Hans-Ulrich Demuth

List of Publications by Year
in descending order

102	4,174	109264	118793
papers	citations	35 h-index	62 g-index

114	114	114	3428
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Prion-like behaviour and tau-dependent cytotoxicity of pyroglutamylated amyloid-Î². Nature, 2012, 485, 651-655.	13.7	369
2	Glutaminyl cyclase inhibition attenuates pyroglutamate AÎ² and Alzheimer's diseaseâ€“like pathology. Nature Medicine, 2008, 14, 1106-1111.	15.2	316
3	On the Seeding and Oligomerization of pGlu-Amyloid Peptides (in vitro). Biochemistry, 2006, 45, 12393-12399.	1.2	238
4	Pyroglutamate Formation Influences Solubility and Amyloidogenicity of Amyloid Peptides. Biochemistry, 2009, 48, 7072-7078.	1.2	171
5	Glutaminyl cyclases unfold glutamyl cyclase activity under mild acid conditions. FEBS Letters, 2004, 563, 191-196.	1.3	155
6	Intraneuronal pyroglutamate-Abeta 3â€“42 triggers neurodegeneration and lethal neurological deficits in a transgenic mouse model. Acta Neuropathologica, 2009, 118, 487-496.	3.9	151
7	Pyroglutamate-3 Amyloid-Î² Deposition in the Brains of Humans, Non-Human Primates, Canines, and Alzheimer Diseaseâ€“Like Transgenic Mouse Models. American Journal of Pathology, 2013, 183, 369-381.	1.9	102
8	Amyloidogenic Processing of Amyloid Precursor Protein: Evidence of a Pivotal Role of Glutaminyl Cyclase in Generation of Pyroglutamate-Modified Amyloid-Î². Biochemistry, 2008, 47, 7405-7413.	1.2	100
9	Selective Hippocampal Neurodegeneration in Transgenic Mice Expressing Small Amounts of Truncated AÎ² Is Induced by Pyroglutamateâ€“AÎ² Formation. Journal of Neuroscience, 2011, 31, 12790-12801.	1.7	90
10	Glutaminyl Cyclase in Human Cortex: Correlation with (pGlu)-Amyloid-Î² Load and Cognitive Decline in Alzheimer's Disease. Journal of Alzheimer's Disease, 2014, 39, 385-400.	1.2	90
11	The First Potent Inhibitors for Human Glutaminyl Cyclase:Â Synthesis and Structureâˆ'Activity Relationship. Journal of Medicinal Chemistry, 2006, 49, 664-677.	2.9	81
12	Overexpression of Glutaminyl Cyclase, the Enzyme Responsible for Pyroglutamate AÎ² Formation, Induces Behavioral Deficits, and Glutaminyl Cyclase Knock-out Rescues the Behavioral Phenotype in 5XFAD Mice. Journal of Biological Chemistry, 2011, 286, 4454-4460.	1.6	79
13	Identification of Human Glutaminyl Cyclase as a Metalloenzyme. Journal of Biological Chemistry, 2003, 278, 49773-49779.	1.6	78
14	The isoenzyme of glutaminyl cyclase is an important regulator of monocyte infiltration under inflammatory conditions. EMBO Molecular Medicine, 2011, 3, 545-558.	3.3	78
15	Nâ€Terminal pyroglutamate formation of AÎ²38 and AÎ²40 enforces oligomer formation and potency to disrupt hippocampal longâ€term potentiation. Journal of Neurochemistry, 2012, 121, 774-784.	2.1	76
16	Inhibition of glutaminyl cyclase alters pyroglutamate formation in mammalian cells. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2006, 1764, 1618-1625.	1.1	73
17	Pyroglutamate Amyloid Î² (AÎ²) Aggravates Behavioral Deficits in Transgenic Amyloid Mouse Model for Alzheimer Disease. Journal of Biological Chemistry, 2012, 287, 8154-8162.	1.6	71
18	Inhibition of glutaminyl cyclase prevents pGluâ€AÎ² formation after intracortical/hippocampal microinjection in vivo/in situ. Journal of Neurochemistry, 2008, 106, 1225-1236.	2.1	67

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19	Passive Immunization against Pyroglutamate-3 Amyloid-Î² Reduces Plaque Burden in Alzheimer-Like Transgenic Mice: A Pilot Study. Neurodegenerative Diseases, 2012, 10, 265-270.	0.8	63
