Vikaas S Sohal

List of Publications by Year
in descending order

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Version: 2024-02-01

91 papers	9,619 citations	108046 37 h-index	81351 76 g-index
103 all docs	103 docs citations	103 times ranked	13814 citing authors

#	Article	IF	Citations
1	Convergence of Clinically Relevant Manipulations on Dopamine-Regulated Prefrontal Activity Underlying Stress Coping Responses. Biological Psychiatry, 2022, 91, 810-820.	0.7	6
2	Transforming Discoveries About Cortical Microcircuits and Gamma Oscillations Into New Treatments for Cognitive Deficits in Schizophrenia. American Journal of Psychiatry, 2022, 179, 267-276.	4.0	16
3	Top-down control of hippocampal signal-to-noise by prefrontal long-range inhibition. Cell, 2022, 185, 1602-1617.e17.	13.5	48
4	Fate mapping of neural stem cell niches reveals distinct origins of human cortical astrocytes. Science, 2022, 376, 1441-1446.	6.0	25
5	Selective Inhibitory Circuit Dysfunction after Chronic Frontal Lobe Contusion. Journal of Neuroscience, 2022, 42, 5361-5372.	1.7	2
6	Information diversity in individual auditory cortical neurons is associated with functionally distinct coordinated neuronal ensembles. Scientific Reports, 2021, 11, 4064.	1.6	2
7	Dynamic patterns of correlated activity in the prefrontal cortex encode information about social behavior. PLoS Biology, 2021, 19, e3001235.	2.6	19
8	Integrated Stress Response Inhibitor Reverses Sex-Dependent Behavioral and Cell-Specific Deficits after Mild Repetitive Head Trauma. Journal of Neurotrauma, 2020, 37, 1370-1380.	1.7	29
9	GluN2D-mediated excitatory drive onto medial prefrontal cortical PV+ fast-spiking inhibitory interneurons. PLoS ONE, 2020, 15, e0233895.	1.1	25
10	Interneuron Transplantation Rescues Social Behavior Deficits without Restoring Wild-Type Physiology in a Mouse Model of Autism with Excessive Synaptic Inhibition. Journal of Neuroscience, 2020, 40, 2215-2227.	1.7	17
11	Enhancing WNT Signaling Restores Cortical Neuronal Spine Maturation and Synaptogenesis in Tbr1 Mutants. Cell Reports, 2020, 31, 107495.	2.9	32
12	Cross-hemispheric gamma synchrony between prefrontal parvalbumin interneurons supports behavioral adaptation during rule shift learning. Nature Neuroscience, 2020, 23, 892-902.	7.1	50
13	Altered hippocampal-prefrontal communication during anxiety-related avoidance in mice deficient for the autism-associated gene Pogz. ELife, 2020, 9, .	2.8	22
14	Regulatory Elements Inserted into AAVs Confer Preferential Activity in Cortical Interneurons. ENeuro, 2020, 7, .	0.9	4
15	Regulatory Elements Inserted into AAVs Confer Preferential Activity in Cortical Interneurons. ENeuro, 2020, 7, ENEURO.0211-20.2020.	0.9	12
16	GABAergic cell transplants in the anterior cingulate cortex reduce neuropathic pain aversiveness. Brain, 2019, 142, 2655-2669.	3.7	49
17	Tsc1 represses parvalbumin expression and fast-spiking properties in somatostatin lineage cortical interneurons. Nature Communications, 2019, 10, 4994.	5.8	39
18	Excitation-inhibition balance as a framework for investigating mechanisms in neuropsychiatric disorders. Molecular Psychiatry, 2019, 24, 1248-1257.	4.1	531

