Gal Bitan

List of Publications by Year in Descending Order

127 papers	8,656 citations	44 h-index	92 g-index
157 ext. papers	9,489 ext. citations	6.4 avg, IF	5.91 L-index

#	Paper	IF	Citations
127	Three-repeat and four-repeat Tau isoforms form different oligomers.. *Protein Science*, **2021**,	6.3	1
126	Aptamers targeting amyloidogenic proteins and their emerging role in neurodegenerative diseases.. *Journal of Biological Chemistry*, **2021**, 101478	5.4	4
125	-Synuclein in blood exosomes immunoprecipitated using neuronal and oligodendroglial markers distinguishes Parkinson's disease from multiple system atrophy. *Acta Neuropathologica*, **2021**, 142, 495-511	14.3	10
124	The molecular tweezer CLR01 improves behavioral deficits and reduces tau pathology in P301S-tau transgenic mice. *Alzheimer's Research and Therapy*, **2021**, 13, 6	9	7
123	Lysine-selective molecular tweezers are cell penetrant and concentrate in lysosomes. *Communications Biology*, **2021**, 4, 1076	6.7	1
122	Inhibition of Staphylococcus aureus biofilm-forming functional amyloid by molecular tweezers. *Cell Chemical Biology*, **2021**, 28, 1310-1320.e5	8.2	4
121	Different Inhibitors of A 42-Induced Toxicity Have Distinct Metal-Ion Dependency. *ACS Chemical Neuroscience*, **2020**, 11, 2243-2255	5.7	1
120	The Amyloid Inhibitor CLR01 Relieves Autophagy and Ameliorates Neuropathology in a Severe Lysosomal Storage Disease. *Molecular Therapy*, **2020**, 28, 1167-1176	11.7	20
119	CNS-Derived Blood Exosomes as a Promising Source of Biomarkers: Opportunities and Challenges. *Frontiers in Molecular Neuroscience*, **2020**, 13, 38	6.1	73
118	CLR01 protects dopaminergic neurons in vitro and in mouse models of Parkinson's disease. *Nature Communications*, **2020**, 11, 4885	17.4	14
117	Examination of SOD1 aggregation modulators and their effect on SOD1 enzymatic activity as a proxy for potential toxicity. *FASEB Journal*, **2020**, 34, 11957-11969	0.9	1
116	Supramolecular Mechanism of Viral Envelope Disruption by Molecular Tweezers. *Journal of the American Chemical Society*, **2020**, 142, 17024-17038	16.4	14
115	Ischemic axonal injury up-regulates MARK4 in cortical neurons and primes tau phosphorylation and aggregation. *Acta Neuropathologica Communications*, **2019**, 7, 135	7.3	10
114	Major Differences between the Self-Assembly and Seeding Behavior of Heparin-Induced and in Vitro Phosphorylated Tau and Their Modulation by Potential Inhibitors. *ACS Chemical Biology*, **2019**, 14, 1363-1379	4.9	21
113	Native Top-Down Mass Spectrometry and Ion Mobility Spectrometry of the Interaction of Tau Protein with a Molecular Tweezer Assembly Modulator. *Journal of the American Society for Mass Spectrometry*, **2019**, 30, 16-23	3.5	30
112	The molecular tweezer CLR01 reduces aggregated, pathologic, and seeding-competent -synuclein in experimental multiple system atrophy. *Biochimica Et Biophysica Acta - Molecular Basis of Disease*, **2019**, 1865, 165513	6.9	15
111	Amyloid -protein oligomers promote the uptake of tau fibril seeds potentiating intracellular tau aggregation. *Alzheimer's Research and Therapy*, **2019**, 11, 86	9	39

110	Molecular Lysine Tweezers Counteract Aberrant Protein Aggregation. *Frontiers in Chemistry*, **2019**, 7, 657	5	12
109	F2-06-01: MAJOR DIFFERENCES BETWEEN THE SELF-ASSEMBLY, SEEDING BEHAVIOR, AND INTERACTION WITH MODULATORS OF HEPARIN-INDUCED VERSUS IN-VITRO PHOSPHORYLATED TAU **2019**, 15, P524-P525		
