

# Avijit Chakrabartty

## List of Publications by Citations

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91  
papers

6,715  
citations

40  
h-index

81  
g-index

96  
ext. papers

7,209  
ext. citations

7.8  
avg, IF

5.55  
L-index

#	Paper	IF	Citations
91	Helix propensities of the amino acids measured in alanine-based peptides without helix-stabilizing side-chain interactions. <i>Protein Science</i> , <b>1994</b> , 3, 843-52	6.3	518
90	Aromatic side-chain contribution to far-ultraviolet circular dichroism of helical peptides and its effect on measurement of helix propensities. <i>Biochemistry</i> , <b>1993</b> , 32, 5560-5	3.2	309
89	Large differences in the helix propensities of alanine and glycine. <i>Nature</i> , <b>1991</b> , 351, 586-8	50.4	305
88	Stability of $\beta$ Helices. <i>Advances in Protein Chemistry</i> , <b>1995</b> , 46, 141-176		301
87	Membrane disruption by Alzheimer beta-amyloid peptides mediated through specific binding to either phospholipids or gangliosides. Implications for neurotoxicity. <i>Journal of Biological Chemistry</i> , <b>1996</b> , 271, 26482-9	5.4	267
86	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> , <b>2004</b> , 279, 15499-504	5.4	263
85	Oxidation-induced misfolding and aggregation of superoxide dismutase and its implications for amyotrophic lateral sclerosis. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 47551-6	5.4	251
84	Helix propagation and N-cap propensities of the amino acids measured in alanine-based peptides in 40 volume percent trifluoroethanol. <i>Protein Science</i> , <b>1996</b> , 5, 2623-37	6.3	239
83	A prion protein epitope selective for the pathologically misfolded conformation. <i>Nature Medicine</i> , <b>2003</b> , 9, 893-9	50.5	233
82	Structural studies of soluble oligomers of the Alzheimer beta-amyloid peptide. <i>Journal of Molecular Biology</i> , <b>2000</b> , 297, 73-87	6.5	201
81	Manipulating the amyloid-beta aggregation pathway with chemical chaperones. <i>Journal of Biological Chemistry</i> , <b>1999</b> , 274, 32970-4	5.4	201
80	An immunological epitope selective for pathological monomer-misfolded SOD1 in ALS. <i>Nature Medicine</i> , <b>2007</b> , 13, 754-9	50.5	184
79	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> , <b>1994</b> , 33, 3396-403	3.2	163
78	Characterization of the interactions of Alzheimer beta-amyloid peptides with phospholipid membranes. <i>FEBS Journal</i> , <b>1997</b> , 245, 355-63		160
77	Lipopeptide detergents designed for the structural study of membrane proteins. <i>Nature Biotechnology</i> , <b>2003</b> , 21, 171-6	44.5	155
76	Amyotrophic lateral sclerosis is a non-amyloid disease in which extensive misfolding of SOD1 is unique to the familial form. <i>Acta Neuropathologica</i> , <b>2010</b> , 119, 335-44	14.3	147
75	Structure, folding, and misfolding of Cu,Zn superoxide dismutase in amyotrophic lateral sclerosis. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , <b>2006</b> , 1762, 1025-37	6.9	147

