

# Dominic M Walsh

## List of Publications by Citations

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77  
papers

18,648  
citations

46  
h-index

79  
g-index

79  
ext. papers

20,534  
ext. citations

10.1  
avg, IF

6.46  
L-index

#	Paper	IF	Citations
77	Naturally secreted oligomers of amyloid beta protein potently inhibit hippocampal long-term potentiation in vivo. <i>Nature</i> , <b>2002</b> , 416, 535-9	50.4	3560
76	Amyloid-beta protein dimers isolated directly from Alzheimer's brains impair synaptic plasticity and memory. <i>Nature Medicine</i> , <b>2008</b> , 14, 837-42	50.5	2779
75	Natural oligomers of the amyloid-beta protein specifically disrupt cognitive function. <i>Nature Neuroscience</i> , <b>2005</b> , 8, 79-84	25.5	1436
74	Natural oligomers of the Alzheimer amyloid-beta protein induce reversible synapse loss by modulating an NMDA-type glutamate receptor-dependent signaling pathway. <i>Journal of Neuroscience</i> , <b>2007</b> , 27, 2866-75	6.6	1232
73	Deciphering the molecular basis of memory failure in Alzheimer's disease. <i>Neuron</i> , <b>2004</b> , 44, 181-93	13.9	1004
72	Protofibrillar intermediates of amyloid beta-protein induce acute electrophysiological changes and progressive neurotoxicity in cortical neurons. <i>Journal of Neuroscience</i> , <b>1999</b> , 19, 8876-84	6.6	873
71	Amyloid beta-protein fibrillogenesis. Detection of a protofibrillar intermediate. <i>Journal of Biological Chemistry</i> , <b>1997</b> , 272, 22364-72	5.4	859
70	Soluble oligomers of amyloid Beta protein facilitate hippocampal long-term depression by disrupting neuronal glutamate uptake. <i>Neuron</i> , <b>2009</b> , 62, 788-801	13.9	698
69	Soluble amyloid beta-protein dimers isolated from Alzheimer cortex directly induce Tau hyperphosphorylation and neuritic degeneration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2011</b> , 108, 5819-24	11.5	641
68	Amyloid beta protein immunotherapy neutralizes Abeta oligomers that disrupt synaptic plasticity in vivo. <i>Nature Medicine</i> , <b>2005</b> , 11, 556-61	50.5	443
67	Alzheimer's disease: synaptic dysfunction and Abeta. <i>Molecular Neurodegeneration</i> , <b>2009</b> , 4, 48	19	318
66	Certain inhibitors of synthetic amyloid beta-peptide (Abeta) fibrillogenesis block oligomerization of natural Abeta and thereby rescue long-term potentiation. <i>Journal of Neuroscience</i> , <b>2005</b> , 25, 2455-62	6.6	262
65	Amyloid beta protein dimer-containing human CSF disrupts synaptic plasticity: prevention by systemic passive immunization. <i>Journal of Neuroscience</i> , <b>2008</b> , 28, 4231-7	6.6	256
64	Interaction between prion protein and toxic amyloid assemblies can be therapeutically targeted at multiple sites. <i>Nature Communications</i> , <b>2011</b> , 2, 336	17.4	228
63	An improved method of preparing the amyloid beta-protein for fibrillogenesis and neurotoxicity experiments. <i>Amyloid: the International Journal of Experimental and Clinical Investigation: the Official Journal of the International Society of Amyloidosis</i> , <b>2000</b> , 7, 166-78	2.7	211
62	The presence of sodium dodecyl sulphate-stable Abeta dimers is strongly associated with Alzheimer-type dementia. <i>Brain</i> , <b>2010</b> , 133, 1328-41	11.2	207
61	A vicious cycle of amyloid-dependent neuronal hyperactivation. <i>Science</i> , <b>2019</b> , 365, 559-565	33.3	206