108	Disease-modifying therapy for proteinopathies: Can the exception become the rule?. *Progress in Molecular Biology and Translational Science*, **2019**, 168, 277-287	4	2
107	Different Amyloid-Self-Assemblies Have Distinct Effects on Intracellular Tau Aggregation. *Frontiers in Molecular Neuroscience*, **2019**, 12, 268	6.1	9
106	The molecular tweezer CLR01 inhibits aberrant superoxide dismutase 1 (SOD1) self-assembly and in the G93A-SOD1 mouse model of ALS. *Journal of Biological Chemistry*, **2019**, 294, 3501-3513	5.4	18
105	A Label-Free Platform for Identification of Exosomes from Different Sources. *ACS Sensors*, **2019**, 4, 488-497	9.1	60
104	The molecular tweezer CLR01 inhibits Ebola and Zika virus infection. *Antiviral Research*, **2018**, 152, 26-35	10.8	24
103	Using Molecular Tweezers to Remodel Abnormal Protein Self-Assembly and Inhibit the Toxicity of Amyloidogenic Proteins. *Methods in Molecular Biology*, **2018**, 1777, 369-386	1.4	9
102	Investigation of Anti-SOD1 Antibodies Yields New Structural Insight into SOD1 Misfolding and Surprising Behavior of the Antibodies Themselves. *ACS Chemical Biology*, **2018**, 13, 2794-2807	4.9	15
101	Preparation of Pure Populations of Amyloid Protein Oligomers of Defined Size. *Methods in Molecular Biology*, **2018**, 1779, 3-12	1.4	3
100	On-chip ultraviolet holography for high-throughput nanoparticle and biomolecule detection **2018**,		1
99	Recommendations of the Global Multiple System Atrophy Research Roadmap Meeting. *Neurology*, **2018**, 90, 74-82	6.5	10
98	Computational On-Chip Imaging of Nanoparticles and Biomolecules using Ultraviolet Light. *Scientific Reports*, **2017**, 7, 44157	4.9	11
97	Inhibition of Huntingtin Exon-1 Aggregation by the Molecular Tweezer CLR01. *Journal of the American Chemical Society*, **2017**, 139, 5640-5643	16.4	34
96	A Molecular Tweezer Ameliorates Motor Deficits in Mice Overexpressing Synuclein. *Neurotherapeutics*, **2017**, 14, 1107-1119	6.4	34
95	Inhibition of Mutant B Crystallin-Induced Protein Aggregation by a Molecular Tweezer. *Journal of the American Heart Association*, **2017**, 6,	6	12
94	Preparation of pure populations of covalently stabilized amyloid protein oligomers of specific sizes. *Analytical Biochemistry*, **2017**, 518, 78-85	3.1	21
93	Mechanism of C-Terminal Fragments of Amyloid Protein as Inhibitors: Do C-Terminal Interactions Play a Key Role in Their Inhibitory Activity?. *Journal of Physical Chemistry B*, **2016**, 120, 1615-23	3.4	39

92	Modulation of Amyloid β-Protein (Aβ) Assembly by Homologous C-Terminal Fragments as a Strategy for Inhibiting Aβ Toxicity. *ACS Chemical Neuroscience*, **2016**, 7, 845-56	5.7	30
91	Neurotoxicity of the Parkinson Disease-Associated Pesticide Ziram Is Synuclein-Dependent in Zebrafish Embryos. *Environmental Health Perspectives*, **2016**, 124, 1766-1775	8.4	45
90	Reducing synuclein accumulation improves neuronal survival after spinal cord injury. *Experimental Neurology*, **2016**, 278, 105-15	5.7	20
89	Molecular tweezers for lysine and arginine - powerful inhibitors of pathologic protein aggregation. *Chemical Communications*, **2016**, 52, 11318-34	5.8	94
88	The Lys-Specific Molecular Tweezer, CLR01, Modulates Aggregation of the Mutant p53 DNA Binding Domain and Inhibits Its Toxicity. *Biochemistry*, **2015**, 54, 3729-38	3.2	17
87	Amyloid β-protein assembly: The effect of molecular tweezers CLR01 and CLR03. *Journal of Physical Chemistry B*, **2015**, 119, 4831-41	3.4	58