20	Isolation of an Isoenzyme of Human Glutaminyl Cyclase: Retention in the Golgi Complex Suggests Involvement in the Protein Maturation Machinery. Journal of Molecular Biology, 2008, 379, 966-980.	2.0	62
21	Substrate Specificity of Glutaminyl Cyclases from Plants and Animals. Biological Chemistry, 2003, 384, 1583-92.	1.2	59
22	Heterologous Expression and Characterization of Human Glutaminyl Cyclase:Â Evidence for a Disulfide Bond with Importance for Catalytic Activity. Biochemistry, 2002, 41, 10849-10857.	1.2	58
23	Inhibitors for Human Glutaminyl Cyclase by Structure Based Design and Bioisosteric Replacement. Journal of Medicinal Chemistry, 2009, 52, 7069-7080.	2.9	57
24	Structureâ€“Activity Relationships of Benzimidazole-Based Glutaminyl Cyclase Inhibitors Featuring a Heteroaryl Scaffold. Journal of Medicinal Chemistry, 2013, 56, 6613-6625.	2.9	54
25	Amyloid-Beta Peptides Trigger Aggregation of Alpha-Synuclein In Vitro. Molecules, 2020, 25, 580.	1.7	53
26	Glutaminyl cyclase contributes to the formation of focal and diffuse pyroglutamate (pGlu)-AÎ² deposits in hippocampus via distinct cellular mechanisms. Acta Neuropathologica, 2011, 121, 705-719.	3.9	52
27	QUINT: Workflow for Quantification and Spatial Analysis of Features in Histological Images From Rodent Brain. Frontiers in Neuroinformatics, 2019, 13, 75.	1.3	51
28	Continuous Spectrometric Assays for Glutaminyl Cyclase Activity. Analytical Biochemistry, 2002, 303, 49-56.	1.1	50
29	Natural Products from Microalgae with Potential against Alzheimerâ€™s Disease: Sulfolipids Are Potent Glutaminyl Cyclase Inhibitors. Marine Drugs, 2016, 14, 203.	2.2	50
30	Posttranslational modification impact on the mechanism by which amyloidâ€Î² induces synaptic dysfunction. EMBO Reports, 2017, 18, 962-981.	2.0	50
31	Glutaminyl Cyclase Inhibitor PQ912 Improves Cognition in Mouse Models of Alzheimerâ€™s Diseaseâ€"Studies on Relation to Effective Target Occupancy. Journal of Pharmacology and Experimental Therapeutics, 2017, 362, 119-130.	1.3	50
32	An anti-pyroglutamate-3 AÎ² vaccine reduces plaques and improves cognition in APPswe/PS1Î"E9 mice. Neurobiology of Aging, 2015, 36, 3187-3199.	1.5	45
33	QIAD assay for quantitating a compoundâ€™s efficacy in elimination of toxic AÎ² oligomers. Scientific Reports, 2015, 5, 13222.	1.6	39
34	Glutaminyl Cyclases Display Significant Catalytic Proficiency for Glutamyl Substrates. Biochemistry, 2009, 48, 11831-11833.	1.2	38
35	Isoglutaminyl cyclase contributes to CCL2-driven neuroinflammation in Alzheimerâ€™s disease. Acta Neuropathologica, 2015, 129, 565-583.	3.9	38
36	Mammalian glutaminyl cyclases and their isoenzymes have identical enzymatic characteristics. FEBS Journal, 2009, 276, 6522-6536.	2.2	37

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37	Identifying neuropeptide Y (NPY) as the main stress-related substrate of dipeptidyl peptidase 4 (DPP4) in blood circulation. Neuropeptides, 2016, 57, 21-34.	0.9	35
38	Enhanced Fibril Fragmentation of Nâ€Terminally Truncated and Pyroglutamylâ€Modified AÎ² Peptides. Angewandte Chemie - International Edition, 2016, 55, 5081-5084.	7.2	34
39	No improvement after chronic ibuprofen treatment in the 5XFAD mouse model of Alzheimer's disease. Neurobiology of Aging, 2012, 33, 833.e39-833.e50.	1.5	32
40	Developmental expression and subcellular localization of glutaminyl cyclase in mouse brain. International Journal of Developmental Neuroscience, 2009, 27, 825-835.	0.7	31
41	Glutaminyl Cyclase Knock-out Mice Exhibit Slight Hypothyroidism but No Hypogonadism. Journal of Biological Chemistry, 2011, 286, 14199-14208.	1.6	30
