Maxime Lvesque

List of Publications by Citations

117 papers	5,962 citations	39 h-index	75 g-index
122 ext. papers	7,081 ext. citations	5.6 avg, IF	6.03 L-index

#	Paper	IF	Citations
117	The pilocarpine model of temporal lobe epilepsy. *Journal of Neuroscience Methods*, **2008**, 172, 143-57	3	668
116	Network and pharmacological mechanisms leading to epileptiform synchronization in the limbic system in vitro. *Progress in Neurobiology*, **2002**, 68, 167-207	10.9	359
115	The kainic acid model of temporal lobe epilepsy. *Neuroscience and Biobehavioral Reviews*, **2013**, 37, 2887-99	9	275
114	CA3-driven hippocampal-entorhinal loop controls rather than sustains in vitro limbic seizures. *Journal of Neuroscience*, **1997**, 17, 9308-14	6.6	254
113	Synchronous GABA-mediated potentials and epileptiform discharges in the rat limbic system in vitro. *Journal of Neuroscience*, **1996**, 16, 3912-24	6.6	249
112	Mechanisms of physiological and epileptic HFO generation. *Progress in Neurobiology*, **2012**, 98, 250-64	10.9	200
111	GABAergic synchronization in the limbic system and its role in the generation of epileptiform activity. *Progress in Neurobiology*, **2011**, 95, 104-32	10.9	183
110	Topiramate attenuates voltage-gated sodium currents in rat cerebellar granule cells. *Neuroscience Letters*, **1997**, 231, 123-6	3.3	182
109	Electrical coupling mediates tunable low-frequency oscillations and resonance in the cerebellar Golgi cell network. *Neuron*, **2009**, 61, 126-39	13.9	169
108	Cellular and molecular mechanisms of epilepsy in the human brain. *Progress in Neurobiology*, **2005**, 77, 166-200	10.9	141
107	Animal models of temporal lobe epilepsy following systemic chemoconvulsant administration. *Journal of Neuroscience Methods*, **2016**, 260, 45-52	3	131
106	Pyramidal neurons are "neurogenic hubs" in the neurovascular coupling response to whisker stimulation. *Journal of Neuroscience*, **2011**, 31, 9836-47	6.6	128
105	Facilitation of epileptic activity during sleep is mediated by high amplitude slow waves. *Brain*, **2015**, 138, 1629-41	11.2	115
104	Participation of GABAA-mediated inhibition in ictallike discharges in the rat entorhinal cortex. *Journal of Neurophysiology*, **1998**, 79, 352-60	3.2	106
103	Quantitative evaluation of neuronal loss in the dorsal hippocampus in rats with long-term pilocarpine seizures. *Epilepsy Research*, **1994**, 17, 237-47	3	106
102	A brief history on the oscillating roles of thalamus and cortex in absence seizures. *Epilepsia*, **2012**, 53, 779-89	6.4	103
101	Two seizure-onset types reveal specific patterns of high-frequency oscillations in a model of temporal lobe epilepsy. *Journal of Neuroscience*, **2012**, 32, 13264-72	6.6	101