86	Molecular tweezers inhibit islet amyloid polypeptide assembly and toxicity by a new mechanism. *ACS Chemical Biology*, **2015**, 10, 1555-69	4.9	37
85	Role of Species-Specific Primary Structure Differences in Aβ42 Assembly and Neurotoxicity. *ACS Chemical Neuroscience*, **2015**, 6, 1941-55	5.7	22
84	Toxicity inhibitors protect lipid membranes from disruption by Aβ42. *ACS Chemical Neuroscience*, **2015**, 6, 1860-9	5.7	25
83	A molecular tweezer antagonizes seminal amyloids and HIV infection. *ELife*, **2015**, 4,	8.9	55
82	Molecular tweezers targeting transthyretin amyloidosis. *Neurotherapeutics*, **2014**, 11, 450-61	6.4	36
81	Molecular basis for preventing α-synuclein aggregation by a molecular tweezer. *Journal of Biological Chemistry*, **2014**, 289, 10727-10737	5.4	70
80	Safety and pharmacological characterization of the molecular tweezer CLR01 - a broad-spectrum inhibitor of amyloid proteins' toxicity. *BMC Pharmacology & Toxicology*, **2014**, 15, 23	2.6	37
79	Exact modeling of cylindrical metal-dielectric multilayers beyond the effective medium approximation. *Optics Letters*, **2014**, 39, 6517-20	3	1
78	Counteracting Semen-mediated Enhancement of HIV Infection and Enveloped Virus Infection by a Lysine-specific Molecular Tweezer. *AIDS Research and Human Retroviruses*, **2014**, 30, A263-A263	1.6	
77	Assembly of Amyloid β-Protein Variants Containing Familial Alzheimer's Disease-Linked Amino Acid Substitutions **2014**, 429-442		8
76	Disrupting self-assembly and toxicity of amyloidogenic protein oligomers by "molecular tweezers" - from the test tube to animal models. *Current Pharmaceutical Design*, **2014**, 20, 2469-83	3.3	36
75	Modulators of amyloid protein aggregation and toxicity: EGCG and CLR01. *Translational Neuroscience*, **2013**, 4,	1.2	18

74	Tranilast binds to a monomers and promotes a fibrillation. *Biochemistry*, **2013**, 52, 3995-4002	3.2	10
73	Effects of different amyloid protein analogues on synaptic function. *Neurobiology of Aging*, **2013**, 34, 1032-44	5.6	48
72	A shortened Barnes maze protocol reveals memory deficits at 4-months of age in the triple-transgenic mouse model of Alzheimer's disease. *PLoS ONE*, **2013**, 8, e80355	3.7	69
71	Design of amyloid aggregation inhibitors from a predicted structural motif. *Journal of Medicinal Chemistry*, **2012**, 55, 3002-10	8.3	42
70	A key role for lysine residues in amyloid protein folding, assembly, and toxicity. *ACS Chemical Neuroscience*, **2012**, 3, 473-81	5.7	85
69	Protection of primary neurons and mouse brain from Alzheimer's pathology by molecular tweezers. *Brain*, **2012**, 135, 3735-48	11.2	75
68	O2-12-01: Lysine-specific molecular tweezers protect neurons against beta-amyloid-induced synaptotoxicity and lower beta-amyloid and p-tau load in a mouse model of Alzheimer's disease **2012**, 8, P259-P259		1
67	Plasma methionine sulfoxide in persons with familial Alzheimer's disease mutations. *Dementia and Geriatric Cognitive Disorders*, **2012**, 33, 219-25	2.6	15
66	Application of photochemical cross-linking to the study of oligomerization of amyloidogenic proteins. *Methods in Molecular Biology*, **2012**, 849, 11-21	1.4	12
65	Comparison of three amyloid assembly inhibitors: the sugar scyllo-inositol, the polyphenol epigallocatechin gallate, and the molecular tweezer CLR01. *ACS Chemical Neuroscience*, **2012**, 3, 451-8	5.7	93
