

# Avijit Chakrabartty

## List of Publications by Year in descending order

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90  
papers

7,611  
citations

66234

42  
h-index

51492

86  
g-index

96  
all docs

96  
docs citations

96  
times ranked

8113  
citing authors

#	ARTICLE	IF	CITATIONS
1	Helix propensities of the amino acids measured in alanine-based peptides without helix-stabilizing side-chain interactions. <i>Protein Science</i> , 1994, 3, 843-852.	3.1	572
2	Stability of $\alpha$ -Helices. <i>Advances in Protein Chemistry</i> , 1995, 46, 141-176.	4.4	339
3	Aromatic side-chain contribution to far-ultraviolet circular dichroism of helical peptides and its effect on measurement of helix propensities. <i>Biochemistry</i> , 1993, 32, 5560-5565.	1.2	334
4	Large differences in the helix propensities of alanine and glycine. <i>Nature</i> , 1991, 351, 586-588.	13.7	325
5	Membrane Disruption by Alzheimer $\beta$ -Amyloid Peptides Mediated through Specific Binding to Either Phospholipids or Gangliosides. <i>Journal of Biological Chemistry</i> , 1996, 271, 26482-26489.	1.6	307
6	Monomeric Cu,Zn-superoxide Dismutase Is a Common Misfolding Intermediate in the Oxidation Models of Sporadic and Familial Amyotrophic Lateral Sclerosis. <i>Journal of Biological Chemistry</i> , 2004, 279, 15499-15504.	1.6	296
7	Oxidation-induced Misfolding and Aggregation of Superoxide Dismutase and Its Implications for Amyotrophic Lateral Sclerosis. <i>Journal of Biological Chemistry</i> , 2002, 277, 47551-47556.	1.6	279
8	Helix propagation and N-cap propensities of the amino acids measured in alanine-based peptides in 40 volume percent trifluoroethanol. <i>Protein Science</i> , 1996, 5, 2623-2637.	3.1	256
9	A prion protein epitope selective for the pathologically misfolded conformation. <i>Nature Medicine</i> , 2003, 9, 893-899.	15.2	252
10	Manipulating the Amyloid- $\beta$ Aggregation Pathway with Chemical Chaperones. <i>Journal of Biological Chemistry</i> , 1999, 274, 32970-32974.	1.6	238
11	Structural studies of soluble oligomers of the alzheimer $\beta$ -amyloid peptide. <i>Journal of Molecular Biology</i> , 2000, 297, 73-87.	2.0	217
12	An immunological epitope selective for pathological monomer-misfolded SOD1 in ALS. <i>Nature Medicine</i> , 2007, 13, 754-759.	15.2	199
13	Characterization of the Interactions of Alzheimer beta-Amyloid Peptides with Phospholipid Membranes. <i>FEBS Journal</i> , 1997, 245, 355-363.	0.2	189
14	Determination of Free Energies of N-Capping in $\alpha$ -Helices by Modification of the Lifson-Roig Helix-Coil Theory To Include N- and C-Capping. <i>Biochemistry</i> , 1994, 33, 3396-3403.	1.2	180
15	Structure, folding, and misfolding of Cu,Zn superoxide dismutase in amyotrophic lateral sclerosis. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2006, 1762, 1025-1037.	1.8	178
16	Lipopeptide detergents designed for the structural study of membrane proteins. <i>Nature Biotechnology</i> , 2003, 21, 171-176.	9.4	174
17	Structural Transitions Associated with the Interaction of Alzheimer $\beta$ -Amyloid Peptides with Gangliosides. <i>Journal of Biological Chemistry</i> , 1998, 273, 4506-4515.	1.6	173
18	Amyotrophic lateral sclerosis is a non-amyloid disease in which extensive misfolding of SOD1 is unique to the familial form. <i>Acta Neuropathologica</i> , 2010, 119, 335-344.	3.9	171