42	Distinct glutaminyl cyclase expression in Edingerâ€“Westphal nucleus, locus coeruleus and nucleus basalis Meynert contributes to pGlu-AÎ² pathology in Alzheimerâ€™s disease. Acta Neuropathologica, 2010, 120, 195-207.	3.9	29
43	Proteolytic degradation of neuropeptide Y (<scp>NPY</scp>) from head to toe: Identification of novel <scp>NPY</scp>â€cleaving peptidases and potential drug interactions in <scp>CNS</scp> and Periphery. Journal of Neurochemistry, 2015, 135, 1019-1037.	2.1	28
44	Structures of Glycosylated Mammalian Glutaminyl Cyclases Reveal Conformational Variability near the Active Center. Biochemistry, 2011, 50, 6280-6288.	1.2	27
45	Structural Analysis and Aggregation Propensity of Pyroglutamate AÎ²(3-40) in Aqueous Trifluoroethanol. PLoS ONE, 2015, 10, e0143647.	1.1	27
46	Inhibition of Glutaminyl Cyclases alleviates <scp>CCL</scp>2â€mediated inflammation of nonâ€alcoholic fatty liver disease in mice. International Journal of Experimental Pathology, 2013, 94, 217-225.	0.6	26
47	Inhibition of CDK9 as a therapeutic strategy for inflammatory arthritis. Scientific Reports, 2016, 6, 31441.	1.6	25
48	N-terminal pyroglutamate formation in CX3CL1 is essential for its full biologic activity. Bioscience Reports, 2017, 37, .	1.1	25
49	Structural and functional analyses of pyroglutamate-amyloid-Î²-specific antibodies as a basis for Alzheimer immunotherapy. Journal of Biological Chemistry, 2017, 292, 12713-12724.	1.6	24
50	A non-canonical function of eukaryotic elongation factor 1A1: Regulation of interleukin-6 expression. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 965-975.	1.9	23
51	IsoQC (QPCTL) knock-out mice suggest differential substrate conversion by glutaminyl cyclase isoenzymes. Biological Chemistry, 2016, 397, 45-55.	1.2	23
52	Isolation and Characterization of Glutaminyl Cyclases from Drosophila:â€‰ Evidence for Enzyme Forms with Different Subcellular Localization. Biochemistry, 2007, 46, 10921-10930.	1.2	22
53	Selective inhibition of dipeptidyl peptidase 4 by targeting a substrate-specific secondary binding site. Biological Chemistry, 2011, 392, 223-31.	1.2	22
54	Glutaminyl cyclase-mediated toxicity of pyroglutamate-beta amyloid induces striatal neurodegeneration. BMC Neuroscience, 2013, 14, 108.	0.8	22

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55	Role of glutaminyl cyclases in thyroid carcinomas. Endocrine-Related Cancer, 2013, 20, 79-90.	1.6	21
56	Purification and Characterization of Recombinant N-Terminally Pyroglutamate-Modified Amyloid-Î² Variants and Structural Analysis by Solution NMR Spectroscopy. PLoS ONE, 2015, 10, e0139710.	1.1	21
57	Pathological Hallmarks, Clinical Parallels, and Value for Drug Testing in Alzheimer's Disease of the APP[V717I] London Transgenic Mouse Model. International Journal of Alzheimer's Disease, 2010, 2010, 1-9.	1.1	20
58	Structural analysis of the pyroglutamateâ€modified isoform of the Alzheimer's diseaseâ€related amyloidâ€Î² using NMR spectroscopy. Journal of Peptide Science, 2012, 18, 691-695.	0.8	20
59	Dipeptidyl-Peptidase Activity of Meprin Î² Links N-truncation of AÎ² with Glutaminyl Cyclase-Catalyzed pGlu-AÎ² Formation. Journal of Alzheimer's Disease, 2018, 66, 359-375.	1.2	20
60	Characterizing Aging, Mild Cognitive Impairment, and Dementia with Blood-Based Biomarkers and Neuropsychology. Journal of Alzheimer's Disease, 2016, 50, 111-126.	1.2	18
61	Concerted action of dipeptidyl peptidase IV and glutaminyl cyclase results in formation of pyroglutamate-modified amyloid peptides inÂvitro. Neurochemistry International, 2018, 113, 112-119.	1.9	18