74	Structural transitions associated with the interaction of Alzheimer beta-amyloid peptides with gangliosides. <i>Journal of Biological Chemistry</i> , <b>1998</b> , 273, 4506-15	5.4	142
73	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> , <b>2005</b> , 345, 275-87	6.5	141
72	Autoinhibition of the kit receptor tyrosine kinase by the cytosolic juxtamembrane region. <i>Molecular and Cellular Biology</i> , <b>2003</b> , 23, 3067-78	4.8	133
71	The effect of enhanced alpha-helicity on the activity of a winter flounder antifreeze polypeptide. <i>FEBS Journal</i> , <b>1991</b> , 202, 1057-63		128
70	Prion disease susceptibility is affected by beta-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> , <b>2010</b> , 107, 19808-13	11.5	102
69	The molecular interaction of human salivary histatins with polyphenolic compounds. <i>FEBS Journal</i> , <b>2001</b> , 268, 4384-97		102
68	Adaptor protein self-assembly drives the control of a cullin-RING ubiquitin ligase. <i>Structure</i> , <b>2012</b> , 20, 1141-53	5.2	90
67	Alternate aggregation pathways of the Alzheimer beta-amyloid peptide: Abeta association kinetics at endosomal pH. <i>Journal of Molecular Biology</i> , <b>2003</b> , 325, 743-57	6.5	87
66	Targeting of monomer/misfolded SOD1 as a therapeutic strategy for amyotrophic lateral sclerosis. <i>Journal of Neuroscience</i> , <b>2012</b> , 32, 8791-9	6.6	71
65	Hyperactive antifreeze protein from winter flounder is a very long rod-like dimer of alpha-helices. <i>Journal of Biological Chemistry</i> , <b>2005</b> , 280, 17920-9	5.4	67
64	Alternate aggregation pathways of the Alzheimer beta-amyloid peptide. An in vitro model of preamyloid. <i>Journal of Biological Chemistry</i> , <b>2000</b> , 275, 36436-40	5.4	64
63	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> , <b>2013</b> , 81, 1285-303 <sup>4.2</sup>	4.2	62
62	Fibrillogenesis of Alzheimer Abeta peptides studied by fluorescence energy transfer. <i>Journal of Molecular Biology</i> , <b>1997</b> , 269, 214-24	6.5	61
61	Dimerization of the transmembrane domain of amyloid precursor proteins and familial Alzheimer's disease mutants. <i>BMC Neuroscience</i> , <b>2008</b> , 9, 17	3.2	61
60	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> , <b>2016</b> , 23, 86-97	2.7	54
59	"Structural characterization of the minimal segment of TDP-43 competent for aggregation". <i>Archives of Biochemistry and Biophysics</i> , <b>2014</b> , 545, 53-62	4.1	54
58	Transthyretin amyloidosis: an under-recognized neuropathy and cardiomyopathy. <i>Clinical Science</i> , <b>2017</b> , 131, 395-409	6.5	50
57	CCM3/PDCD10 heterodimerizes with germinal center kinase III (GCKIII) proteins using a mechanism analogous to CCM3 homodimerization. <i>Journal of Biological Chemistry</i> , <b>2011</b> , 286, 25056-64	5.4	50

56	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> , <b>2015</b> , 130, 49-61	14.3	49
55	Phase to Phase with TDP-43. <i>Biochemistry</i> , <b>2017</b> , 56, 809-823	3.2	47
54	Charge substitution shows that repulsive electrostatic interactions impede the oligomerization of Alzheimer amyloid peptides. <i>FEBS Letters</i> , <b>2005</b> , 579, 3574-8	3.8	46
53	Alzheimer beta-amyloid peptides: structures of amyloid fibrils and alternate aggregation products. <i>Biopolymers</i> , <b>2001</b> , 60, 381-94	2.2	44
52	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> , <b>2008</b> , 383, 424-36	6.5	40
51	Interaction of human and mouse Abeta peptides. <i>Journal of Neurochemistry</i> , <b>2004</b> , 91, 1398-403	6	39
50	Early steps in oxidation-induced SOD1 misfolding: implications for non-amyloid protein aggregation in familial ALS. <i>Journal of Molecular Biology</i> , <b>2012</b> , 421, 631-52	6.5	38
49	Amyloid beta-protein (A beta) associated with lipid molecules: immunoreactivity distinct from that of soluble A beta. <i>FEBS Letters</i> , <b>1997</b> , 420, 43-6	3.8	37
48	The PrP-like protein Doppel binds copper. <i>Journal of Biological Chemistry</i> , <b>2003</b> , 278, 8888-96	5.4	35
47	Co-incorporation of A beta 40 and A beta 42 to form mixed pre-fibrillar aggregates. <i>FEBS Journal</i> , <b>2003</b> , 270, 654-63		35
46	Variants of DsRed fluorescent protein: Development of a copper sensor. <i>Protein Science</i> , <b>2006</b> , 15, 2442-7	7.3	34
45	ALS-causing SOD1 mutations promote production of copper-deficient misfolded species. <i>Journal of Molecular Biology</i> , <b>2011</b> , 409, 839-52	6.5	33
44	Reversible assembly of helical filaments by de novo designed minimalist peptides. <i>Biopolymers</i> , <b>2005</b> , 80, 26-33	2.2	30
43	Alzheimer's Abeta40 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> , <b>2005</b> , 280, 3675-85	5.4	30
42	Requirement of aggregation propensity of Alzheimer amyloid peptides for neuronal cell surface binding. <i>BMC Neuroscience</i> , <b>2007</b> , 8, 29	3.2	29
41	Primary structures of the alanine-rich antifreeze polypeptides from grubby sculpin, <i>Myoxocephalus aeneus</i> . <i>Canadian Journal of Zoology</i> , <b>1988</b> , 66, 403-408	1.5	25
40	Binding of TDP-43 to the 3'UTR of its cognate mRNA enhances its solubility. <i>Biochemistry</i> , <b>2014</b> , 53, 5885-94	5.24	24
39	Determining composition of micron-scale protein deposits in neurodegenerative disease by spatially targeted optical microproteomics. <i>ELife</i> , <b>2015</b> , 4,	8.9	23

