

# Marcela Pekna

## List of Publications by Year in descending order

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96  
papers

10,205  
citations

71102

41  
h-index

39675

94  
g-index

100  
all docs

100  
docs citations

100  
times ranked

12000  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reactive astrocyte nomenclature, definitions, and future directions. <i>Nature Neuroscience</i> , 2021, 24, 312-325.	14.8	1,098
2	PDGF-A Signaling Is a Critical Event in Lung Alveolar Myofibroblast Development and Alveogenesis. <i>Cell</i> , 1996, 85, 863-873.	28.9	787
3	Astrocyte Reactivity and Reactive Astrogliosis: Costs and Benefits. <i>Physiological Reviews</i> , 2014, 94, 1077-1098.	28.8	701
4	Astrocytes: a central element in neurological diseases. <i>Acta Neuropathologica</i> , 2016, 131, 323-345.	7.7	597
5	The dual role of astrocyte activation and reactive gliosis. <i>Neuroscience Letters</i> , 2014, 565, 30-38.	2.1	555
6	Glial cells in (patho)physiology. <i>Journal of Neurochemistry</i> , 2012, 121, 4-27.	3.9	460
7	Protective Role of Reactive Astrocytes in Brain Ischemia. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2008, 28, 468-481.	4.3	441
8	Absence of Glial Fibrillary Acidic Protein and Vimentin Prevents Hypertrophy of Astrocytic Processes and Improves Post-Traumatic Regeneration. <i>Journal of Neuroscience</i> , 2004, 24, 5016-5021.	3.6	393
9	Absence of Epithelial Immunoglobulin a Transport, with Increased Mucosal Leakiness, in Polymeric Immunoglobulin Receptor/Secretory Component-deficient Mice. <i>Journal of Experimental Medicine</i> , 1999, 190, 915-922.	8.5	377
10	Astrocyte intermediate filaments in CNS pathologies and regeneration. <i>Journal of Pathology</i> , 2004, 204, 428-437.	4.5	352
11	Mice lacking glial fibrillary acidic protein display astrocytes devoid of intermediate filaments but develop and reproduce normally.. <i>EMBO Journal</i> , 1995, 14, 1590-1598.	7.8	297
12	Complement: a novel factor in basal and ischemia-induced neurogenesis. <i>EMBO Journal</i> , 2006, 25, 1364-1374.	7.8	242
13	Modulation of Neural Plasticity as a Basis for Stroke Rehabilitation. <i>Stroke</i> , 2012, 43, 2819-2828.	2.0	220
14	Reactive gliosis in the pathogenesis of CNS diseases. <i>Biochimica Et Biophysica Acta - Molecular Basis of Disease</i> , 2016, 1862, 483-491.	3.8	194
15	Astrocyte activation and reactive gliosis—A new target in stroke?. <i>Neuroscience Letters</i> , 2019, 689, 45-55.	2.1	150
16	The Role of Astrocytes and Complement System in Neural Plasticity. <i>International Review of Neurobiology</i> , 2007, 82, 95-111.	2.0	148
17	Complement-Derived Anaphylatoxin C3a Regulates In Vitro Differentiation and Migration of Neural Progenitor Cells. <i>Stem Cells</i> , 2009, 27, 2824-2832.	3.2	142
18	Complement Deficiency Ameliorates Collagen-Induced Arthritis in Mice. <i>Journal of Immunology</i> , 2002, 169, 454-459.	0.8	132