62	Neuropeptide Y (<scp>NPY</scp>) in cerebrospinal fluid from patients with Huntington's Disease: increased <scp>NPY</scp> levels and differential degradation of the <scp>NPY</scp>_{1â€“30} fragment. Journal of Neurochemistry, 2016, 137, 820-837.	2.1	17
63	Recent progress in translational research on neurovascular and neurodegenerative disorders. Restorative Neurology and Neuroscience, 2017, 35, 87-103.	0.4	16
64	Probing Secondary Glutaminyl Cyclase (QC) Inhibitor Interactions Applying an in silicoâ€Modeling/Siteâ€Directed Mutagenesis Approach: Implications for Drug Development. Chemical Biology and Drug Design, 2012, 80, 937-946.	1.5	15
65	Glutaminyl Cyclases as Novel Targets for the Treatment of Septic Arthritis. Journal of Infectious Diseases, 2013, 207, 768-777.	1.9	15
66	Kinetic and structural characterization of bacterial glutaminyl cyclases from Zymomonas mobilis and Myxococcus xanthus. Biological Chemistry, 2010, 391, 1419-28.	1.2	14
67	Immunohistochemical Evidence from APP-Transgenic Mice for Glutaminyl Cyclase as Drug Target to Diminish pE-Abeta Formation. Molecules, 2018, 23, 924.	1.7	14
68	Mouse strain and brain regionâ€specific expression of the glutaminyl cyclases QC and isoQC. International Journal of Developmental Neuroscience, 2014, 36, 64-73.	0.7	13
69	Phosphate ions and glutaminyl cyclases catalyze the cyclization of glutaminyl residues by facilitating synchronized proton transfers. Bioorganic Chemistry, 2015, 60, 98-101.	2.0	13
70	Crystal Structures of Glutaminyl Cyclases (QCs) from Drosophila melanogaster Reveal Active Site Conservation between Insect and Mammalian QCs. Biochemistry, 2012, 51, 7383-7392.	1.2	12
71	Heteroarylketones inhibit astroglial interleukin-6 expression via a STAT3/NF-ÎºB signaling pathway. Journal of Neuroinflammation, 2011, 8, 86.	3.1	11
72	Hydrazides Are Potent Transition-State Analogues for Glutaminyl Cyclase Implicated in the Pathogenesis of Alzheimerâ€™s Disease. Biochemistry, 2020, 59, 2585-2591.	1.2	11

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73	Comprehensive Characterization of the Pyroglutamate Amyloid-Î² Induced Motor Neurodegenerative Phenotype of TBA2.1 Mice. Journal of Alzheimer's Disease, 2018, 63, 115-130.	1.2	10
74	Targeting isoaspartate-modified AÎ² rescues behavioral deficits in transgenic mice with Alzheimerâ€™s disease-like pathology. Alzheimer's Research and Therapy, 2020, 12, 149.	3.0	10
75	Pyroglutamate-Amyloid-Î² and Glutaminyl Cyclase Are Colocalized with Amyloid-Î² in Secretory Vesicles and Undergo Activity-Dependent, Regulated Secretion. Neurodegenerative Diseases, 2014, 14, 85-97.	0.8	9
76	Identification of thyrotropin-releasing hormone as hippocampal glutaminyl cyclase substrate in neurons and reactive astrocytes. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2015, 1852, 146-155.	1.8	9
77	AÎ² oligomer eliminating compounds interfere successfully with pEAÎ²(3â€“42) induced motor neurodegenerative phenotype in transgenic mice. Neuropeptides, 2018, 67, 27-35.	0.9	9
78	Mammalian-like type II glutaminyl cyclases in Porphyromonas gingivalis and other oral pathogenic bacteria as targets for treatment of periodontitis. Journal of Biological Chemistry, 2021, 296, 100263.	1.6	9
79	Continuous assays for meprin alpha and beta using prolyl tripeptidyl aminopeptidase (PtP) from Porphyromonas gingivalis. Analytical Biochemistry, 2018, 559, 11-16.	1.1	7
80	Structure and Dynamics of Meprin Î² in Complex with a Hydroxamate-Based Inhibitor. International Journal of Molecular Sciences, 2021, 22, 5651.	1.8	7
