

Michael R Sierks

List of Publications by Year in descending order

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74
papers

4,081
citations

109321

35
h-index

114465

63
g-index

74
all docs

74
docs citations

74
times ranked

4444
citing authors

#	ARTICLE	IF	CITATIONS
1	Trehalose differentially inhibits aggregation and neurotoxicity of beta-amyloid 40 and 42. <i>Neurobiology of Disease</i> , 2005, 20, 74-81.	4.4	316
2	Starch- and glycogen-debranching and branching enzymes: Prediction of structural features of the catalytic (?/?)-barrel domain and evolutionary relationship to other amylolytic enzymes. <i>The Protein Journal</i> , 1993, 12, 791-805.	1.1	258
3	Curcumin reduces $\hat{\pm}$ -synuclein induced cytotoxicity in Parkinson's disease cell model. <i>BMC Neuroscience</i> , 2010, 11, 57.	1.9	167
4	Isofagomine, a Potent, New Glycosidase Inhibitor. <i>Angewandte Chemie International Edition in English</i> , 1994, 33, 1778-1779.	4.4	163
5	Residues 17-20 and 30-35 of beta-amyloid play critical roles in aggregation. <i>Journal of Neuroscience Research</i> , 2004, 75, 162-171.	2.9	161
6	A Novel Nicotinic Acetylcholine Receptor Subtype in Basal Forebrain Cholinergic Neurons with High Sensitivity to Amyloid Peptides. <i>Journal of Neuroscience</i> , 2009, 29, 918-929.	3.6	159
7	Isolation of a Human Single Chain Antibody Fragment Against Oligomeric $\hat{\pm}$ -Synuclein that Inhibits Aggregation and Prevents $\hat{\pm}$ -Synuclein-induced Toxicity. <i>Journal of Molecular Biology</i> , 2007, 368, 1132-1144.	4.2	143
8	Ectoine and hydroxyectoine inhibit aggregation and neurotoxicity of Alzheimer's $\hat{\pm}$ -amyloid. <i>FEBS Letters</i> , 2005, 579, 4775-4780.	2.8	120
9	A human single-chain Fv intrabody blocks aberrant cellular effects of overexpressed $\hat{\pm}$ -synuclein. <i>Molecular Therapy</i> , 2004, 10, 1023-1031.	8.2	112
10	Single Chain Variable Fragments against $\hat{\pm}$ -Amyloid ($\hat{\pm}$) Can Inhibit $\hat{\pm}$ Aggregation and Prevent $\hat{\pm}$ -Induced Neurotoxicity. <i>Biochemistry</i> , 2004, 43, 6959-6967.	2.5	111
11	Insights into the mechanisms of action of anti- $\hat{\pm}$ antibodies in Alzheimer's disease mouse models. <i>FASEB Journal</i> , 2006, 20, 2576-2578.	0.5	110
12	Catalytic mechanism of fungal glucoamylase as defined by mutagenesis of Asp176, Glu179 and Glu180 in the enzyme from <i>Aspergillus awamori</i> . <i>Protein Engineering, Design and Selection</i> , 1990, 3, 193-198.	2.1	108
13	Inhibiting Aggregation of $\hat{\pm}$ -Synuclein with Human Single Chain Antibody Fragments. <i>Biochemistry</i> , 2004, 43, 2871-2878.	2.5	104
14	Quantification of Cytokines Involved in Wound Healing Using Surface Plasmon Resonance. <i>Analytical Chemistry</i> , 2005, 77, 7016-7023.	6.5	102
15	Detecting Morphologically Distinct Oligomeric Forms of $\hat{\pm}$ -Synuclein. <i>Journal of Biological Chemistry</i> , 2009, 284, 11048-11058.	3.4	89
16	ESCRT-mediated Uptake and Degradation of Brain-targeted $\hat{\pm}$ -synuclein Single Chain Antibody Attenuates Neuronal Degeneration In Vivo. <i>Molecular Therapy</i> , 2014, 22, 1753-1767.	8.2	80
17	APP/ $\hat{\pm}$ structural diversity and Alzheimer's disease pathogenesis. <i>Neurochemistry International</i> , 2017, 110, 1-13.	3.8	78
18	Roles of the aromatic side chains in the binding of substrates, inhibitors, and cyclomalto-oligosaccharides to the glucoamylase from <i>Aspergillus niger</i> probed by perturbation difference spectroscopy, chemical modification, and mutagenesis. <i>Carbohydrate Research</i> , 1992, 227, 29-44.	2.3	77