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19	Characterization of Segments from the Central Region of BRCA1: An Intrinsically Disordered Scaffold for Multiple Protein-Protein and Protein-DNA Interactions?. <i>Journal of Molecular Biology</i> , 2005, 345, 275-287.	2.0	157
20	Autoinhibition of the Kit Receptor Tyrosine Kinase by the Cytosolic Juxtamembrane Region. <i>Molecular and Cellular Biology</i> , 2003, 23, 3067-3078.	1.1	151
21	The effect of enhanced alpha-helicity on the activity of a winter flounder antifreeze polypeptide. <i>FEBS Journal</i> , 1991, 202, 1057-1063.	0.2	138
22	Adaptor Protein Self-Assembly Drives the Control of a Cullin-RING Ubiquitin Ligase. <i>Structure</i> , 2012, 20, 1141-1153.	1.6	127
23	Prion disease susceptibility is affected by $\beta^2$ -structure folding propensity and local side-chain interactions in PrP. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 19808-19813.	3.3	119
24	The molecular interaction of human salivary histatins with polyphenolic compounds. <i>FEBS Journal</i> , 2001, 268, 4384-4397.	0.2	115
25	Alternate Aggregation Pathways of the Alzheimer $\beta$ -Amyloid Peptide: $\beta^2$ Association Kinetics at Endosomal pH. <i>Journal of Molecular Biology</i> , 2003, 325, 743-757.	2.0	97
26	Targeting of Monomer/Misfolded SOD1 as a Therapeutic Strategy for Amyotrophic Lateral Sclerosis. <i>Journal of Neuroscience</i> , 2012, 32, 8791-8799.	1.7	87
27	Hyperactive Antifreeze Protein from Winter Flounder Is a Very Long Rod-like Dimer of $\beta$ -Helices*. <i>Journal of Biological Chemistry</i> , 2005, 280, 17920-17929.	1.6	73
28	Dimerization of the transmembrane domain of amyloid precursor proteins and familial Alzheimer's disease mutants. <i>BMC Neuroscience</i> , 2008, 9, 17.	0.8	73
29	Low molecular weight species of TDP-43 generated by abnormal splicing form inclusions in amyotrophic lateral sclerosis and result in motor neuron death. <i>Acta Neuropathologica</i> , 2015, 130, 49-61.	3.9	71
30	Alternate Aggregation Pathways of the Alzheimer $\beta$ -Amyloid Peptide. <i>Journal of Biological Chemistry</i> , 2000, 275, 36436-36440.	1.6	69
31	Protein misfolding in the late-onset neurodegenerative diseases: Common themes and the unique case of amyotrophic lateral sclerosis. <i>Proteins: Structure, Function and Bioinformatics</i> , 2013, 81, 1285-1303.	1.5	69
32	Novel conformation-specific monoclonal antibodies against amyloidogenic forms of transthyretin. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , 2016, 23, 86-97.	1.4	69
33	Phase to Phase with TDP-43. <i>Biochemistry</i> , 2017, 56, 809-823.	1.2	68
34	CCM3/PDCD10 Heterodimerizes with Germinal Center Kinase III (GCKIII) Proteins Using a Mechanism Analogous to CCM3 Homodimerization. <i>Journal of Biological Chemistry</i> , 2011, 286, 25056-25064.	1.6	67
35	Structural characterization of the minimal segment of TDP-43 competent for aggregation. <i>Archives of Biochemistry and Biophysics</i> , 2014, 545, 53-62.	1.4	67
36	Transthyretin amyloidosis: an under-recognized neuropathy and cardiomyopathy. <i>Clinical Science</i> , 2017, 131, 395-409.	1.8	66

