Nathalie Rouach

List of Publications by Year
in descending order

80 papers	7,394 citations	38 h-index	80 g-index
95 all docs	95 docs citations	95 times ranked	7770 citing authors

#	Article	IF	Citations
1	Modeling and Targeting Neuroglial Interactions with Human Pluripotent Stem Cell Models. International Journal of Molecular Sciences, 2022, 23, 1684.	4.1	6
2	Physiological synaptic activity and recognition memory require astroglial glutamine. Nature Communications, 2022, 13, 753.	12.8	27
3	Hippocampal Excitatory Synaptic Transmission and Plasticity Are Differentially Altered during Postnatal Development by Loss of the X-Linked Intellectual Disability Protein Oligophrenin-1. Cells, 2022, 11, 1545.	4.1	5
4	Myotonic dystrophy RNA toxicity alters morphology, adhesion and migration of mouse and human astrocytes. Nature Communications, 2022, 13, .	12.8	6
5	Reactive astrocyte nomenclature, definitions, and future directions. Nature Neuroscience, 2021, 24, 312-325.	14.8	1,098
6	Astrocytes mediate the effect of oxytocin in the central amygdala on neuronal activity and affective states in rodents. Nature Neuroscience, 2021, 24, 529-541.	14.8	88
7	Astroglial Cx30 differentially impacts synaptic activity from hippocampal principal cells and interneurons. Glia, 2021, 69, 2178-2198.	4.9	6
8	The many ways astroglial connexins regulate neurotransmission and behavior. Glia, 2021, 69, 2527-2545.	4.9	16
9	Astrocytes close the mouse critical period for visual plasticity. Science, 2021, 373, 77-81.	12.6	57
10	Nanoscale molecular architecture controls calcium diffusion and ER replenishment in dendritic spines. Science Advances, 2021, 7, eabh1376.	10.3	13
11	Pannexin 1 channels and ATP release in epilepsy: two sides of the same coin. Purinergic Signalling, 2021, 17, 533-548.	2.2	4
12	Neuropeptide S promotes wakefulness through the inhibition of sleep-promoting ventrolateral preoptic nucleus neurons. Sleep, 2020, 43, .	1.1	15
13	Neuronal Activity Drives Astroglial Connexin 30 in Perisynaptic Processes and Shapes Its Functions. Cerebral Cortex, 2020, 30, 753-766.	2.9	15
14	Distinct P2Y Receptors Mediate Extension and Retraction of Microglial Processes in Epileptic and Peritumoral Human Tissue. Journal of Neuroscience, 2020, 40, 1373-1388.	3.6	44
15	Local Translation in Perisynaptic Astrocytic Processes Is Specific and Changes after Fear Conditioning. Cell Reports, 2020, 32, 108076.	6.4	53
16	Blockade of Glial Connexin 43 Hemichannels Reduces Food Intake. Cells, 2020, 9, 2387.	4.1	9
17	The intellectual disability protein Oligophreninâ€1 controls astrocyte morphology and migration. Glia, 2020, 68, 1729-1742.	4.9	6
18	Interactions neurogliales en physiopathologie cÃ©rÃ©braleÂ/ Neuroglial interactions in cerebral physiopathology. Lâ€™annuaire Du CollÃ¨ge De France, 2020, , 661-663.	0.0	0