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19	Synthesis of isofagomine, a novel glycosidase inhibitor. <i>Tetrahedron</i> , 1994, 50, 13449-13460.	1.9	75
20	Anti-oligomeric A β Single-chain Variable Domain Antibody Blocks A β -induced Toxicity Against Human Neuroblastoma Cells. <i>Journal of Molecular Biology</i> , 2008, 384, 917-928.	4.2	75
21	CSF levels of oligomeric alpha-synuclein and beta-amyloid as biomarkers for neurodegenerative disease. <i>Integrative Biology (United Kingdom)</i> , 2011, 3, 1188-1196.	1.3	72
22	Trimeric Tau Is Toxic to Human Neuronal Cells at Low Nanomolar Concentrations. <i>International Journal of Cell Biology</i> , 2013, 2013, 1-9.	2.5	70
23	Soluble A β -synuclein-antibody complexes activate the NLRP3 inflammasome in hiPSC-derived microglia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	69
24	Reduction of nonspecific protein binding on surface plasmon resonance biosensors. <i>Analytical and Bioanalytical Chemistry</i> , 2006, 386, 1951-1959.	3.7	66
25	Site-directed mutagenesis at the active site Trp120 of <i>Aspergillus awamori</i> glucoamylase. <i>Protein Engineering, Design and Selection</i> , 1989, 2, 621-625.	2.1	62
26	Degradation of A β -Amyloid by Proteolytic Antibody Light Chains. <i>Biochemistry</i> , 2003, 42, 14328-14334.	2.5	62
27	Oligomeric A β -synuclein and A β -amyloid variants as potential biomarkers for Parkinson's and Alzheimer's diseases. <i>European Journal of Neuroscience</i> , 2016, 43, 3-16.	2.6	59
28	Physico-chemical determinants of soluble intrabody expression in mammalian cell cytoplasm. <i>Protein Engineering, Design and Selection</i> , 2010, 23, 489-498.	2.1	54
29	Activity and thermal stability of genetically truncated forms of <i>Aspergillus glucoamylase</i> . <i>Gene</i> , 1990, 91, 131-134.	2.2	53
30	Conformational Targeting of Fibrillar Polyglutamine Proteins in Live Cells Escalates Aggregation and Cytotoxicity. <i>PLoS ONE</i> , 2009, 4, e5727.	2.5	51
31	Isolating recombinant antibodies against specific protein morphologies using atomic force microscopy and phage display technologies. <i>Protein Engineering, Design and Selection</i> , 2006, 19, 497-502.	2.1	46
32	Inhibiting A β -Secretase Activity in Alzheimer's Disease Cell Models with Single-Chain Antibodies Specifically Targeting APP. <i>Journal of Molecular Biology</i> , 2011, 405, 436-447.	4.2	46
33	Single Chain Fv Antibodies against the 25~35 A β Fragment Inhibit Aggregation and Toxicity of A β . <i>Biochemistry</i> , 2006, 45, 11532-11539.	2.5	43
34	Kinetic identification of a hydrogen bonding pair in the glucoamylase-maltose transition state complex. <i>Protein Engineering, Design and Selection</i> , 1992, 5, 185-188.	2.1	37
35	Proteolytic Antibody Light Chains Alter A β -Amyloid Aggregation and Prevent Cytotoxicity. <i>Biochemistry</i> , 2004, 43, 9999-10007.	2.5	37
36	A β -synuclein conformational antibodies fused to penetratin are effective in models of Lewy body disease. <i>Annals of Clinical and Translational Neurology</i> , 2016, 3, 588-606.	3.7	36

