins</i> , 2010, 2, 978-997.	3.4	21
34	A Novel Surface Plasmon Resonance Biosensor for the Rapid Detection of Botulinum Neurotoxins. <i>Biosensors</i> , 2017, 7, 32.	4.7	21
35	Effects of enzymatically inactive recombinant botulinum neurotoxin type A at the mouse neuromuscular junctions. <i>Toxicon</i> , 2013, 72, 71-80.	1.6	20
36	Evolutionary Features in the Structure and Function of Bacterial Toxins. <i>Toxins</i> , 2019, 11, 15.	3.4	20

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37	Comparative immunochemical characteristics of botulinum neurotoxin type A and its associated proteins. <i>Toxicon</i> , 2013, 72, 126-132.	1.6	19
38	Membrane Channel activity and Translocation of Tetanus and Botulinum Neurotoxins. <i>Toxin Reviews</i> , 1999, 18, 45-76.	1.5	18
39	Molecular Composition and Extinction Coefficient of Native Botulinum Neurotoxin Complex Produced by <i>Clostridium botulinum</i> Hall A Strain. <i>Protein Journal</i> , 2013, 32, 106-117.	1.6	17
40	Current strategies for designing antidotes against botulinum neurotoxins. <i>Expert Opinion on Drug Discovery</i> , 2014, 9, 319-333.	5.0	17
41	In Vivo Toxicity and Immunological Characterization of Detoxified Recombinant Botulinum Neurotoxin Type A. <i>Pharmaceutical Research</i> , 2016, 33, 639-652.	3.5	16
42	Molecular differences between type A botulinum neurotoxin and its toxoid. <i>Toxicon</i> , 1989, 27, 403-410.	1.6	15
43	Purification and Characterization of the Glutathione-S-transferases from the Northern Quahog <i>Mercinaria mercinaria</i> . <i>Marine Biotechnology</i> , 1999, 1, 74-80.	2.4	15
44	Development of a Fluorescence Internal Quenching Correction Factor to Correct Botulinum Neurotoxin Type A Endopeptidase Kinetics Using SNAPtide. <i>Analytical Chemistry</i> , 2012, 84, 10549-10553.	6.5	15
45	Expression, purification and comparative characterisation of enzymatically deactivated recombinant botulinum neurotoxin type A. <i>Botulinum Journal</i> , 2008, 1, 219.	0.2	14
46	Molecular Basis of Activation of Endopeptidase Activity of Botulinum Neurotoxin Type E. <i>Biochemistry</i> , 2010, 49, 2510-2519.	2.5	14
47	Calcein permeability of liposomes mediated by type A botulinum neurotoxin and its light and heavy chains. <i>The Protein Journal</i> , 1999, 18, 701-707.	1.1	13
48	Botulinum neurotoxin: unique folding of enzyme domain of the most-poisonous poison. <i>Journal of Biomolecular Structure and Dynamics</i> , 2014, 32, 804-815.	3.5	12
49	Physico-chemical analysis of herbally prepared silver nanoparticles and its potential as a drug bioenhancer. <i>OpenNano</i> , 2017, 2, 19-27.	4.8	11
50	Endopeptidase Activities of Botulinum Neurotoxin Type B Complex, Holotoxin, and Light Chain. <i>Applied and Environmental Microbiology</i> , 2010, 76, 6658-6663.	3.1	9
51	Natural Compounds and Their Analogues as Potent Antidotes against the Most Poisonous Bacterial Toxin. <i>Applied and Environmental Microbiology</i> , 2018, 84, .	3.1	9
52	Role of critical elements in botulinum neurotoxin complex in toxin routing across intestinal and bronchial barriers. <i>PLoS ONE</i> , 2018, 13, e0199524.	2.5	9
53	Clostridial Neurotoxins: Structure, Function and Implications to Other Bacterial Toxins. <i>Microorganisms</i> , 2021, 9, 2206.	3.6	9
54	Biomedical and Toxic-Chemical Aspects of Botulinum Neurotoxins. <i>Toxin Reviews</i> , 1999, 18, vii-x.	1.5	8