100	Update on the mechanisms and roles of high-frequency oscillations in seizures and epileptic disorders. *Epilepsia*, **2017**, 58, 1330-1339	6.4	91
99	Specific imbalance of excitatory/inhibitory signaling establishes seizure onset pattern in temporal lobe epilepsy. *Journal of Neurophysiology*, **2016**, 115, 3229-37	3.2	83
98	High-frequency (80-500 Hz) oscillations and epileptogenesis in temporal lobe epilepsy. *Neurobiology of Disease*, **2011**, 42, 231-41	7.5	81
97	Interneuron activity leads to initiation of low-voltage fast-onset seizures. *Annals of Neurology*, **2015** , 77, 541-6	9.4	79
96	GABAergic networks jump-start focal seizures. *Epilepsia*, **2016**, 57, 679-87	6.4	75
95	CA3-released entorhinal seizures disclose dentate gyrus epileptogenicity and unmask a temporoammonic pathway. *Journal of Neurophysiology*, **2000**, 83, 1115-24	3.2	64
94	Neurosteroids and epilepsy. *Current Opinion in Neurology*, **2010**, 23, 170-6	7.1	62
93	Endogenous neurosteroids modulate epileptogenesis in a model of temporal lobe epilepsy. *Experimental Neurology*, **2006**, 201, 519-24	5.7	59
92	Subiculum network excitability is increased in a rodent model of temporal lobe epilepsy. *Hippocampus*, **2006**, 16, 843-60	3.5	58
91	Activation of specific neuronal networks leads to different seizure onset types. *Annals of Neurology* , **2016**, 79, 354-65	9.4	58
90	Lacosamide: a new approach to target voltage-gated sodium currents in epileptic disorders. *CNS Drugs*, **2009**, 23, 555-68	6.7	55
89	Laminar organization of epileptiform discharges in the rat entorhinal cortex in vitro. *Journal of Physiology*, **1998**, 509 (Pt 3), 785-96	3.9	51
88	Limbic network interactions leading to hyperexcitability in a model of temporal lobe epilepsy. *Journal of Neurophysiology*, **2002**, 87, 634-9	3.2	50
87	Convulsive status epilepticus duration as determinant for epileptogenesis and interictal discharge generation in the rat limbic system. *Neurobiology of Disease*, **2010**, 40, 478-89	7.5	49
86	Dynamics of interictal spikes and high-frequency oscillations during epileptogenesis in temporal lobe epilepsy. *Neurobiology of Disease*, **2014**, 67, 97-106	7.5	48
85	Early-life stress is associated with gender-based vulnerability to epileptogenesis in rat pups. *PLoS ONE*, **2012**, 7, e42622	3.7	48
84	KCC2 function modulates in vitro ictogenesis. *Neurobiology of Disease*, **2015**, 79, 51-8	7.5	47
83	KCC2, epileptiform synchronization, and epileptic disorders. *Progress in Neurobiology*, **2018**, 162, 1-16	10.9	44

82	Epileptiform discharges and a synchronous GABAergic potential induced by 4-aminopyridine in the rat immature hippocampus. *Neuroscience Letters*, **1990**, 117, 93-8	3.3	43
81	Does interictal synchronization influence ictogenesis?. *Neuropharmacology*, **2013**, 69, 37-44	5.5	40
80	Impaired activation of CA3 pyramidal neurons in the epileptic hippocampus. *NeuroMolecular Medicine*, **2005**, 7, 325-42	4.6	40
79	Decrease of SYNGAP1 in GABAergic cells impairs inhibitory synapse connectivity, synaptic inhibition and cognitive function. *Nature Communications*, **2016**, 7, 13340	17.4	40
78	Muscarinic receptor activation induces depolarizing plateau potentials in bursting neurons of the rat subiculum. *Journal of Neurophysiology*, **1999**, 82, 2590-601	3.2	39
77	Low-voltage fast seizures in humans begin with increased interneuron firing. *Annals of Neurology*, **2018**, 84, 588-600	9.4	39
76	Models of drug-induced epileptiform synchronization in vitro. *Journal of Neuroscience Methods*, **2016**, 260, 26-32	3	36
75	The anti-ictogenic effects of levetiracetam are mirrored by interictal spiking and high-frequency oscillation changes in a model of temporal lobe epilepsy. *Seizure: the Journal of the British Epilepsy Association*, **2015**, 25, 18-25	3.2	35
74	Temporal lobe epileptiform activity following systemic administration of 4-aminopyridine in rats. *Epilepsia*, **2013**, 54, 596-604	6.4	35
73	Lacosamide modulates interictal spiking and high-frequency oscillations in a model of mesial temporal lobe epilepsy. *Epilepsy Research*, **2015**, 115, 8-16	3	34
72	Rat subicular networks gate hippocampal output activity in an in vitro model of limbic seizures. *Journal of Physiology*, **2005**, 566, 885-900	3.9	34
71	Ripple activity in the dentate gyrus of dishinibited hippocampus-entorhinal cortex slices. *Journal of Neuroscience Research*, **2005**, 80, 92-103	4.4	34
70	A comparison between automated detection methods of high-frequency oscillations (80-500 Hz) during seizures. *Journal of Neuroscience Methods*, **2012**, 211, 265-71	3	33
69	Repetitive firing and oscillatory activity of pyramidal-like bursting neurons in the rat subiculum. *Experimental Brain Research*, **1997**, 114, 507-17	2.3	33
68	In vitro electrophysiology of rat subicular bursting neurons. *Hippocampus*, **1997**, 7, 48-57	3.5	33
67	Proepileptic influence of a focal vascular lesion affecting entorhinal cortex-CA3 connections after status epilepticus. *Journal of Neuropathology and Experimental Neurology*, **2008**, 67, 687-701	3.1	33
66	Brain-derived neurotrophic factor superinduction parallels anti-epileptic--neuroprotective treatment in the pilocarpine epilepsy model. *Journal of Neurochemistry*, **2001**, 76, 1814-22	6	33
65	Interneurons spark seizure-like activity in the entorhinal cortex. *Neurobiology of Disease*, **2016**, 87, 91-101	7.5	31