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37	Toxic Oligomeric Alpha-Synuclein Variants Present in Human Parkinson's Disease Brains Are Differentially Generated in Mammalian Cell Models. <i>Biomolecules</i> , 2015, 5, 1634-1651.	4.0	33
38	Protein engineering of the relative specificity of glucoamylase from <i>Aspergillus awamori</i> based on sequence similarities between starch-degrading enzymes. <i>Protein Engineering, Design and Selection</i> , 1994, 7, 1479-1484.	2.1	32
39	Nanobody specific for oligomeric beta-amyloid stabilizes nontoxic form. <i>Neurobiology of Aging</i> , 2012, 33, 1320-1328.	3.1	32
40	Intracellular targeting and clearance of oligomeric alpha-synuclein alleviates toxicity in mammalian cells. <i>Neuroscience Letters</i> , 2009, 459, 16-18.	2.1	28
41	Synthesis of the first pseudosugar-C-disaccharide. A potential antigen for eliciting glycoside-bond forming antibodies with catalytic groups. <i>Tetrahedron</i> , 1995, 51, 9063-9078.	1.9	27
42	Solvent and Viscosity Effects on the Rate-Limiting Product Release Step of Glucoamylase during Maltose Hydrolysis. <i>Biotechnology Progress</i> , 1997, 13, 601-608.	2.6	27
43	Cyclodextrins promote protein aggregation posing risks for therapeutic applications. <i>Biochemical and Biophysical Research Communications</i> , 2009, 386, 526-531.	2.1	27
44	TDP-43 protein variants as biomarkers in amyotrophic lateral sclerosis. <i>BMC Neuroscience</i> , 2017, 18, 20.	1.9	27
45	Functional roles and subsite locations of Leu177, Trp178 and Asn182 of <i>Aspergillus awamori</i> glucoamylase determined by site-directed mutagenesis. <i>Protein Engineering, Design and Selection</i> , 1993, 6, 75-79.	2.1	26
46	Isolation and characterization of antibody fragments selective for toxic oligomeric tau. <i>Neurobiology of Aging</i> , 2015, 36, 1342-1355.	3.1	25
47	A novel nicotinic mechanism underlies $A\beta$ -amyloid-induced neurotoxicity. <i>Neuropharmacology</i> , 2015, 97, 457-463.	4.1	24
48	Engineered Proteolytic Nanobodies Reduce $A\beta$ Burden and Ameliorate $A\beta$ -Induced Cytotoxicity. <i>Biochemistry</i> , 2010, 49, 4501-4508.	2.5	23
49	Isolation and characterization of antibody fragments selective for specific protein morphologies from nanogram antigen samples. <i>Biotechnology Progress</i> , 2013, 29, 463-471.	2.6	23
50	Blood-Based Oligomeric and Other Protein Variant Biomarkers to Facilitate Pre-Symptomatic Diagnosis and Staging of Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2017, 58, 23-35.	2.6	23
51	Aglycon mimicking: Glycoside bond cleavage transition state mimics based on hydroxypyrrolidine inhibitors. <i>Tetrahedron Letters</i> , 1995, 36, 6541-6544.	1.4	19
52	Characterizing Antibody Specificity to Different Protein Morphologies by AFM. <i>Langmuir</i> , 2009, 25, 912-918.	3.5	19
53	Improved affinity selection using phage display technology and off-rate based selection. <i>Electronic Journal of Biotechnology</i> , 2006, 9, 171-175.	2.2	16
54	Characterization of an antibody scFv that recognizes fibrillar insulin and $A\beta$ -amyloid using atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2008, 4, 1-7.	3.3	15