64	A(39-42) modulates A oligomerization but not fibril formation. *Biochemistry*, **2012**, 51, 108-17	3.2	65
63	A two-step strategy for structure-activity relationship studies of N-methylated a42 C-terminal fragments as a42 toxicity inhibitors. *ChemMedChem*, **2012**, 7, 515-22	3.7	8
62	Modulating self-assembly of amyloidogenic proteins as a therapeutic approach for neurodegenerative diseases: strategies and mechanisms. *ChemMedChem*, **2012**, 7, 359-74	3.7	52
61	A novel "molecular tweezer" inhibitor of synuclein neurotoxicity in vitro and in vivo. *Neurotherapeutics*, **2012**, 9, 464-76	6.4	123
60	Zn2+-A40 complexes form metastable quasi-spherical oligomers that are cytotoxic to cultured hippocampal neurons. *Journal of Biological Chemistry*, **2012**, 287, 20555-64	5.4	33
59	Preparation of stable amyloid protein oligomers of defined assembly order. *Methods in Molecular Biology*, **2012**, 849, 23-31	1.4	15
58	Overview of Fibrillar and Oligomeric Assemblies of Amyloidogenic Proteins **2012**, 1-36		2
57	Rational design of sheet ligands against A42-induced toxicity. *Journal of the American Chemical Society*, **2011**, 133, 4348-58	16.4	55

56	Lysine-specific molecular tweezers are broad-spectrum inhibitors of assembly and toxicity of amyloid proteins. *Journal of the American Chemical Society*, **2011**, 133, 16958-69	16.4	219
55	Structural basis for A□42 toxicity inhibition by A□C-terminal fragments: discrete molecular dynamics study. *Journal of Molecular Biology*, **2011**, 410, 316-28	6.5	43
54	Surprising toxicity and assembly behaviour of amyloid □protein oxidized to sulfone. *Biochemical Journal*, **2011**, 433, 323-32	3.8	26
53	Induction of methionine-sulfoxide reductases protects neurons from amyloid □protein insults in vitro and in vivo. *Biochemistry*, **2011**, 50, 10687-97	3.2	42
52	C-terminal tetrapeptides inhibit A□42-induced neurotoxicity primarily through specific interaction at the N-terminus of A□42. *Journal of Medicinal Chemistry*, **2011**, 54, 8451-60	8.3	32
51	Despite its role in assembly, methionine 35 is not necessary for amyloid beta-protein toxicity. *Journal of Neurochemistry*, **2010**, 113, 1252-62	6	32
50	Selection of aptamers for amyloid beta-protein, the causative agent of Alzheimer's disease. *Journal of Visualized Experiments*, **2010**,	1.6	16
49	Elucidation of amyloid beta-protein oligomerization mechanisms: discrete molecular dynamics study. *Journal of the American Chemical Society*, **2010**, 132, 4266-80	16.4	211
48	Mechanistic investigation of the inhibition of Abeta42 assembly and neurotoxicity by Abeta42 C-terminal fragments. *Biochemistry*, **2010**, 49, 6358-64	3.2	49
47	Biophysical characterization of Abeta42 C-terminal fragments: inhibitors of Abeta42 neurotoxicity. *Biochemistry*, **2010**, 49, 1259-67	3.2	44
46	Amino acid position-specific contributions to amyloid beta-protein oligomerization. *Journal of Biological Chemistry*, **2009**, 284, 23580-91	5.4	71
45	Amyloids and Protein Aggregation□Analytical Methods **2009**,		15
44	Amyloid-□protein oligomerization and the importance of tetramers and dodecamers in the aetiology of Alzheimer's disease. *Nature Chemistry*, **2009**, 1, 326-31	17.6	737
43	The structure of Abeta42 C-terminal fragments probed by a combined experimental and theoretical study. *Journal of Molecular Biology*, **2009**, 387, 492-501	6.5	75