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19	Glia in the pathogenesis of neurodegenerative diseases. <i>Biochemical Society Transactions</i> , 2014, 42, 1291-1301.	3.4	130
20	Astrocytes Negatively Regulate Neurogenesis Through the Jagged1-Mediated Notch Pathway. <i>Stem Cells</i> , 2012, 30, 2320-2329.	3.2	123
21	Generation of iC3 at the Interface between Blood and Gas. <i>Scandinavian Journal of Immunology</i> , 1992, 35, 85-91.	2.7	120
22	Complement activation by both classical and alternative pathways is critical for the effector phase of arthritis. <i>European Journal of Immunology</i> , 2004, 34, 1208-1216.	2.9	108
23	Complement peptide C3a stimulates neural plasticity after experimental brain ischaemia. <i>Brain</i> , 2017, 140, 353-369.	7.6	106
24	Bioactive 3D cell culture system minimizes cellular stress and maintains the <i>in vivo</i> -like morphological complexity of astroglial cells. <i>Glia</i> , 2013, 61, 432-440.	4.9	100
25	Increased Cell Proliferation and Neurogenesis in the Hippocampal Dentate Gyrus of Old GFAP <sup>+/+</sup> Vim <sup>+/+</sup> Mice. <i>Neurochemical Research</i> , 2004, 29, 2069-2073.	3.3	99
26	Lack of Complement Factor C3, but Not Factor B, Increases Hyperlipidemia and Atherosclerosis in Apolipoprotein E <sup>-/-</sup> Low-Density Lipoprotein Receptor <sup>-/-</sup> Mice. <i>Arteriosclerosis, Thrombosis, and Vascular Biology</i> , 2004, 24, 1062-1067.	2.4	90
27	Defining cell populations with single-cell gene expression profiling: correlations and identification of astrocyte subpopulations. <i>Nucleic Acids Research</i> , 2011, 39, e24-e24.	14.5	90
28	Intermediate filaments are important for astrocyte response to oxidative stress induced by oxygen-glucose deprivation and reperfusion. <i>Histochemistry and Cell Biology</i> , 2013, 140, 81-91.	1.7	90
29	Complement activation during cardiopulmonary bypass: Effects of immobilized heparin. <i>Annals of Thoracic Surgery</i> , 1994, 58, 421-424.	1.3	80
30	Long-Term Improvements After Multimodal Rehabilitation in Late Phase After Stroke. <i>Stroke</i> , 2017, 48, 1916-1924.	2.0	71
31	Cerebrospinal fluid levels of complement proteins C3, C4 and CR1 in Alzheimer's disease. <i>Journal of Neural Transmission</i> , 2012, 119, 789-797.	2.8	67
32	Altered cognitive performance and synaptic function in the hippocampus of mice lacking C3. <i>Experimental Neurology</i> , 2014, 253, 154-164.	4.1	59
33	Attenuation of Reactive Gliosis Does Not Affect Infarct Volume in Neonatal Hypoxic-Ischemic Brain Injury in Mice. <i>PLoS ONE</i> , 2010, 5, e10397.	2.5	57
34	Acylation-stimulating protein deficiency and altered adipose tissue in alternative complement pathway knockout mice. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2008, 294, E521-E529.	3.5	56
35	Complement C3 contributes to ethanol-induced liver steatosis in mice. <i>Annals of Medicine</i> , 2006, 38, 280-286.	3.8	53
36	Reduced removal of synaptic terminals from axotomized spinal motoneurons in the absence of complement C3. <i>Experimental Neurology</i> , 2012, 237, 8-17.	4.1	50

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37	Complement activation by polymethyl methacrylate minimized by end-point heparin attachment. <i>Biomaterials</i> , 1993, 14, 189-192.	11.4	49
38	The impact of genetic removal of GFAP and/or vimentin on glutamine levels and transport of glucose and ascorbate in astrocytes. <i>Neurochemical Research</i> , 1999, 24, 1357-1362.	3.3	48
39	Receptor for complement peptide C3a: a therapeutic target for neonatal hypoxic-ischemic brain injury. <i>FASEB Journal</i> , 2013, 27, 3797-3804.	0.5	48
40	Evidence for iC3 generation during cardiopulmonary bypass as the result of blood-gas interaction. <i>Clinical and Experimental Immunology</i> , 2008, 91, 404-409.	2.6	46
41	Nephrotic Syndrome and Subepithelial Deposits in a Mouse Model of Immune-Mediated Anti-Podocyte Glomerulonephritis. <i>Journal of Immunology</i> , 2011, 187, 3218-3229.	0.8	46
42	Nestin Regulates Neurogenesis in Mice Through Notch Signaling From Astrocytes to Neural Stem Cells. <i>Cerebral Cortex</i> , 2019, 29, 4050-4066.	2.9	46
43	Photothrombosis-Induced Infarction of the Mouse Cerebral Cortex Is Not Affected by the Nrf2-Activator Sulforaphane. <i>PLoS ONE</i> , 2012, 7, e41090.	2.5	46
44	Structure-Function Relationships for Human Antibodies to Pneumococcal Capsular Polysaccharide from Transgenic Mice with Human Immunoglobulin Loci. <i>Infection and Immunity</i> , 2002, 70, 4977-4986.	2.2	44
45	Inflammation in the hippocampus affects IGF1 receptor signaling and contributes to neurological sequelae in rheumatoid arthritis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E12063-E12072.	7.1	41
46	The role of GFAP and vimentin in learning and memory. <i>Biological Chemistry</i> , 2019, 400, 1147-1156.	2.5	40
47	Effect of chronic ethanol consumption on the expression of complement components and acute-phase proteins in liver. <i>Clinical Immunology</i> , 2007, 124, 213-220.	3.2	38
48	Plasma C3 and C3a Levels in Cryptogenic and Large-Vessel Disease Stroke: Associations with Outcome. <i>Cerebrovascular Diseases</i> , 2011, 32, 114-122.	1.7	37
49	Intranasal C3a treatment ameliorates cognitive impairment in a mouse model of neonatal hypoxic-ischemic brain injury. <i>Experimental Neurology</i> , 2017, 290, 74-84.	4.1	36
50	Complement Peptide C3a Promotes Astrocyte Survival in Response to Ischemic Stress. <i>Molecular Neurobiology</i> , 2016, 53, 3076-3087.	4.0	34
51	Heterogeneity of Notch signaling in astrocytes and the effects of GFAP and vimentin deficiency. <i>Journal of Neurochemistry</i> , 2015, 135, 234-248.	3.9	33
52	Axonal Regeneration after Sciatic Nerve Lesion Is Delayed but Complete in GFAP- and Vimentin-Deficient Mice. <i>PLoS ONE</i> , 2013, 8, e79395.	2.5	33
53	Deficiency of the Complement Component 3 but Not Factor B Aggravates <i>Staphylococcus aureus</i> Septic Arthritis in Mice. <i>Infection and Immunity</i> , 2016, 84, 930-939.	2.2	30
54	Activation of complement factor B contributes to murine and human myocardial ischemia/reperfusion injury. <i>PLoS ONE</i> , 2017, 12, e0179450.	2.5	29