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55	A novel role of C-terminus in introducing a functionally flexible structure critical for the biological activity of botulinum neurotoxin. <i>Scientific Reports</i> , 2018, 8, 8884.	3.3	8
56	Isolation, purification, and characterization of glutathione S-transferase from oat (<i>Avena sativa</i>) seedlings. <i>The Protein Journal</i> , 2000, 19, 425-430.	1.1	7
57	Structural and functional analysis of botulinum neurotoxin subunits for pH-dependent membrane channel formation and translocation. <i>Biochimica Et Biophysica Acta - Proteins and Proteomics</i> , 2015, 1854, 1510-1516.	2.3	7
58	Selection of RNA Aptamers Against Botulinum Neurotoxin Type A Light Chain Through a Non-Radioactive Approach. <i>Applied Biochemistry and Biotechnology</i> , 2016, 180, 10-25.	2.9	7
59	A First-Day Exercise on Relevance of Chemistry to Nonscience Majors Kindles Sustained Positive Student Response. <i>Journal of Chemical Education</i> , 1999, 76, 1219.	2.3	6
60	Near-infrared imaging of balb/c mice injected with a detoxified botulinum neurotoxin A. <i>Botulinum Journal</i> , 2010, 1, 431.	0.2	5
61	Botulinum Endopeptidase: SAXS Experiments and MD Simulations Reveal Extended Solution Structures That Account for Its Biochemical Properties. <i>Journal of Physical Chemistry B</i> , 2020, 124, 5801-5812.	2.6	5
62	Design, synthesis and activities of 4/5-acyl-2-aminoimidazolyl analogues of oroidin for biofilm inhibition. <i>MedChemComm</i> , 2013, 4, 1467.	3.4	4
63	Determination of the Secondary Structure of Proteins from Amide I and Amide III Infrared Bands Using Partial Least-Square Method. <i>ACS Symposium Series</i> , 1999, , 117-129.	0.5	3
64	A single protein research integrated advanced biochemistry laboratory course; spectroscopic determination of tyrosyl side chain pKa. <i>Biochemical Education</i> , 2000, 28, 107-109.	0.1	3
65	Role of Neurotoxin Associated Proteins in the Low pH Induced Structural Changes in the Botulinum Neurotoxin Complex. <i>Protein Journal</i> , 2014, 33, 557-564.	1.6	3
66	Differential endopeptidase activity of different forms of type A botulinum neurotoxin: A unique relationship between the size of the substrate and activity of the enzyme. <i>Toxicon</i> , 2018, 144, 34-41.	1.6	3
67	Dramatic neurological and biological effects by botulinum neurotoxin type A on SH-SY5Y neuroblastoma cells, beyond the blockade of neurotransmitter release. <i>BMC Pharmacology & Toxicology</i> , 2020, 21, 66.	2.4	3
68	Botulinum neurotoxin inhibitor binding dynamics and kinetics relevant for drug design. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2021, 1865, 129933.	2.4	3
69	A Targeted Therapeutic Rescues Botulinum Toxin-A Poisoned Neurons. <i>Nature Precedings</i> , 2008, , .	0.1	2
70	Structure and trafficking potentials of Botulinum Neurotoxin in drug delivery. <i>Botulinum Journal</i> , 2010, 1, 349.	0.2	2
71	Evolution of Toxin. <i>SpringerBriefs in Biochemistry and Molecular Biology</i> , 2016, , 113-134.	0.3	2
72	High Yield Preparation of Functionally Active Catalytic-Translocation Domain Module of Botulinum Neurotoxin Type A That Exhibits Uniquely Different Enzyme Kinetics. <i>Protein Journal</i> , 2017, 36, 489-501.	1.6	2

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73	Etiquette in Departmental Seminars. <i>Journal of Chemical Education</i> , 1998, 75, 846.	2.3	1
74	Relevance of Intrinsic Disorder in Protein Structure and Function. <i>SpringerBriefs in Biochemistry and Molecular Biology</i> , 2016, , 29-72.	0.3	1
75	Critical analysis in the advancement of cell-based assays for botulinum neurotoxin. <i>Critical Reviews in Microbiology</i> , 2023, 49, 1-17.	6.1	1
76	Lincomycin-induced alteration in the contents of chlorophyll-protein complexes of dimorphic maize chloroplasts and its effect on the temperature-induced spectral changes. <i>Physiologia Plantarum</i> , 1991, 81, 393-398.	5.2	0
77	Targeted Therapeutic Peptide Delivery to Synaptic Junctions as Botulism Countermeasure. <i>FASEB Journal</i> , 2007, 21, A1001.	0.5	0
78	Stability and Endopeptidase Activity of Botulinum Neurotoxin Type A Light Chain. <i>FASEB Journal</i> , 2007, 21, A1006.	0.5	0
79	Resistance of Type A Botulinum Neurotoxin to Lysosomal Proteases. <i>FASEB Journal</i> , 2007, 21, A648.	0.5	0
80	Horizontal Gene Transfer May Involve <i>Clostridium botulinum</i> Neurotoxin Evolution. <i>FASEB Journal</i> , 2007, 21, A622.	0.5	0