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19	Do Astrocytes Play a Role in Intellectual Disabilities?. Trends in Neurosciences, 2019, 42, 518-527.	8.6	34
20	Structural and functional connections between the median and the ventrolateral preoptic nucleus. Brain Structure and Function, 2019, 224, 3045-3057.	2.3	11
21	Fast calcium transients in dendritic spines driven by extreme statistics. PLoS Biology, 2019, 17, e2006202.	5.6	34
22	Astroglial Cx30 sustains neuronal population bursts independently of gapâ€junction mediated biochemical coupling. Glia, 2019, 67, 1104-1112.	4.9	12
23	A New Tool for In Vivo Study of Astrocyte Connexin 43 in Brain. Scientific Reports, 2019, 9, 18292.	3.3	13
24	Gammaâ€aminobutyric acidergic transmission underlies interictal epileptogenicity in pediatric focal cortical dysplasia. Annals of Neurology, 2019, 85, 204-217.	5.3	41
25	Connexin 30 controls astroglial polarization during postnatal brain development. Development (Cambridge), 2018, 145, .	2.5	29
26	Human astrocytes in the diseased brain. Brain Research Bulletin, 2018, 136, 139-156.	3.0	183
27	Connexin 30 is expressed in a subtype of mouse brain pericytes. Brain Structure and Function, 2018, 223, 1017-1024.	2.3	15
28	Versatile control of synaptic circuits by astrocytes: where, when and how?. Nature Reviews Neuroscience, 2018, 19, 729-743.	10.2	117
29	Live Cell STED-AFM Analysis Correlates Cytoskeletal Structure Remodelling and Membrane Physical Properties during Polarized Migration in Astrocytes. Biophysical Journal, 2018, 114, 386a.	0.5	0
30	Pannexin-1 channels contribute to seizure generation in human epileptic brain tissue and in a mouse model of epilepsy. Science Translational Medicine, 2018, 10, .	12.4	91
31	Human astrocytes: structure and functions in the healthy brain. Brain Structure and Function, 2017, 222, 2017-2029.	2.3	270
32	Non-ketogenic combination of nutritional strategies provides robust protection against seizures. Scientific Reports, 2017, 7, 5496.	3.3	23
33	Correlative STED and Atomic Force Microscopy on Live Astrocytes Reveals Plasticity of Cytoskeletal Structure and Membrane Physical Properties during Polarized Migration. Frontiers in Cellular Neuroscience, 2017, 11, 104.	3.7	49
34	Glucose Tightly Controls Morphological and Functional Properties of Astrocytes. Frontiers in Aging Neuroscience, 2016, 8, 82.	3.4	20
35	LGI1 acts presynaptically to regulate excitatory synaptic transmission during early postnatal development. Scientific Reports, 2016, 6, 21769.	3.3	38
36	A Highly Selective Potassium Sensor for the Detection of Potassium in Living Tissues. Chemistry - A European Journal, 2016, 22, 14902-14911.	3.3	23

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37	Perisynaptic astroglial processes: dynamic processors of neuronal information. Brain Structure and Function, 2016, 221, 2427-2442.	2.3	53
38	Astrocytes as new targets to improve cognitive functions. Progress in Neurobiology, 2016, 144, 48-67.	5.7	115
39	Astroglial networks promote neuronal coordination. Science Signaling, 2016, 9, ra6.	3.6	66
40	Ciliary neurotrophic factor (CNTF) activation of astrocytes decreases spreading depolarization susceptibility and increases potassium clearance. Glia, 2015, 63, 91-103.	4.9	24
41	Astroglial calcium signaling displays short-term plasticity and adjusts synaptic efficacy. Frontiers in Cellular Neuroscience, 2015, 9, 189.	3.7	29
42	Activity-Dependent Plasticity of Astroglial Potassium and Glutamate Clearance. Neural Plasticity, 2015, 2015, 1-16.	2.2	43
43	Why so many sperm cells?. Communicative and Integrative Biology, 2015, 8, e1017156.	1.4	18
44	Activated microglia impairs neuroglial interaction by opening <scp>C</scp>x43 hemichannels in hippocampal astrocytes. Glia, 2015, 63, 795-811.	4.9	108
45	The Neuroglial Potassium Cycle during Neurotransmission: Role of Kir4.1 Channels. PLoS Computational Biology, 2015, 11, e1004137.	3.2	74
46	New Insights on Astrocyte Ion Channels: Critical for Homeostasis and Neuron-Glia Signaling. Journal of Neuroscience, 2015, 35, 13827-13835.	3.6	161
47	Bursting Reverberation as a Multiscale Neuronal Network Process Driven by Synaptic Depression-Facilitation. PLoS ONE, 2015, 10, e0124694.	2.5	12
48	Connexons and pannexons: newcomers in neurophysiology. Frontiers in Cellular Neuroscience, 2014, 8, 348.	3.7	72
49	Connexin 30 sets synaptic strength by controlling astroglial synapse invasion. Nature Neuroscience, 2014, 17, 549-558.	14.8	269
50	Astroglial connexin 43 sustains glutamatergic synaptic efficacy. Philosophical Transactions of the Royal Society B: Biological Sciences, 2014, 369, 20130596.	4.0	65
51	Astroglial potassium clearance contributes to shortâ€term plasticity of synaptically evoked currents at the tripartite synapse. Journal of Physiology, 2014, 592, 87-102.	2.9	130
52	Astroglial Connexin43 Hemichannels Tune Basal Excitatory Synaptic Transmission. Journal of Neuroscience, 2014, 34, 11228-11232.	3.6	141
53	Multi-electrode Array Recordings of Human Epileptic Postoperative Cortical Tissue. Journal of Visualized Experiments, 2014, , e51870.	0.3	13
54	Emerging role for astroglial networks in information processing: from synapse to behavior. Trends in Neurosciences, 2013, 36, 405-417.	8.6	209