60	Amyloid beta-protein dimers rapidly form stable synaptotoxic protofibrils. <i>Journal of Neuroscience</i> , <b>2010</b> , 30, 14411-9	6.6	199
59	A critical appraisal of the pathogenic protein spread hypothesis of neurodegeneration. <i>Nature Reviews Neuroscience</i> , <b>2016</b> , 17, 251-60	13.5	198
58	A facile method for expression and purification of the Alzheimer's disease-associated amyloid beta-peptide. <i>FEBS Journal</i> , <b>2009</b> , 276, 1266-81	5.7	197
57	Alzheimer's disease brain-derived amyloid- $\beta$ -mediated inhibition of LTP in vivo is prevented by immunotargeting cellular prion protein. <i>Journal of Neuroscience</i> , <b>2011</b> , 31, 7259-63	6.6	193
56	Large Soluble Oligomers of Amyloid $\beta$ Protein from Alzheimer Brain Are Far Less Neuroactive Than the Smaller Oligomers to Which They Dissociate. <i>Journal of Neuroscience</i> , <b>2017</b> , 37, 152-163	6.6	185
55	Developmental Regulation of Mitochondrial Apoptosis by c-Myc Governs Age- and Tissue-Specific Sensitivity to Cancer Therapeutics. <i>Cancer Cell</i> , <b>2017</b> , 31, 142-156	24.3	123
54	mGlu5 receptors and cellular prion protein mediate amyloid- $\beta$ -facilitated synaptic long-term depression in vivo. <i>Nature Communications</i> , <b>2014</b> , 5, 3374	17.4	122
53	C-Terminally Truncated Forms of Tau, But Not Full-Length Tau or Its C-Terminal Fragments, Are Released from Neurons Independently of Cell Death. <i>Journal of Neuroscience</i> , <b>2015</b> , 35, 10851-65	6.6	106
52	Amyloid- $\beta$ nanotubes are associated with prion protein-dependent synaptotoxicity. <i>Nature Communications</i> , <b>2013</b> , 4, 2416	17.4	97
51	Alzheimer's disease and the amyloid $\beta$ protein. <i>Progress in Molecular Biology and Translational Science</i> , <b>2012</b> , 107, 101-24	4	96
50	Aggregation and metal-binding properties of mutant forms of the amyloid A beta peptide of Alzheimer's disease. <i>Journal of Neurochemistry</i> , <b>1996</b> , 66, 740-7	6	94
49	Soluble A $\beta$ oligomers impair hippocampal LTP by disrupting glutamatergic/GABAergic balance. <i>Neurobiology of Disease</i> , <b>2016</b> , 85, 111-121	7.5	92
48	gamma-Secretase cleavage and binding to FE65 regulate the nuclear translocation of the intracellular C-terminal domain (ICD) of the APP family of proteins. <i>Biochemistry</i> , <b>2003</b> , 42, 6664-73	3.2	91
47	Detection of Aggregation-Competent Tau in Neuron-Derived Extracellular Vesicles. <i>International Journal of Molecular Sciences</i> , <b>2018</b> , 19,	6.3	86
46	APP homodimers transduce an amyloid- $\beta$ -mediated increase in release probability at excitatory synapses. <i>Cell Reports</i> , <b>2014</b> , 7, 1560-1576	10.6	82
45	Aggregation and catabolism of disease-associated intra-A $\beta$ mutations: reduced proteolysis of A $\beta$ 21G by neprilysin. <i>Neurobiology of Disease</i> , <b>2008</b> , 31, 442-50	7.5	76
44	Autoregulated paracellular clearance of amyloid- $\beta$ across the blood-brain barrier. <i>Science Advances</i> , <b>2015</b> , 1, e1500472	14.3	73
43	Human Brain-Derived A $\beta$ Oligomers Bind to Synapses and Disrupt Synaptic Activity in a Manner That Requires APP. <i>Journal of Neuroscience</i> , <b>2017</b> , 37, 11947-11966	6.6	72