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37	Fibrillogenesis of Alzheimer A $\beta$ peptides studied by fluorescence energy transfer. <i>Journal of Molecular Biology</i> , 1997, 269, 214-224.	2.0	64
38	Interaction of human and mouse A $\beta$ peptides. <i>Journal of Neurochemistry</i> , 2004, 91, 1398-1403.	2.1	51
39	Charge substitution shows that repulsive electrostatic interactions impede the oligomerization of Alzheimer amyloid peptides. <i>FEBS Letters</i> , 2005, 579, 3574-3578.	1.3	51
40	Alzheimer $\beta$ -amyloid peptides: Structures of amyloid fibrils and alternate aggregation products. <i>Biopolymers</i> , 2001, 60, 381.	1.2	50
41	Denaturational Stress Induces Formation of Zinc-Deficient Monomers of Cu,Zn Superoxide Dismutase: Implications for Pathogenesis in Amyotrophic Lateral Sclerosis. <i>Journal of Molecular Biology</i> , 2008, 383, 424-436.	2.0	44
42	Early Steps in Oxidation-Induced SOD1 Misfolding: Implications for Non-Amyloid Protein Aggregation in Familial ALS. <i>Journal of Molecular Biology</i> , 2012, 421, 631-652.	2.0	44
43	Variants of DsRed fluorescent protein: Development of a copper sensor. <i>Protein Science</i> , 2006, 15, 2442-2447.	3.1	43
44	Amyloid $\beta$ -protein (A $\beta$ ) associated with lipid molecules: immunoreactivity distinct from that of soluble A $\beta$ . <i>FEBS Letters</i> , 1997, 420, 43-46.	1.3	42
45	Co-incorporation of A $\beta$ 40 and A $\beta$ 42 to form mixed pre-fibrillar aggregates. <i>FEBS Journal</i> , 2003, 270, 654-663.	0.2	40
46	The PrP-like Protein Doppel Binds Copper. <i>Journal of Biological Chemistry</i> , 2003, 278, 8888-8896.	1.6	39
47	ALS-Causing SOD1 Mutations Promote Production of Copper-Deficient Misfolded Species. <i>Journal of Molecular Biology</i> , 2011, 409, 839-852.	2.0	39
48	Determining composition of micron-scale protein deposits in neurodegenerative disease by spatially targeted optical microproteomics. <i>ELife</i> , 2015, 4, .	2.8	38
49	Somatostatin binds to the human amyloid $\beta$ peptide and favors the formation of distinct oligomers. <i>ELife</i> , 2017, 6, .	2.8	37
50	Binding of TDP-43 to the 3'UTR of Its Cognate mRNA Enhances Its Solubility. <i>Biochemistry</i> , 2014, 53, 5885-5894.	1.2	36
51	Alzheimer's A $\beta$ 40 Studied by NMR at Low pH Reveals That Sodium 4,4-Dimethyl-4-silapentane-1-sulfonate (DSS) Binds and Promotes $\beta$ -Ball Oligomerization. <i>Journal of Biological Chemistry</i> , 2005, 280, 3675-3685.	1.6	34
52	Requirement of aggregation propensity of Alzheimer amyloid peptides for neuronal cell surface binding. <i>BMC Neuroscience</i> , 2007, 8, 29.	0.8	33
53	Electrostatic Repulsion Governs TDP-43 C-terminal Domain Aggregation. <i>PLoS Biology</i> , 2016, 14, e1002447.	2.6	33
54	Quercitrin and quercetin 3-O-glucoside as chemical chaperones for the A4V SOD1 ALS-causing mutant. <i>Protein Engineering, Design and Selection</i> , 2017, 30, 431-440.	1.0	33

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55	Reversible assembly of helical filaments by de novo designed minimalist peptides. <i>Biopolymers</i> , 2005, 80, 26-33.	1.2	32
56	Primary structures of the alanine-rich antifreeze polypeptides from grubby sculpin, <i>Myoxocephalus aeneus</i> . <i>Canadian Journal of Zoology</i> , 1988, 66, 403-408.	0.4	26
57	Species barriers for chronic wasting disease by in vitro conversion of prion protein. <i>Biochemical and Biophysical Research Communications</i> , 2007, 364, 796-800.	1.0	26
58	Substoichiometric inhibition of transthyretin misfolding by immune-targeting sparsely populated misfolding intermediates: a potential diagnostic and therapeutic for TTR amyloidosis. <i>Scientific Reports</i> , 2016, 6, 25080.	1.6	26
59	Structural and functional characterization of KEOPS dimerization by Pcc1 and its role in t <sup>6</sup> A biosynthesis. <i>Nucleic Acids Research</i> , 2016, 44, 6971-6980.	6.5	26
60	Simple Elimination of Background Fluorescence in Formalin-Fixed Human Brain Tissue for Immunofluorescence Microscopy. <i>Journal of Visualized Experiments</i> , 2017, , .	0.2	26
61	Physiologically Important Electrolytes as Regulators of TDP-43 Aggregation and Droplet-Phase Behavior. <i>Biochemistry</i> , 2019, 58, 590-607.	1.2	24
62	Identification of stable helical bundles from a combinatorial library of amphipathic peptides. <i>Biopolymers</i> , 2004, 76, 244-257.	1.2	22
63	Relative and Regional Stabilities of the Hamster, Mouse, Rabbit, and Bovine Prion Proteins toward Urea Unfolding Assessed by Nuclear Magnetic Resonance and Circular Dichroism Spectroscopies. <i>Biochemistry</i> , 2011, 50, 7536-7545.	1.2	22
64	Equilibrium folding intermediates of a greek key $\hat{I}^2$ -barrel protein. <i>Journal of Molecular Biology</i> , 1998, 276, 669-681.	2.0	21
65	Two Distinct Conformations of $A\hat{I}^2$ Aggregates on the Surface of Living PC12 Cells. <i>Biophysical Journal</i> , 2009, 96, 4260-4267.	0.2	19
66	Calcxitin B Is a New Member of the Sarcoplasmic Calcium-binding Protein Family. <i>Journal of Biological Chemistry</i> , 2001, 276, 22529-22536.	1.6	17
67	Interplay of buried histidine protonation and protein stability in prion misfolding. <i>Scientific Reports</i> , 2017, 7, 882.	1.6	17
68	N-Terminal Helix-Cap in $\hat{I}^{\pm}$ -Helix 2 Modulates $\hat{I}^2$ -State Misfolding in Rabbit and Hamster Prion Proteins. <i>PLoS ONE</i> , 2013, 8, e63047.	1.1	17
69	Interactions of Alzheimer amyloid peptides with cultured cells and brain tissue, and their biological consequences. <i>Biopolymers</i> , 2004, 76, 4-14.	1.2	16
70	Wild-type Cu/Zn superoxide dismutase stabilizes mutant variants by heterodimerization. <i>Neurobiology of Disease</i> , 2014, 62, 479-488.	2.1	16
71	Getting specificity from simplicity in putative proteins from the prebiotic Earth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 14941-14946.	3.3	15
72	Cell Surface Binding and Internalization of $A\hat{I}^2$ Modulated by Degree of Aggregation. <i>International Journal of Alzheimer's Disease</i> , 2011, 2011, 1-13.	1.1	13