64	Distinct EEG seizure patterns reflect different seizure generation mechanisms. *Journal of Neurophysiology*, **2015**, 113, 2840-4	3.2	30
63	Two different interictal spike patterns anticipate ictal activity in vitro. *Neurobiology of Disease*, **2013**, 52, 168-76	7.5	28
62	Long-term consequences of a prolonged febrile seizure in a dual pathology model. *Neurobiology of Disease*, **2011**, 43, 312-21	7.5	28
61	Masking synchronous GABA-mediated potentials controls limbic seizures. *Epilepsia*, **2002**, 43, 1469-79	6.4	28
60	Phase-amplitude coupling and epileptogenesis in an animal model of mesial temporal lobe epilepsy. *Neurobiology of Disease*, **2018**, 114, 111-119	7.5	27
59	On the ictogenic properties of the piriform cortex in vitro. *Epilepsia*, **2012**, 53, 459-68	6.4	26
58	Optogenetic Low-Frequency Stimulation of Specific Neuronal Populations Abates Ictogenesis. *Journal of Neuroscience*, **2017**, 37, 2999-3008	6.6	25
57	Independent epileptiform discharge patterns in the olfactory and limbic areas of the in vitro isolated Guinea pig brain during 4-aminopyridine treatment. *Journal of Neurophysiology*, **2010**, 103, 2728-36	3.2	25
56	Multiple actions of the novel anticonvulsant drug topiramate in the rat subiculum in vitro. *Brain Research*, **1998**, 807, 125-34	3.7	25
55	Synchronized gamma oscillations (30-50 Hz) in the amygdalo-hippocampal network in relation with seizure propagation and severity. *Neurobiology of Disease*, **2009**, 35, 209-18	7.5	24
54	Time-dependent evolution of seizures in a model of mesial temporal lobe epilepsy. *Neurobiology of Disease*, **2017**, 106, 205-213	7.5	22
53	Epileptiform synchronization in the rat insular and perirhinal cortices in vitro. *European Journal of Neuroscience*, **2007**, 26, 3571-82	3.5	22
52	Electrophysiology of regular firing cells in the rat perirhinal cortex. *Hippocampus*, **2001**, 11, 662-72	3.5	22
51	Extracellular potassium elevations in the hippocampus of rats with long-term pilocarpine seizures. *Neuroscience Letters*, **1995**, 201, 87-91	3.3	20
50	Carbonic anhydrase inhibition by acetazolamide reduces in vitro epileptiform synchronization. *Neuropharmacology*, **2015**, 95, 377-87	5.5	19
49	Seizure-like discharges induced by 4-aminopyridine in the olfactory system of the in vitro isolated guinea pig brain. *Epilepsia*, **2013**, 54, 605-15	6.4	19
48	Perirhinal cortex hyperexcitability in pilocarpine-treated epileptic rats. *Hippocampus*, **2011**, 21, 702-13	3.5	18
47	"Interneurons and principal cell firing in human limbic areas at focal seizure onset". *Neurobiology of Disease*, **2019**, 124, 183-188	7.5	17