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19	VIP Interneurons Contribute to Avoidance Behavior by Regulating Information Flow across Hippocampal-Prefrontal Networks. Neuron, 2019, 102, 1223-1234.e4.	3.8	70
20	Microcircuit Mechanisms through which Mediodorsal Thalamic Input to Anterior Cingulate Cortex Exacerbates Pain-Related Aversion. Neuron, 2019, 102, 944-959.e3.	3.8	106
21	Ultrasonic sculpting of virtual optical waveguides in tissue. Nature Communications, 2019, 10, 92.	5.8	39
22	A Shared Vision for Machine Learning in Neuroscience. Journal of Neuroscience, 2018, 38, 1601-1607.	1.7	121
23	Roles of Prefrontal Cortex and Mediodorsal Thalamus in Task Engagement and Behavioral Flexibility. Journal of Neuroscience, 2018, 38, 2569-2578.	1.7	71
24	MouseCntnap2and HumanCNTNAP2ASD Alleles Cell Autonomously Regulate PV+ Cortical Interneurons. Cerebral Cortex, 2018, 28, 3868-3879.	1.6	71
25	The sodium channel activator Lu AE98134 normalizes the altered firing properties of fast spiking interneurons in Dlx5/6+/â^' mice. Neuroscience Letters, 2018, 662, 29-35.	1.0	5
26	An Amygdala-Hippocampus Subnetwork that Encodes Variation in Human Mood. Cell, 2018, 175, 1688-1700.e14.	13.5	119
27	Neonatal Tbr1 Dosage Controls Cortical Layer 6 Connectivity. Neuron, 2018, 100, 831-845.e7.	3.8	83
28	The CaMKII/NMDA receptor complex controls hippocampal synaptic transmission by kinase-dependent and independent mechanisms. Nature Communications, 2018, 9, 2069.	5.8	110
29	Coordinated neuronal ensembles in primary auditory cortical columns. ELife, 2018, 7, .	2.8	38
30	The Psychiatric Cell Map Initiative: A Convergent Systems Biological Approach to Illuminating Key Molecular Pathways in Neuropsychiatric Disorders. Cell, 2018, 174, 505-520.	13.5	108
31	Repeated Mild Head Injury Leads to Wide-Ranging Deficits in Higher-Order Cognitive Functions Associated with the Prefrontal Cortex. Journal of Neurotrauma, 2018, 35, 2425-2434.	1.7	37
32	Upconverting nanoparticle micro-lightbulbs designed for deep tissue optical stimulation and imaging. Biomedical Optics Express, 2018, 9, 4359.	1.5	16
33	D3 Receptors Regulate Excitability in a Unique Class of Prefrontal Pyramidal Cells. Journal of Neuroscience, 2017, 37, 5846-5860.	1.7	77
34	Dynamic, Cell-Type-Specific Roles for GABAergic Interneurons in a Mouse Model of Optogenetically Inducible Seizures. Neuron, 2017, 93, 291-298.	3.8	128
35	Dopamine D2 Receptors Modulate Pyramidal Neurons in Mouse Medial Prefrontal Cortex through a Stimulatory G-Protein Pathway. Journal of Neuroscience, 2017, 37, 10063-10073.	1.7	26
36	Tonic or Phasic Stimulation of Dopaminergic Projections to Prefrontal Cortex Causes Mice to Maintain or Deviate from Previously Learned Behavioral Strategies. Journal of Neuroscience, 2017, 37, 8315-8329.	1.7	84