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55	Single-molecule selection and recovery of structure-specific antibodies using atomic force microscopy. <i>Nanomedicine: Nanotechnology, Biology, and Medicine</i> , 2007, 3, 192-197.	3.3	14
56	Bispecific Tandem Single Chain Antibody Simultaneously Inhibits β -Secretase and Promotes β -Secretase Processing of A β 2PP. <i>Journal of Alzheimer's Disease</i> , 2012, 28, 961-969.	2.6	14
57	Identification and Repair of Positive Binding Antibodies Containing Randomly Generated Amber Codons from Synthetic Phage Display Libraries. <i>Biotechnology Progress</i> , 2006, 22, 919-922.	2.6	13
58	Protein Misfolding and Neurodegenerative Diseases. <i>International Journal of Cell Biology</i> , 2014, 2014, 1-2.	2.5	13
59	A Sensitive phage-based capture <sc>ELISA</sc> for sub-femtomolar detection of protein variants directly from biological samples. <i>Biotechnology Progress</i> , 2015, 31, 289-298.	2.6	13
60	Anti-oligomeric single chain variable domain antibody differentially affects huntingtin and β -synuclein aggregates. <i>FEBS Letters</i> , 2008, 582, 517-522.	2.8	12
61	Promoting β -secretase cleavage of beta-amyloid with engineered proteolytic antibody fragments. <i>Biotechnology Progress</i> , 2009, 25, 1054-1063.	2.6	12
62	Human α 7 Nicotinic Acetylcholine Receptor as a Novel Target of Oligomeric β -Synuclein. <i>PLoS ONE</i> , 2013, 8, e55886.	2.5	12
63	Novel Atomic Force Microscopy Based Biopanning for Isolation of Morphology Specific Reagents against TDP-43 Variants in Amyotrophic Lateral Sclerosis. <i>Journal of Visualized Experiments</i> , 2015, , .	0.3	10
64	Probing Antibody-Antigen Interactions. <i>Microbiology Spectrum</i> , 2014, 2, AID-0010-2013.	3.0	9
65	CNS disease-related protein variants as blood-based biomarkers in traumatic brain injury. <i>Neurology</i> , 2018, 91, 702-709.	1.1	9
66	Bispecific Antibody Fragment Targeting APP and Inducing β -Site Cleavage Restores Neuronal Health in an Alzheimer's Mouse Model. <i>Molecular Neurobiology</i> , 2019, 56, 7420-7432.	4.0	9
67	Isolation and characterization of antibody fragment selective for human Alzheimer's disease brain-derived tau variants. <i>Neurobiology of Aging</i> , 2020, 94, 7-14.	3.1	7
68	Isolation and characterization of antibody fragments selective for human FTD brain derived TDP-43 variants. <i>BMC Neuroscience</i> , 2020, 21, 36.	1.9	6
69	Specific Glycosidase Activity Isolated from a Random Phage Display Antibody Library. <i>Biotechnology Progress</i> , 2001, 17, 197-202.	2.6	5
70	A conformation-specific antibody against oligomeric β -amyloid restores neuronal integrity in a mouse model of Alzheimer's disease. <i>Journal of Biological Chemistry</i> , 2021, 296, 100241.	3.4	4
71	Antifibrillizing agents catalyze the formation of unstable intermediate aggregates of beta-amyloid. <i>Biotechnology Progress</i> , 2010, 26, 1172-1179.	2.6	2
72	Response letter to comments on "Cyclodextrins promote protein aggregation posing risks for therapeutic applications". <i>Biochemical and Biophysical Research Communications</i> , 2009, 390, 1426-1427.	2.1	0

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73	Nanotextured Material for Applications in CSF Sample Screening and Characterization. Materials Research Society Symposia Proceedings, 2012, 1466, 20.	0.1	0
74	Probing Antibody-Antigen Interactions. , 0, , 381-397.		0