81	The Proteolytic Profile of Human Cancer Procoagulant Suggests That It Promotes Cancer Metastasis at the Level of Activation Rather Than Degradation. Protein Journal, 2015, 34, 338-348.	0.7	6
82	VerstÃrkte Fibrillenâ€fragmentierung Nâ€terminal verkÃ¼rzter, Pyroglutamatâ€modifizierter AÎ²â€Peptide. Angewandte Chemie, 2016, 128, 5165-5168.	1.6	6
83	Isolation of dipeptidyl peptidase IV (DP 4) isoforms from porcine kidney by preparative isoelectric focusing to improve crystallization. Biological Chemistry, 2011, 392, 665-77.	1.2	5
84	Endogenous mouse huntingtin is highly abundant in cranial nerve nuclei, co-aggregates to Abeta plaques and is induced in reactive astrocytes in a transgenic mouse model of Alzheimerâ€™s disease. Acta Neuropathologica Communications, 2019, 7, 79.	2.4	5
85	Kallikreinâ€related peptidases are activators of the CC chemokine CCL14. European Journal of Immunology, 2018, 48, 1592-1594.	1.6	4
86	Proteases in the Nervous System. , 2013, , 319-371.		4
87	Structure of glutaminyl cyclase fromDrosophila melanogasterin space groupI4. Acta Crystallographica Section F: Structural Biology Communications, 2013, 69, 358-361.	0.7	2
88	O1-10-02: TOXIC PGLU-ABETA IS ENHANCED AND GLUTAMINYL CYCLASE (QC) UP-REGULATED EARLY IN ALZHEIMER'S DISEASE (AD): INHIBITORS OF QC BLOCKING PGLU-ABETA FORMATION ARE IN CLINICAL DEVELOPMENT. , 2014, 10, P149-P149.		1
89	The pyroglutamate modification of toxic AÎ² resulted new therapeutic aproaches: inhibitors of glutaminyl cyclase and highly specific antibodies â€“ a status report. Neurobiology of Aging, 2016, 39, S18-S19.	1.5	1
90	11th German Conference on Chemoinformatics (GCC 2015). Journal of Cheminformatics, 2016, 8, 18.	2.8	1

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91	O3â€01â€01: A NEW MOUSE MODEL WITH HUMANIZED WILDâ€TYPE TAU EXPRESSION. Alzheimer's and Dementia, 2018, 14, P1008.	0.4	1
92	Highlight: Dipeptidyl peptidase 4 and related proteins. Biological Chemistry, 2011, 392, 151-2.	1.2	0
93	O2-07-02: Characterization of double transgenic mice, APPSLxhQC, exhibiting enhanced pyroGlu3-beta-amyloid formation to evaluate efficacy of glutaminyl cyclase (QC) inhibitors. , 2013, 9, P328-P328.		0
94	Glutaminyl Cyclases. , 2013, , 1736-1742.		0
95	O2-12-05: ALTERNATIVE BETA-SECRETASE PROCESSING GENERATES N-TERMINALLY TRUNCATED ABETA PEPTIDES IN MAMMALIAN CELLS. , 2014, 10, P192-P193.		0
96	P3-128: COMBINATION OF BLOOD-BASED BIOMARKERS AND NEUROPSYCHOLOGICAL ASSESSMENT ENABLES RELIABLE CLASSIFICATION OF TESTED SUBJECTS BY CONTROLS: MILD COGNITIVE IMPAIRMENT AND ALZHEIMER'S DISEASE. , 2014, 10, P675-P675.		0
97	P3-041: BRAIN DEPOSITION OF PYROGLUTAMATE AÎ² IN AÎ² AMYLOIDOSIS. , 2014, 10, P643-P643.		0
98	P1-077: EVIDENCE FOR INVOLVEMENT OF MEPRIN B IN FORMATION OF N-TRUNCATED AND PYROGLUTAMATE -MODIFIED (PGLU) ABETA. , 2014, 10, P331-P331.		0
99	P4â€298: Meprin Î² is Associated with Formation of Pyroglutamateâ€Modified AÎ² Peptides. Alzheimer's and Dementia, 2016, 12, P1147.	0.4	0
100	[P4â€“457]: Nâ€TRUNCATED AND PYROGLUTAMATEâ€MODIFIED AÎ² ACCELERATES AGGREGATION OF Î±â€SYNUCLEIN IN VITRO. Alzheimer's and Dementia, 2017, 13, P1505.	0.4	0
101	P2â€056: TARGETING ISOASPARTATEâ€MODIFIED AÎ²: A DIFFERENTIAL APPROACH OF PASSIVE IMMUNOTHERAPY. Alzheimer's and Dementia, 2018, 14, P687.	0.4	0
102	P4â€474: CHARACTERIZATION OF A NOVEL HUMANIZED WILDâ€TYPE TAU EXPRESSING MOUSE MODEL IN HIGHâ€AMYLOID BACKGROUND OF 5XFAD MICE. Alzheimer's and Dementia, 2019, 15, P1493.	0.4	0