42	Secreted amyloid $\beta$ proteins in a cell culture model include N-terminally extended peptides that impair synaptic plasticity. <i>Biochemistry</i> , <b>2014</b> , 53, 3908-21	3.2	71
41	A highly sensitive novel immunoassay specifically detects low levels of soluble A $\beta$ oligomers in human cerebrospinal fluid. <i>Alzheimers Research and Therapy</i> , <b>2015</b> , 7, 14	9	63
40	miR-212 and miR-132 Are Downregulated in Neurally Derived Plasma Exosomes of Alzheimer's Patients. <i>Frontiers in Neuroscience</i> , <b>2019</b> , 13, 1208	5.1	61
39	Learnings about the complexity of extracellular tau aid development of a blood-based screen for Alzheimer's disease. <i>Alzheimers and Dementia</i> , <b>2019</b> , 15, 487-496	1.2	60
38	Peripheral administration of a humanized anti-PrP antibody blocks Alzheimer's disease A $\beta$ synaptotoxicity. <i>Journal of Neuroscience</i> , <b>2014</b> , 34, 6140-5	6.6	57
37	Amyloid $\beta$ protein and beyond: the path forward in Alzheimer's disease. <i>Current Opinion in Neurobiology</i> , <b>2020</b> , 61, 116-124	7.6	56
36	PrP is a central player in toxicity mediated by soluble aggregates of neurodegeneration-causing proteins. <i>Acta Neuropathologica</i> , <b>2020</b> , 139, 503-526	14.3	55
35	A $\beta$ dimers differ from monomers in structural propensity, aggregation paths and population of synaptotoxic assemblies. <i>Biochemical Journal</i> , <b>2014</b> , 461, 413-26	3.8	53
34	N-Terminal Extensions Retard A $\beta$ 2 Fibril Formation but Allow Cross-Seeding and Coaggregation with A $\beta$ 2. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 14673-85	16.4	51
33	Diffusible, highly bioactive oligomers represent a critical minority of soluble A $\beta$ in Alzheimer's disease brain. <i>Acta Neuropathologica</i> , <b>2018</b> , 136, 19-40	14.3	47
32	Alzheimer brain-derived amyloid $\beta$ protein impairs synaptic remodeling and memory consolidation. <i>Neurobiology of Aging</i> , <b>2013</b> , 34, 1315-27	5.6	47
31	Cellular Prion Protein Mediates the Disruption of Hippocampal Synaptic Plasticity by Soluble Tau. <i>Journal of Neuroscience</i> , <b>2018</b> , 38, 10595-10606	6.6	45
30	Isolation of low-n amyloid $\beta$ protein oligomers from cultured cells, CSF, and brain. <i>Methods in Molecular Biology</i> , <b>2011</b> , 670, 33-44	1.4	44
29	Non-Fibrillar Oligomeric Amyloid- $\beta$ within Synapses. <i>Journal of Alzheimers Disease</i> , <b>2016</b> , 53, 787-800	4.3	43
28	The levels of water-soluble and triton-soluble A $\beta$ are increased in Alzheimer's disease brain. <i>Brain Research</i> , <b>2012</b> , 1450, 138-47	3.7	43
27	Extracellular Forms of A $\beta$ and Tau from iPSC Models of Alzheimer's Disease Disrupt Synaptic Plasticity. <i>Cell Reports</i> , <b>2018</b> , 23, 1932-1938	10.6	43
26	Target engagement in an alzheimer trial: Crenezumab lowers amyloid $\beta$ oligomers in cerebrospinal fluid. <i>Annals of Neurology</i> , <b>2019</b> , 86, 215-224	9.4	41
25	The aqueous phase of Alzheimer's disease brain contains assemblies built from ~4 and ~7 kDa A $\beta$ species. <i>Alzheimers and Dementia</i> , <b>2015</b> , 11, 1286-305	1.2	41