38	Electrostatic Repulsion Governs TDP-43 C-terminal Domain Aggregation. <i>PLoS Biology</i> , <b>2016</b> , 14, e1002447	23
37	Quercitrin and quercetin 3- $\beta$ -D-glucoside as chemical chaperones for the A4V SOD1 ALS-causing mutant. <i>Protein Engineering, Design and Selection</i> , <b>2017</b> , 30, 431-440	1.9 22
36	Substoichiometric inhibition of transthyretin misfolding by immune-targeting sparsely populated misfolding intermediates: a potential diagnostic and therapeutic for TTR amyloidoses. <i>Scientific Reports</i> , <b>2016</b> , 6, 25080	4.9 22
35	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> , <b>2011</b> , 50, 7536-45	3.2 21
34	Identification of stable helical bundles from a combinatorial library of amphipathic peptides. <i>Biopolymers</i> , <b>2004</b> , 76, 244-57	2.2 21
33	Equilibrium folding intermediates of a Greek key beta-barrel protein. <i>Journal of Molecular Biology</i> , <b>1998</b> , 276, 669-81	6.5 21
32	Somatostatin binds to the human amyloid $\beta$ peptide and favors the formation of distinct oligomers. <i>ELife</i> , <b>2017</b> , 6,	8.9 21
31	Two distinct conformations of A $\beta$ aggregates on the surface of living PC12 cells. <i>Biophysical Journal</i> , <b>2009</b> , 96, 4260-7	2.9 19
30	Species barriers for chronic wasting disease by in vitro conversion of prion protein. <i>Biochemical and Biophysical Research Communications</i> , <b>2007</b> , 364, 796-800	3.4 19
29	Structural and functional characterization of KEOPS dimerization by Pcc1 and its role in t6A biosynthesis. <i>Nucleic Acids Research</i> , <b>2016</b> , 44, 6971-80	20.1 17
28	Interactions of Alzheimer amyloid peptides with cultured cells and brain tissue, and their biological consequences. <i>Biopolymers</i> , <b>2004</b> , 76, 4-14	2.2 16
27	Wild-type Cu/Zn superoxide dismutase stabilizes mutant variants by heterodimerization. <i>Neurobiology of Disease</i> , <b>2014</b> , 62, 479-88	7.5 15
26	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> , <b>2007</b> , 104, 14941-6	11.5 15
25	Calexitin B is a new member of the sarcoplasmic calcium-binding protein family. <i>Journal of Biological Chemistry</i> , <b>2001</b> , 276, 22529-36	5.4 15
24	N-terminal helix-cap in Ehelix 2 modulates Estate misfolding in rabbit and hamster prion proteins. <i>PLoS ONE</i> , <b>2013</b> , 8, e63047	3.7 15
23	Interplay of buried histidine protonation and protein stability in prion misfolding. <i>Scientific Reports</i> , <b>2017</b> , 7, 882	4.9 14
22	Simple Elimination of Background Fluorescence in Formalin-Fixed Human Brain Tissue for Immunofluorescence Microscopy. <i>Journal of Visualized Experiments</i> , <b>2017</b> ,	1.6 14
21	Conformational coupling of Mg <sup>2+</sup> and Ca <sup>2+</sup> on the three-state folding of calexitin B. <i>Biochemistry</i> , <b>2003</b> , 42, 5531-9	3.2 12