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55	How do astrocytes shape synaptic transmission? Insights from electrophysiology. Frontiers in Cellular Neuroscience, 2013, 7, 159.	3.7	130
56	Astroglial networking contributes to neurometabolic coupling. Frontiers in Neuroenergetics, 2013, 5, 4.	5.3	44
57	Synaptic transmission in neurological disorders dissected by a quantitative approach. Communicative and Integrative Biology, 2012, 5, 448-452.	1.4	10
58	Astroglial gap junctions shape neuronal network activity. Communicative and Integrative Biology, 2012, 5, 248-254.	1.4	38
59	Dual Electrophysiological Recordings of Synaptically-evoked Astroglial and Neuronal Responses in Acute Hippocampal Slices. Journal of Visualized Experiments, 2012, , e4418.	0.3	14
60	Transcriptome profile reveals AMPA receptor dysfunction in the hippocampus of the Rsk2-knockout mice, an animal model of Coffinâ€"Lowry syndrome. Human Genetics, 2011, 129, 255-269.	3.8	23
61	Astroglial networks scale synaptic activity and plasticity. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 8467-8472.	7.1	325
62	Synapse Geometry and Receptor Dynamics Modulate Synaptic Strength. PLoS ONE, 2011, 6, e25122.	2.5	75
63	Astroglial networks: a step further in neuroglial and gliovascular interactions. Nature Reviews Neuroscience, 2010, 11, 87-99.	10.2	652
64	Astroglial Metabolic Networks Sustain Hippocampal Synaptic Transmission. Science, 2008, 322, 1551-1555.	12.6	734
65	AMPA receptors and stargazin-like transmembrane AMPA receptor-regulatory proteins mediate hippocampal kainate neurotoxicity. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18784-18788.	7.1	47
66	S1P inhibits gap junctions in astrocytes: involvement of Giand Rho GTPase/ROCK. European Journal of Neuroscience, 2006, 23, 1453-1464.	2.6	74
67	Shapes of astrocyte networks in the juvenile brain. Neuron Glia Biology, 2006, 2, 3-14.	1.6	86
68	TARP Î³-8 controls hippocampal AMPA receptor number, distribution and synaptic plasticity. Nature Neuroscience, 2005, 8, 1525-1533.	14.8	240
69	Regulation of GluR1 abundance in murine hippocampal neurones by serum- and glucocorticoid-inducible kinase 3. Journal of Physiology, 2005, 565, 381-390.	2.9	32
70	Activity-dependent NMDA receptor degradation mediated by retrotranslocation and ubiquitination. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 5600-5605.	7.1	145
71	Hydrogen peroxide increases gap junctional communication and induces astrocyte toxicity: Regulation by brain macrophages. Glia, 2004, 45, 28-38.	4.9	36
72	Neurons set the tone of gap junctional communication in astrocytic networks. Neurochemistry International, 2004, 45, 265-272.	3.8	49

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73	Endocannabinoids contribute to short-term but not long-term mGluR-induced depression in the hippocampus. European Journal of Neuroscience, 2003, 18, 1017-1020.	2.6	80
74	Carbenoxolone Blockade of Neuronal Network Activity in Culture is not Mediated by an Action on Gap Junctions. Journal of Physiology, 2003, 553, 729-745.	2.9	155
75	Neurons and Brain Macrophages Regulate Connexin Expression in Cultured Astrocytes. Cell Communication and Adhesion, 2003, 10, 407-411.	1.0	6
76	Costimulation of N-methyl-D-aspartate and muscarinic neuronal receptors modulates gap junctional communication in striatal astrocytes. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1023-1028.	7.1	28
77	Brain macrophages inhibit gap junctional communication and downregulate connexin 43 expression in cultured astrocytes. European Journal of Neuroscience, 2002, 15, 403-407.	2.6	68
78	Zinc-induced inhibition of protein synthesis and reduction of connexin-43 expression and intercellular communication in mouse cortical astrocytes. European Journal of Neuroscience, 2002, 16, 1037-1044.	2.6	10
79	Connexins and gap junctional communication in astrocytes are targets for neuroglial interaction. Progress in Brain Research, 2001, 132, 203-214.	1.4	20
80	Activity-Dependent Neuronal Control of Gap-Junctional Communication in Astrocytes. Journal of Cell Biology, 2000, 149, 1513-1526.	5.2	193