42	Photo-induced cross-linking of unmodified proteins (PICUP) applied to amyloidogenic peptides. *Journal of Visualized Experiments*, **2009**,	1.6	57
41	RNA aptamers generated against oligomeric Abeta40 recognize common amyloid aptatopes with low specificity but high sensitivity. *PLoS ONE*, **2009**, 4, e7694	3.7	43
40	C-terminal peptides coassemble into Abeta42 oligomers and protect neurons against Abeta42-induced neurotoxicity. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 14175-80	11.5	143
39	Structure-function relationships of pre-fibrillar protein assemblies in Alzheimer's disease and related disorders. *Current Alzheimer Research*, **2008**, 5, 319-41	3	82

38	Role of electrostatic interactions in amyloid beta-protein (A beta) oligomer formation: a discrete molecular dynamics study. *Biophysical Journal*, **2007**, 92, 4064-77	2.9	98
37	Dendrimeric Abeta1-15 is an effective immunogen in wildtype and APP-tg mice. *Neurobiology of Aging*, **2007**, 28, 813-23	5.6	52
36	Early diagnostics and therapeutics for Alzheimer's disease--how early can we get there?. *Expert Review of Neurotherapeutics*, **2006**, 6, 1293-306	4.3	19
35	Elucidating amyloid beta-protein folding and assembly: A multidisciplinary approach. *Accounts of Chemical Research*, **2006**, 39, 635-45	24.3	188
34	Structural study of metastable amyloidogenic protein oligomers by photo-induced cross-linking of unmodified proteins. *Methods in Enzymology*, **2006**, 413, 217-36	1.7	73
33	Towards Inhibition of Amyloid protein Oligomerization **2006**, 515-516		1
32	Amyloid beta-protein monomer structure: a computational and experimental study. *Protein Science*, **2006**, 15, 420-8	6.3	211
31	Neurotoxic protein oligomers--what you see is not always what you get. *Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis*, **2005**, 12, 88-95	2.7	189
30	Amyloid beta-protein: monomer structure and early aggregation states of Abeta42 and its Pro19 alloform. *Journal of the American Chemical Society*, **2005**, 127, 2075-84	16.4	296
29	Determination of Peptide oligomerization state using rapid photochemical crosslinking. *Methods in Molecular Biology*, **2005**, 299, 11-8	1.4	19
28	Preparation of aggregate-free, low molecular weight amyloid-beta for assembly and toxicity assays. *Methods in Molecular Biology*, **2005**, 299, 3-9	1.4	42
27	En route to early diagnosis of Alzheimer's disease--are we there yet?. *Trends in Biotechnology*, **2005**, 23, 531-3	15.1	20
26	In silico study of amyloid beta-protein folding and oligomerization. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 17345-50	11.5	305
25	Rapid photochemical cross-linking--a new tool for studies of metastable, amyloidogenic protein assemblies. *Accounts of Chemical Research*, **2004**, 37, 357-64	24.3	183
24	Elucidation of primary structure elements controlling early amyloid beta-protein oligomerization. *Journal of Biological Chemistry*, **2003**, 278, 34882-9	5.4	246
23	Amyloid beta -protein (Abeta) assembly: Abeta 40 and Abeta 42 oligomerize through distinct pathways. *Proceedings of the National Academy of Sciences of the United States of America*, **2003**, 100, 330-5	11.5	1077
22	A molecular switch in amyloid assembly: Met35 and amyloid beta-protein oligomerization. *Journal of the American Chemical Society*, **2003**, 125, 15359-65	16.4	143
21	Increased T cell reactivity to amyloid protein in older humans and patients with Alzheimer disease. *Journal of Clinical Investigation*, **2003**, 112, 415-422	15.9	221