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73	Conformational Coupling of Mg <sup>2+</sup> and Ca <sup>2+</sup> on the Three-State Folding of Calyculin A. <i>Biochemistry</i> , 2003, 42, 5531-5539.	1.2	12
74	Cost-effective elimination of lipofuscin fluorescence from formalin-fixed brain tissue by white phosphor light emitting diode array. <i>Biochemistry and Cell Biology</i> , 2016, 94, 545-550.	0.9	12
75	Putative One-Pot Prebiotic Polypeptides with Ribonucleolytic Activity. <i>Chemistry - A European Journal</i> , 2010, 16, 5314-5323.	1.7	11
76	All or none fibrillogenesis of a prion peptide. <i>FEBS Journal</i> , 2001, 268, 4885-4891.	0.2	10
77	Conversion of A $\beta$ 42 into a Folded Soluble Native-like Protein using a Semi-random Library of Amphipathic Helices. <i>Journal of Molecular Biology</i> , 2010, 396, 1284-1294.	2.0	10
78	Probing Alzheimer amyloid peptide aggregation using a cell-free fluorescent protein refolding method. <i>Biochemistry and Cell Biology</i> , 2009, 87, 631-639.	0.9	9
79	Multiphoton ANS fluorescence microscopy as an in vivo sensor for protein misfolding stress. <i>Cell Stress and Chaperones</i> , 2011, 16, 549-561.	1.2	9
80	Progress in transthyretin fibrillogenesis research strengthens the amyloid hypothesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2001, 98, 14757-14759.	3.3	7
81	Analyzing complicated protein folding kinetics rapidly by analytical Laplace inversion using a Tikhonov regularization variant. <i>Analytical Biochemistry</i> , 2012, 421, 181-190.	1.1	7
82	An Arg-rich putative prebiotic protein is as stable as its Lys-rich variant. <i>Archives of Biochemistry and Biophysics</i> , 2012, 528, 118-126.	1.4	6
83	Structure of a simplified $\beta$ -hairpin and its ATP complex. <i>Archives of Biochemistry and Biophysics</i> , 2013, 537, 62-71.	1.4	6
84	Conformation specificity and arene binding in a peptide composed only of Lys, Ile, Ala and Gly. <i>European Biophysics Journal</i> , 2012, 41, 63-72.	1.2	5
85	Nonpolar contributions to conformational specificity in assemblies of designed short helical peptides. <i>Protein Science</i> , 2000, 9, 1011-1023.	3.1	4
86	Alternate routes to conformational specificity in a Greek key $\beta$ barrel protein. <i>FEBS Journal</i> , 2001, 268, 4653-4664.	0.2	2
87	NMR-driven secondary and tertiary structure model of Ca <sup>2+</sup> -loaded calyculin. <i>Biochemical and Biophysical Research Communications</i> , 2006, 343, 520-524.	1.0	2
88	Protein Misfolding and Toxicity in Amyotrophic Lateral Sclerosis. , 2012, , 257-288.		2
89	Reply to "Properties of a disease-specific prion probe". <i>Nature Medicine</i> , 2004, 10, 11-12.	15.2	1
90	Alzheimer $\beta$ -amyloid peptides: Structures of amyloid fibrils and alternate aggregation products. , 2001, 60, 381.		1