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55	Signaling through C5aR is not involved in basal neurogenesis. <i>Journal of Neuroscience Research</i> , 2007, 85, 2892-2897.	2.9	27
56	The Complement System: A Powerful Modulator and Effector of Astrocyte Function in the Healthy and Diseased Central Nervous System. <i>Cells</i> , 2021, 10, 1812.	4.1	27
57	Plasticity Response in the Contralesional Hemisphere after Subtle Neurotrauma: Gene Expression Profiling after Partial Deafferentation of the Hippocampus. <i>PLoS ONE</i> , 2013, 8, e70699.	2.5	26
58	Short general anaesthesia induces prolonged changes in gene expression in the mouse hippocampus. <i>Acta Anaesthesiologica Scandinavica</i> , 2014, 58, 1127-1133.	1.6	26
59	Injury Leads to the Appearance of Cells with Characteristics of Both Microglia and Astrocytes in Mouse and Human Brain. <i>Cerebral Cortex</i> , 2017, 27, 3360-3377.	2.9	26
60	The effects of a rhythm and music-based therapy program and therapeutic riding in late recovery phase following stroke: a study protocol for a three-armed randomized controlled trial. <i>BMC Neurology</i> , 2012, 12, 141.	1.8	24
61	Complement C5 Contributes to Brain Injury After Subarachnoid Hemorrhage. <i>Translational Stroke Research</i> , 2020, 11, 678-688.	4.2	24
62	Targeted Disruption of the Murine Gene Coding for the Third Complement Component (C3). <i>Scandinavian Journal of Immunology</i> , 1998, 47, 25-29.	2.7	23
63	Increased Neuronal Differentiation of Neural Progenitor Cells Derived from Phosphovimentin-Deficient Mice. <i>Molecular Neurobiology</i> , 2018, 55, 5478-5489.	4.0	22
64	Effects of horse-riding therapy and rhythm and music-based therapy on functional mobility in late phase after stroke. <i>NeuroRehabilitation</i> , 2019, 45, 483-492.	1.3	22
65	Biocompatibility of Heparin-Coated Circuits Used in Cardiopulmonary Bypass. <i>Scandinavian Journal of Thoracic and Cardiovascular Surgery</i> , 1994, 28, 5-11.	0.2	21
66	Grafting of neural stem and progenitor cells to the hippocampus of young, irradiated mice causes gliosis and disrupts the granule cell layer. <i>Cell Death and Disease</i> , 2013, 4, e591-e591.	6.3	21
67	Cardioembolic and Small Vessel Disease Stroke Show Differences in Associations between Systemic C3 Levels and Outcome. <i>PLoS ONE</i> , 2013, 8, e72133.	2.5	21
68	C3 deficiency ameliorates the negative effects of irradiation of the young brain on hippocampal development and learning. <i>Oncotarget</i> , 2016, 7, 19382-19394.	1.8	21
69	The complement-derived anaphylatoxin C5a increases microglial GLT1 expression and glutamate uptake in a TNF-independent manner. <i>European Journal of Neuroscience</i> , 2009, 29, 267-274.	2.6	20
70	Immunoglobulin treatment reduces atherosclerosis in apolipoprotein E-/- low-density lipoprotein receptor -/- mice via the complement system. <i>Clinical and Experimental Immunology</i> , 2005, 142, 051025081649005.	2.6	19
71	Hyperactive Behavior and Altered Brain Morphology in Adult Complement C3a Receptor Deficient Mice. <i>Frontiers in Immunology</i> , 2021, 12, 604812.	4.8	18
72	Neurofilament Light Chain (NfL) in Blood – A Biomarker Predicting Unfavourable Outcome in the Acute Phase and Improvement in the Late Phase after Stroke. <i>Cells</i> , 2021, 10, 1537.	4.1	18