46	Allopregnanolone decreases interictal spiking and fast ripples in an animal model of mesial temporal lobe epilepsy. *Neuropharmacology*, **2017**, 121, 12-19	5.5	16
45	Role of KCC2-dependent potassium efflux in 4-Aminopyridine-induced Epileptiform synchronization. *Neurobiology of Disease*, **2018**, 109, 137-147	7.5	16
44	Hypersynchronous ictal onset in the perirhinal cortex results from dynamic weakening in inhibition. *Neurobiology of Disease*, **2016**, 87, 1-10	7.5	16
43	Paradoxical effects of optogenetic stimulation in mesial temporal lobe epilepsy. *Annals of Neurology*, **2019**, 86, 714-728	9.4	16
42	Network and intrinsic contributions to carbachol-induced oscillations in the rat subiculum. *Journal of Neurophysiology*, **2001**, 86, 1164-78	3.2	15
41	High-frequency oscillations and mesial temporal lobe epilepsy. *Neuroscience Letters*, **2018**, 667, 66-74	3.3	14
40	Interictal oscillations and focal epileptic disorders. *European Journal of Neuroscience*, **2018**, 48, 2915-2927	3.5	13
39	Topiramate depresses carbachol-induced plateau potentials in subicular bursting cells. *NeuroReport* , **2000**, 11, 75-8	1.7	13
38	Body temperature estimation of a moving subject from thermographic images. *Machine Vision and Applications*, **2012**, 23, 299-311	2.8	10
37	Involvement of inward rectifier and M-type currents in carbachol-induced epileptiform synchronization. *Neuropharmacology*, **2011**, 60, 653-61	5.5	10
36	The H current blocker ZD7288 decreases epileptiform hyperexcitability in the rat neocortex by depressing synaptic transmission. *Neuropharmacology*, **2006**, 51, 681-91	5.5	10
35	GABA(B) receptor activation and limbic network ictogenesis. *Neuropharmacology*, **2004**, 46, 43-51	5.5	10
34	Limbic networks and epileptiform synchronization: the view from the experimental side. *International Review of Neurobiology*, **2014**, 114, 63-87	4.4	9
33	Cell type-specific properties of subicular GABAergic currents shape hippocampal output firing mode. *PLoS ONE*, **2012**, 7, e50241	3.7	9
32	Neurosteroids and Focal Epileptic Disorders. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	9
31	Epileptiform synchronization in the human dysplastic cortex. *Epileptic Disorders*, **2003**, 5 Suppl 2, S45-50	1.9	9
30	Fast ripple analysis in human mesial temporal lobe epilepsy suggests two different seizure-generating mechanisms. *Neurobiology of Disease*, **2019**, 127, 374-381	7.5	8
29	High frequency oscillations can pinpoint seizures progressing to status epilepticus. *Experimental Neurology*, **2016**, 280, 24-9	5.7	8