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37	The Cytokine CXCL12 Promotes Basket Interneuron Inhibitory Synapses in the Medial Prefrontal Cortex. Cerebral Cortex, 2017, 27, 4303-4313.	1.6	24
38	Serotonin enhances excitability and gamma frequency temporal integration in mouse prefrontal fast-spiking interneurons. ELife, 2017, 6, .	2.8	39
39	Immediate Mood Scaler: Tracking Symptoms of Depression and Anxiety Using a Novel Mobile Mood Scale. JMIR MHealth and UHealth, 2017, 5, e44.	1.8	63
40	Serotonin 1B Receptors Regulate Prefrontal Function by Gating Callosal and Hippocampal Inputs. Cell Reports, 2016, 17, 2882-2890.	2.9	41
41	Correlations between prefrontal neurons form a small-world network that optimizes the generation of multineuron sequences of activity. Journal of Neurophysiology, 2016, 115, 2359-2375.	0.9	9
42	Energy-Looping Nanoparticles: Harnessing Excited-State Absorption for Deep-Tissue Imaging. ACS Nano, 2016, 10, 8423-8433.	7.3	122
43	Making the Right Connections. Biological Psychiatry, 2016, 80, 502-503.	0.7	0
44	How Close Are We to Understanding What (if Anything) Î³ Oscillations Do in Cortical Circuits?. Journal of Neuroscience, 2016, 36, 10489-10495.	1.7	81
45	Stressing out the Social Network. Neuron, 2016, 91, 210-213.	3.8	0
46	Putative Microcircuit-Level Substrates for Attention Are Disrupted in Mouse Models of Autism. Biological Psychiatry, 2016, 79, 667-675.	0.7	23
47	Of Mice, Men, and Microbial Opsins: How Optogenetics Can Help Hone Mouse Models of Mental Illness. Biological Psychiatry, 2016, 79, 47-52.	0.7	20
48	Deep tissue targeted near-infrared optogenetic stimulation using fully implantable upconverting light bulbs. , 2015, 2015, 821-4.		1
49	Neural Oscillations and Synchrony in Brain Dysfunction and Neuropsychiatric Disorders. JAMA Psychiatry, 2015, 72, 840.	6.0	115
50	Gamma Rhythms Link Prefrontal Interneuron Dysfunction with Cognitive Inflexibility in Dlx5/6+/â^' Mice. Neuron, 2015, 85, 1332-1343.	3.8	292
51	Tether-less Implantable Upconverting Microscale Light Bulbs for Deep Brain Neural Stimulation and Imaging. , 2015, , .		0
52	The Parvalbumin/Somatostatin Ratio Is Increased in Pten Mutant Mice and by Human PTEN ASD Alleles. Cell Reports, 2015, 11, 944-956.	2.9	111
53	Identifying Pathways Leading to Prefrontal GABA-ergic Interneuron Dysfunction in Schizophrenia. American Journal of Psychiatry, 2014, 171, 906-909.	4.0	2
54	Pyramidal Neurons in Prefrontal Cortex Receive Subtype-Specific Forms of Excitation and Inhibition. Neuron, 2014, 81, 61-68.	3.8	177

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55	Optogenetic approaches for investigating neural pathways implicated in schizophrenia and related disorders. Human Molecular Genetics, 2014, 23, R64-R68.	1.4	16
56	A Class of GABAergic Neurons in the Prefrontal Cortex Sends Long-Range Projections to the Nucleus Accumbens and Elicits Acute Avoidance Behavior. Journal of Neuroscience, 2014, 34, 11519-11525.	1.7	152
57	Releasing the Brake Drives Fear Behavior. Science Translational Medicine, 2014, 6, .	5.8	0
58	You Have Your Fatherâ€™s Nose. Science Translational Medicine, 2014, 6, .	5.8	0
59	Serotonin Gives Oxytocin a Helping Hand. Science Translational Medicine, 2013, 5, .	5.8	3
60	Neurons Themselves May Shy Away from Normal Interactions in Autism. Science Translational Medicine, 2013, 5, .	5.8	0
61	Stimulating the Prefrontal Cortex to Undo Stimulant Addiction. Science Translational Medicine, 2013, 5, .	5.8	0
62	Autism in the Balance. Science Translational Medicine, 2013, 5, .	5.8	0
63	Transplanting Interneuron Precursors for Epilepsy Control. Science Translational Medicine, 2013, 5, .	5.8	0
64	Seeing the Big Picture in Fragile X Syndrome. Science Translational Medicine, 2013, 5, .	5.8	0
65	Too Much of a Good Thing?. Science Translational Medicine, 2013, 5, .	5.8	1
66	Synaptic Activity Unmasks Dopamine D2 Receptor Modulation of a Specific Class of Layer V Pyramidal Neurons in Prefrontal Cortex. Journal of Neuroscience, 2012, 32, 4959-4971.	1.7	194
67	Chronic reduction in inhibition reduces receptive field size in mouse auditory cortex. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13829-13834.	3.3	30
68	Insights into Cortical Oscillations Arising from Optogenetic Studies. Biological Psychiatry, 2012, 71, 1039-1045.	0.7	99
69	Responsive Neurostimulation Suppresses Synchronized Cortical Rhythms in Patients with Epilepsy. Neurosurgery Clinics of North America, 2011, 22, 481-488.	0.8	63
70	Neocortical excitation/inhibition balance in information processing and social dysfunction. Nature, 2011, 477, 171-178.	13.7	2,036
71	Ultrafast optogenetic control. Nature Neuroscience, 2010, 13, 387-392.	7.1	660
72	Dlx5andDlx6Regulate the Development of Parvalbumin-Expressing Cortical Interneurons. Journal of Neuroscience, 2010, 30, 5334-5345.	1.7	162