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73	Reactive astrocytes prevent maladaptive plasticity after ischemic stroke. <i>Progress in Neurobiology</i> , 2022, 209, 102199.	5.7	18
74	Circulating Cytokines and Granulocyte-Derived Enzymes During Complex Heart Surgery: A Clinical Study with Special Reference to Heparin-Coating of Cardiopulmonary Bypass Circuits. <i>Scandinavian Journal of Thoracic and Cardiovascular Surgery</i> , 1995, 29, 167-174.	0.2	17
75	Mice Deficient for the Complement Factor B Develop and Reproduce Normally. <i>Scandinavian Journal of Immunology</i> , 1998, 47, 375-380.	2.7	17
76	Response to Quinlan and Nilsson: Astroglia sitting at the controls?. <i>Trends in Neurosciences</i> , 2004, 27, 243-244.	8.6	16
77	Genetic variation in complement component C3 shows association with ischaemic stroke. <i>European Journal of Neurology</i> , 2011, 18, 1272-1274.	3.3	16
78	Vimentin Phosphorylation Is Required for Normal Cell Division of Immature Astrocytes. <i>Cells</i> , 2019, 8, 1016.	4.1	15
79	Interaction Between the Complement System and Infectious Agents – A Potential Mechanistic Link to Neurodegeneration and Dementia. <i>Frontiers in Cellular Neuroscience</i> , 2021, 15, 710390.	3.7	15
80	Targeting Complement C3a Receptor to Improve Outcome After Ischemic Brain Injury. <i>Neurochemical Research</i> , 2021, 46, 2626-2637.	3.3	15
81	Complement C3a: Shaping the Plasticity of the Post-stroke Brain. <i>Springer Series in Translational Stroke Research</i> , 2018, , 521-541.	0.1	12
82	Grafting Neural Stem and Progenitor Cells Into the Hippocampus of Juvenile, Irradiated Mice Normalizes Behavior Deficits. <i>Frontiers in Neurology</i> , 2018, 9, 715.	2.4	11
83	Complement Opsonization Enhances Friend Virus Infection of B Cells and Thereby Amplifies the Virus-Specific CD8+ T Cell Response. <i>Journal of Virology</i> , 2011, 85, 1151-1155.	3.4	10
84	Plasma neurofilament light chain levels predict improvement in late phase after stroke. <i>European Journal of Neurology</i> , 2021, 28, 2218-2228.	3.3	10
85	Trace Fear Conditioning Detects Hypoxic-Ischemic Brain Injury in Neonatal Mice. <i>Developmental Neuroscience</i> , 2011, 33, 222-230.	2.0	8
86	The neurobiology of brain injury. <i>Cerebrum: the Dana Forum on Brain Science</i> , 2012, 2012, 9.	0.1	8
87	C3a Receptor Signaling Inhibits Neurodegeneration Induced by Neonatal Hypoxic-Ischemic Brain Injury. <i>Frontiers in Immunology</i> , 2021, 12, 768198.	4.8	8
88	Complement Gene Single Nucleotide Polymorphisms and Biomarker Endophenotypes of Alzheimer's Disease. <i>Journal of Alzheimer's Disease</i> , 2013, 35, 51-57.	2.6	6
89	Nestin Null Mice Show Improved Reversal Place Learning. <i>Neurochemical Research</i> , 2020, 45, 215-220.	3.3	6
90	Neural Progenitor Cells in Cerebral Cortex of Epilepsy Patients do not Originate from Astrocytes Expressing GLAST. <i>Cerebral Cortex</i> , 2016, 27, 5672-5682.	2.9	5

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91	Drugs targeting intermediate filaments can improve neurosupportive properties of astrocytes. Brain Research Bulletin, 2018, 136, 130-138.	3.0	5
92	Motor Function in the Late Phase After Stroke: Stroke Survivorsâ€™ Perspective. Annals of Rehabilitation Medicine, 2020, 44, 362-369.	1.6	5
93	Activation of Complement C3 Does Not Hamper the Outcome of Experimental Intramuscular Islet Transplantation. Transplantation, 2016, 100, e6-e7.	1.0	4
94	Reactive Astrocytes, Astrocyte Intermediate Filament Proteins, and Their Role in the Disease Pathogenesis. Neuromethods, 2013, , 299-319.	0.3	4
95	Neural Plasticity as a Basis for Stroke Rehabilitation. , 2012, , 24-34.		3
96	Editorial: Complement in the Development and Regeneration of the Nervous System. Frontiers in Immunology, 2021, 12, 694810.	4.8	0