28	Blockade of in vitro ictogenesis by low-frequency stimulation coincides with increased epileptiform response latency. *Journal of Neurophysiology*, **2015**, 114, 21-8	3.2	8
27	Subiculum-entorhinal cortex interactions during in vitro ictogenesis. *Seizure: the Journal of the British Epilepsy Association*, **2015**, 31, 33-40	3.2	8
26	Carbachol-induced network oscillations in an in vitro limbic system brain slice. *Neuroscience*, **2017**, 348, 153-164	3.9	7
25	Neurosteroidal modulation of in vitro epileptiform activity is enhanced in pilocarpine-treated epileptic rats. *Neurobiology of Disease*, **2015**, 78, 24-34	7.5	7
24	High-frequency oscillations and focal seizures in epileptic rodents. *Neurobiology of Disease*, **2019**, 124, 396-407	7.5	7
23	Piriform cortex ictogenicity in vitro. *Experimental Neurology*, **2019**, 321, 113014	5.7	6
22	Dynamic interneuron-principal cell interplay leads to a specific pattern of in vitro ictogenesis. *Neurobiology of Disease*, **2018**, 115, 92-100	7.5	6
21	The pilocarpine model of mesial temporal lobe epilepsy: Over one decade later, with more rodent species and new investigative approaches. *Neuroscience and Biobehavioral Reviews*, **2021**, 130, 274-291	9	6
20	Measuring an Animal Body Temperature in Thermographic Video Using Particle Filter Tracking. *Lecture Notes in Computer Science*, **2008**, 1081-1091	0.9	5
19	High-frequency oscillations and seizure-like discharges in the entorhinal cortex of the in vitro isolated guinea pig brain. *Epilepsy Research*, **2017**, 130, 21-26	3	4
18	Transition from status epilepticus to interictal spiking in a rodent model of mesial temporal epilepsy. *Epilepsy Research*, **2019**, 152, 73-76	3	4
17	High frequency oscillations in epileptic rodents: Are we doing it right?. *Journal of Neuroscience Methods*, **2018**, 299, 16-21	3	4
16	Single-unit Activity in the in vitro Entorhinal Cortex During Carbachol-induced Field Oscillations. *Neuroscience*, **2018**, 379, 1-12	3.9	4
15	4E-BP2-dependent translation in parvalbumin neurons controls epileptic seizure threshold. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	4
14	Evolving Mechanistic Concepts of Epileptiform Synchronization and their Relevance in Curing Focal Epileptic Disorders. *Current Neuropharmacology*, **2019**, 17, 830-842	7.6	3
13	Neurosteroids differentially modulate fast and slow interictal discharges in the hippocampal CA3 area. *European Journal of Neuroscience*, **2015**, 41, 379-89	3.5	3
12	KCC2 antagonism increases neuronal network excitability but disrupts ictogenesis in vitro. *Journal of Neurophysiology*, **2019**, 122, 1163-1173	3.2	3
11	Effects of Diazepam and Ketamine on Pilocarpine-Induced Status Epilepticus in Mice. *Neuroscience*, **2019**, 421, 112-122	3.9	3

10	Evolution of interictal spiking during the latent period in a mouse model of mesial temporal lobe epilepsy. *Current Research in Neurobiology*, **2021**, 2, 100008	0	3
9	Carbachol-Induced theta-like oscillations in the rodent brain limbic system: Underlying mechanisms and significance. *Neuroscience and Biobehavioral Reviews*, **2018**, 95, 406-420	9	3
8	The subiculum and its role in focal epileptic disorders. *Reviews in the Neurosciences*, **2021**, 32, 249-273	4.7	2
7	Activity-dependent changes in excitability of perirhinal cortex networks in vitro. *Pflugers Archiv European Journal of Physiology*, **2015**, 467, 805-16	4.6	1
6	KCC2 antagonism and gabaergic synchronization in the entorhinal cortex in the absence of ionotropic glutamatergic receptor signalling. *Neuropharmacology*, **2020**, 167, 107982	5.5	1
5	On the contribution of KCC2 and carbonic anhydrase to two types of in vitro interictal discharge. *Pflugers Archiv European Journal of Physiology*, **2015**, 467, 2325-35	4.6	1
4	Cerebellar Cortex 4-12 Hz Oscillations and Unit Phase Relation in the Awake Rat. *Frontiers in Systems Neuroscience*, **2020**, 14, 475948	3.5	1
3	Dysregulation of GABAergic Signaling in Neurodevelomental Disorders: Targeting Cation-Chloride Co-transporters to Re-establish a Proper E/I Balance.. *Frontiers in Cellular Neuroscience*, **2021**, 15, 813441	6.1	0
2	In Vivo Recordings of Network Activity Using Local Field Potentials and Single Units in Movement and Network Pathophysiology. *Neuromethods*, **2018**, 249-266	0.4	
1	Pathological High-Frequency Oscillations in Mesial Temporal Lobe Epilepsy **2020**, 99-116		