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73	Parvalbumin neurons and gamma rhythms enhance cortical circuit performance. Nature, 2009, 459, 698-702.	13.7	2,258
74	Intrinsic and Synaptic Dynamics Interact to Generate Emergent Patterns of Rhythmic Bursting in Thalamocortical Neurons. Journal of Neuroscience, 2006, 26, 4247-4255.	1.7	47
75	Inhibitory coupling specifically generates emergent gamma oscillations in diverse cell types. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 18638-18643.	3.3	41
76	Inhibitory Interconnections Control Burst Pattern and Emergent Network Synchrony in Reticular Thalamus. Journal of Neuroscience, 2003, 23, 8978-8988.	1.7	75
77	Dynamic GABA_AReceptor Subtype-Specific Modulation of the Synchrony and Duration of Thalamic Oscillations. Journal of Neuroscience, 2003, 23, 3649-3657.	1.7	86
78	Reciprocal inhibition controls the oscillatory state in thalamic networks. Neurocomputing, 2002, 44-46, 653-659.	3.5	9
79	It Takes T to Tango. Neuron, 2001, 31, 3-4.	3.8	10
80	Clonazepam suppresses oscillations in rat thalamic slices. Neurocomputing, 2001, 38-40, 907-913.	3.5	0
81	A model for experience-dependent changes in the responses of inferotemporal neurons. Network: Computation in Neural Systems, 2000, 11, 169-190.	2.2	45
82	Reciprocal inhibitory connections produce desynchronizing phase lags during intrathalamic oscillations. Neurocomputing, 2000, 32-33, 509-516.	3.5	3
83	Reciprocal Inhibitory Connections Regulate the Spatiotemporal Properties of Intrathalamic Oscillations. Journal of Neuroscience, 2000, 20, 1735-1745.	1.7	90
84	Long-range connections synchronize rather than spread intrathalamic oscillatory activity: Computational modeling and in vitro electrophysiology. Neurocomputing, 1999, 26-27, 525-531.	3.5	0
85	GABAB modulation improves sequence disambiguation in computational models of hippocampal region CA3. Hippocampus, 1998, 8, 171-193.	0.9	40
86	Changes in GABAB Modulation During a Theta Cycle May Be Analogous to the Fall of Temperature During Annealing. Neural Computation, 1998, 10, 869-882.	1.3	72
87	Localization of CCK Receptors in Thalamic Reticular Neurons: A Modeling Study. Journal of Neurophysiology, 1998, 79, 2820-2824.	0.9	8
88	Long-Range Connections Synchronize Rather Than Spread Intrathalamic Oscillations: Computational Modeling and In Vitro Electrophysiology. Journal of Neurophysiology, 1998, 80, 1736-1751.	0.9	15
89	A Mathematical Description for Gabaergic Modulation of Sequence Disambiguation in Hippocampal Region CA3. , 1998, , 525-530.		0
90	A Model of Changes in Inferotemporal Activity during a Delayed Match-To-Sample Task. , 1997, , 845-850.		1

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91	A model for experience-dependent changes in the responses of inferotemporal neurons. , 0, .		19