20	Increased T cell reactivity to amyloid beta protein in older humans and patients with Alzheimer disease. *Journal of Clinical Investigation*, **2003**, 112, 415-22	15.9	122
19	Paradigm shifts in Alzheimer's disease and other neurodegenerative disorders: the emerging role of oligomeric assemblies. *Journal of Neuroscience Research*, **2002**, 69, 567-77	4.4	493
18	Polyglutamine repeat length-dependent proteolysis of huntingtin. *Neurobiology of Disease*, **2002**, 11, 111-22	7.5	35
17	Amyloid beta-protein oligomerization: prenucleation interactions revealed by photo-induced cross-linking of unmodified proteins. *Journal of Biological Chemistry*, **2001**, 276, 35176-84	5.4	320
16	Identification of a contact domain between echistatin and the integrin alpha(v)beta(3) by photoaffinity cross-linking. *Biochemistry*, **2001**, 40, 15117-26	3.2	9
15	Photoaffinity cross-linking identifies differences in the interactions of an agonist and an antagonist with the parathyroid hormone/parathyroid hormone-related protein receptor. *Journal of Biological Chemistry*, **2000**, 275, 9-17	5.4	98
14	Ligand-integrin alpha v beta 3 interaction determined by photoaffinity cross-linking: a challenge to the prevailing model. *Biochemistry*, **2000**, 39, 11014-23	3.2	6
13	Mapping the integrin alpha V beta 3-ligand interface by photoaffinity cross-linking. *Biochemistry*, **1999**, 38, 3414-20	3.2	25
12	Synthesis of a bicyclic BPTI mimetic containing 4-thioproline replacing Cys38. *International Journal of Peptide Research and Therapeutics*, **1998**, 5, 101-103		
11	Synthesis of a bicyclic BPTI mimetic containing 4-thioproline replacing Cys38. *International Journal of Peptide Research and Therapeutics*, **1998**, 5, 101-103		3
10	Synthesis and biological activity of novel backbone-bicyclic substance-P analogs containing lactam and disulfide bridges. *Chemical Biology and Drug Design*, **1997**, 49, 421-6		26
9	Building units for N-backbone cyclic peptides. Part 4.1Synthesis of protected N□functionalized alkyl aminoacids by reductive alkylation of natural amino acids. *Journal of the Chemical Society Perkin Transactions 1*, **1997**, 1501-1510		28
8	Building Units for N-Backbone Cyclic Peptides. 3. Synthesis of Protected N(alpha)-(omega-Aminoalkyl)amino Acids and N(alpha)-(omega-Carboxyalkyl)amino Acids. *Journal of Organic Chemistry*, **1997**, 62, 411-416	4.2	74
7	Structure-activity relationship of the ring portion in backbone-cyclic C-terminal hexapeptide analogs of substance P. NMR and molecular dynamics. *International Journal of Peptide and Protein Research*, **1996**, 48, 569-79		7
6	Synthesis and biological activity of NK-1 selective, N-backbone cyclic analogs of the C-terminal hexapeptide of substance P. *Journal of Medicinal Chemistry*, **1996**, 39, 3174-8	8.3	57
5	Backbone cyclization of the C-terminal part of substance P. Part 1: The important role of the sulphur in position 11. *Journal of Peptide Science*, **1996**, 2, 261-9	2.1	6
4	New backbone cyclic substance P analogs. *International Journal of Peptide Research and Therapeutics*, **1995**, 2, 121-124		7
3	Backbone cyclization as a tool for imposing conformational constraint on peptides **1993**, 482-485		6

2	Transfer hydrogenation of diarylacetylenes by polymethylhydrosiloxane in the presence of the RhCl3-Aliquat 336 catalyst. *Journal of Molecular Catalysis*, **1991**, 66, 313-319	9
1	The Amyloid Protein384-491	2