24	Identification of neurotoxic cross-linked amyloid- $\beta$ dimers in the Alzheimer's brain. <i>Brain</i> , <b>2019</b> , 142, 1441-1457	11.57	40
23	Anti-A $\beta$ antibodies incapable of reducing cerebral A $\beta$ oligomers fail to attenuate spatial reference memory deficits in J20 mice. <i>Neurobiology of Disease</i> , <b>2015</b> , 82, 372-384	7.5	31
22	An in vitro paradigm to assess potential anti-A $\beta$ antibodies for Alzheimer's disease. <i>Nature Communications</i> , <b>2018</b> , 9, 2676	17.4	26
21	Tau immunization: a cautionary tale?. <i>Neurobiology of Aging</i> , <b>2015</b> , 36, 1316-32	5.6	25
20	beta-Secretase cleavage is not required for generation of the intracellular C-terminal domain of the amyloid precursor family of proteins. <i>FEBS Journal</i> , <b>2010</b> , 277, 1503-18	5.7	21
19	Intracerebroventricular Administration of Amyloid $\beta$ protein Oligomers Selectively Increases Dorsal Hippocampal Dialysate Glutamate Levels in the Awake Rat. <i>Sensors</i> , <b>2008</b> , 8, 7428-7437	3.8	19
18	A human monoclonal IgG that binds $\alpha$ assemblies and diverse amyloids exhibits anti-amyloid activities in vitro and in vivo. <i>Journal of Neuroscience</i> , <b>2015</b> , 35, 6265-76	6.6	18
17	Simultaneous measurement of a range of particle sizes during A $\beta$ -42 fibrillogenesis quantified using fluorescence correlation spectroscopy. <i>Biochemical and Biophysical Research Communications</i> , <b>2014</b> , 448, 195-9	3.4	18
16	The Many Faces of A $\beta$ 42: Structures and Activity. <i>Current Medicinal Chemistry Immunology, Endocrine &amp; Metabolic Agents</i> , <b>2003</b> , 3, 277-291		18
15	Neurotransmitter receptor and time dependence of the synaptic plasticity disrupting actions of Alzheimer's disease A $\beta$ in vivo. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , <b>2014</b> , 369, 20130147	5.8	17
14	The Aggregation Paths and Products of A $\beta$ 2 Dimers Are Distinct from Those of the A $\beta$ 2 Monomer. <i>Biochemistry</i> , <b>2016</b> , 55, 6150-6161	3.2	15
13	Peripheral Interventions Enhancing Brain Glutamate Homeostasis Relieve Amyloid $\beta$ and TNF $\alpha$ Mediated Synaptic Plasticity Disruption in the Rat Hippocampus. <i>Cerebral Cortex</i> , <b>2017</b> , 27, 3724-3735	5.1	13
12	PrP-grafted antibodies bind certain amyloid $\beta$ protein aggregates, but do not prevent toxicity. <i>Brain Research</i> , <b>2019</b> , 1710, 125-135	3.7	13
11	Soluble tau aggregates inhibit synaptic long-term depression and amyloid $\beta$ facilitated LTD in vivo. <i>Neurobiology of Disease</i> , <b>2019</b> , 127, 582-590	7.5	12
10	Dynamics of plasma biomarkers in Down syndrome: the relative levels of A $\beta$ 2 decrease with age, whereas NT1 tau and NFL increase. <i>Alzheimer's Research and Therapy</i> , <b>2020</b> , 12, 27	9	12
9	Laboratory evolution of a sortase enzyme that modifies amyloid- $\beta$ protein. <i>Nature Chemical Biology</i> , <b>2021</b> , 17, 317-325	11.7	10
8	The ELISA-measured increase in cerebrospinal fluid tau that discriminates Alzheimer's disease from other neurodegenerative disorders is not attributable to differential recognition of tau assembly forms. <i>Journal of Alzheimer's Disease</i> , <b>2013</b> , 33, 923-8	4.3	9
7	Soluble A $\beta$ aggregates can inhibit prion propagation. <i>Open Biology</i> , <b>2017</b> , 7,	7	9

- 6 IgG Conformer $\beta$  Binding to Amyloidogenic Aggregates. *PLoS ONE*, **2015**, 10, e0137344 3.7 3
- 5 DT-02-03: TARGET ENGAGEMENT IN AN AD TRIAL: CRENEZUMAB LOWERS A $\beta$  OLIGOMER LEVELS IN CSF **2018**, 14, P1669-P1670 3
- 4 F5-02-01: Getting a handle on soluble a $\beta$  in Alzheimer $\beta$  disease brains **2015**, 11, P304-P305
- 3 Transcriptomic correlates of neurite degeneration due to human brain-derived A $\beta$  and protection by clinical anti-A $\beta$  antibodies. *Alzheimers and Dementia*, **2020**, 16, e043057 1.2
- 2 P1-106: A HEAD-TO-HEAD COMPARISON OF LEAD CLINICAL ANTI-A $\beta$  ANTIBODIES **2018**, 14, P312-P312
- 1 P1-301: CERTAIN PLASMA N-TERMINAL TAU FRAGMENTS ARE ELEVATED IN AD AND AD-MCI COMPARED TO CONTROLS **2018**, 14, P405-P405