20	Physiologically Important Electrolytes as Regulators of TDP-43 Aggregation and Droplet-Phase Behavior. <i>Biochemistry</i> , <b>2019</b> , 58, 590-607	3.2	12
19	Putative one-pot prebiotic polypeptides with ribonucleolytic activity. <i>Chemistry - A European Journal</i> , <b>2010</b> , 16, 5314-23	4.8	11
18	Cell surface binding and internalization of $\alpha$ modulated by degree of aggregation. <i>International Journal of Alzheimers Disease</i> , <b>2011</b> , 2011, 962352	3.7	10
17	Conversion of Abeta42 into a folded soluble native-like protein using a semi-random library of amphipathic helices. <i>Journal of Molecular Biology</i> , <b>2010</b> , 396, 1284-94	6.5	10
16	Cost-effective elimination of lipofuscin fluorescence from formalin-fixed brain tissue by white phosphor light emitting diode array. <i>Biochemistry and Cell Biology</i> , <b>2016</b> , 94, 545-550	3.6	8
15	Multiphoton ANS fluorescence microscopy as an in vivo sensor for protein misfolding stress. <i>Cell Stress and Chaperones</i> , <b>2011</b> , 16, 549-61	4	8
14	All or none fibrillogenesis of a prion peptide. <i>FEBS Journal</i> , <b>2001</b> , 268, 4885-91		8
13	Analyzing complicated protein folding kinetics rapidly by analytical Laplace inversion using a Tikhonov regularization variant. <i>Analytical Biochemistry</i> , <b>2012</b> , 421, 181-90	3.1	7
12	Probing Alzheimer amyloid peptide aggregation using a cell-free fluorescent protein refolding method. <i>Biochemistry and Cell Biology</i> , <b>2009</b> , 87, 631-9	3.6	7
11	Progress in transthyretin fibrillogenesis research strengthens the amyloid hypothesis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2001</b> , 98, 14757-9	11.5	7
10	An Arg-rich putative prebiotic protein is as stable as its Lys-rich variant. <i>Archives of Biochemistry and Biophysics</i> , <b>2012</b> , 528, 118-26	4.1	6
9	Conformation specificity and arene binding in a peptide composed only of Lys, Ile, Ala and Gly. <i>European Biophysics Journal</i> , <b>2012</b> , 41, 63-72	1.9	4
8	Structure of a simplified Hairpin and its ATP complex. <i>Archives of Biochemistry and Biophysics</i> , <b>2013</b> , 537, 62-71	4.1	4
7	Nonpolar contributions to conformational specificity in assemblies of designed short helical peptides. <i>Protein Science</i> , <b>2000</b> , 9, 1011-23	6.3	4
6	Alternate routes to conformational specificity in a Greek key beta barrel protein. <i>FEBS Journal</i> , <b>2001</b> , 268, 4653-63		2
5	Protein Misfolding and Toxicity in Amyotrophic Lateral Sclerosis <b>2012</b> , 257-288		2
4	Interaction of Alzheimer Amyloid Peptide with Cell Surfaces and Artificial Membranes <b>2011</b> , 231-243		1
3	NMR-driven secondary and tertiary structure model of Ca <sup>2+</sup> -loaded calyculin. <i>Biochemical and Biophysical Research Communications</i> , <b>2006</b> , 343, 520-4	3.4	1

2      Reply to Properties of a disease-specific prion probe *Nature Medicine*, **2004**, 10, 11-12      50.5    1

1      Alzheimer Amyloid peptides: Structures of amyloid fibrils and alternate aggregation products  
**2001**, 60, 381      1