

Denis I Burdakov

List of Publications by Year in descending order

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91
papers

6,414
citations

66234

42
h-index

71532

76
g-index

101
all docs

101
docs citations

101
times ranked

5232
citing authors

#	ARTICLE	IF	CITATIONS
1	Narcolepsy " clinical spectrum, aetiopathophysiology, diagnosis and treatment. Nature Reviews Neurology, 2019, 15, 519-539.	4.9	364
2	Optogenetic identification of a rapid eye movement sleep modulatory circuit in the hypothalamus. Nature Neuroscience, 2013, 16, 1637-1643.	7.1	359
3	Physiological Changes in Glucose Differentially Modulate the Excitability of Hypothalamic Melanin-Concentrating Hormone and Orexin Neurons In Situ. Journal of Neuroscience, 2005, 25, 2429-2433.	1.7	314
4	Enhanced PIP3 signaling in POMC neurons causes KATP channel activation and leads to diet-sensitive obesity. Journal of Clinical Investigation, 2006, 116, 1886-1901.	3.9	281
5	Control of hypothalamic orexin neurons by acid and CO2. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 10685-10690.	3.3	265
6	Tandem-Pore K+ Channels Mediate Inhibition of Orexin Neurons by Glucose. Neuron, 2006, 50, 711-722.	3.8	259
7	Glucose-sensing neurons of the hypothalamus. Philosophical Transactions of the Royal Society B: Biological Sciences, 2005, 360, 2227-2235.	1.8	230
8	Intraluminal calcium as a primary regulator of endoplasmic reticulum function. Cell Calcium, 2005, 38, 303-310.	1.1	214
9	GABA and glutamate neurons in the VTA regulate sleep and wakefulness. Nature Neuroscience, 2019, 22, 106-119.	7.1	188
10	Coreleased Orexin and Glutamate Evoke Nonredundant Spike Outputs and Computations in Histamine Neurons. Cell Reports, 2014, 7, 697-704.	2.9	160
11	Awake dynamics and brain-wide direct inputs of hypothalamic MCH and orexin networks. Nature Communications, 2016, 7, 11395.	5.8	152
12	Orexin Excites GABAergic Neurons of the Arcuate Nucleus by Activating the Sodium-Calcium Exchanger. Journal of Neuroscience, 2003, 23, 4951-4957.	1.7	149
13	Activation of Central Orexin/Hypocretin Neurons by Dietary Amino Acids. Neuron, 2011, 72, 616-629.	3.8	134
14	Optogenetic Probing of Fast Glutamatergic Transmission from Hypocretin/Orexin to Histamine Neurons <i>In Situ</i> . Journal of Neuroscience, 2012, 32, 12437-12443.	1.7	131
15	Inhibitory Control of Prefrontal Cortex by the Claustrum. Neuron, 2018, 99, 1029-1039.e4.	3.8	121
16	Inhibitory Interplay between Orexin Neurons and Eating. Current Biology, 2016, 26, 2486-2491.	1.8	118
17	Acute Suppressive and Long-Term Phase Modulation Actions of Orexin on the Mammalian Circadian Clock. Journal of Neuroscience, 2014, 34, 3607-3621.	1.7	116
18	Optogenetic Evidence for Inhibitory Signaling from Orexin to MCH Neurons via Local Microcircuits. Journal of Neuroscience, 2015, 35, 5435-5441.	1.7	113

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19	Metabolism-Independent Sugar Sensing in Central Orexin Neurons. <i>Diabetes</i> , 2008, 57, 2569-2576.	0.3	111
20	Aversive stimuli drive hypothalamus-to-habenula excitation to promote escape behavior. <i>ELife</i> , 2017, 6, .	2.8	110
21	Adaptive sugar sensors in hypothalamic feeding circuits. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 11975-11980.	3.3	107
22	Gamma oscillations organize top-down signalling to hypothalamus and enable food seeking. <i>Nature</i> , 2017, 542, 232-236.	13.7	102
23	Lateral hypothalamus as a sensor-regulator in respiratory and metabolic control. <i>Physiology and Behavior</i> , 2013, 121, 117-124.	1.0	97
24	Dissociation between sensing and metabolism of glucose in sugar sensing neurones. <i>Journal of Physiology</i> , 2009, 587, 41-48.	1.3	92
25	Multiple hypothalamic circuits sense and regulate glucose levels. <i>American Journal of Physiology - Regulatory Integrative and Comparative Physiology</i> , 2011, 300, R47-R55.	0.9	88
26	Polarity in intracellular calcium signaling. <i>BioEssays</i> , 1999, 21, 851-860.	1.2	78
27	Hypothalamic orexins/hypocretins as regulators of breathing. <i>Expert Reviews in Molecular Medicine</i> , 2008, 10, e28.	1.6	74
28	Orexin-driven GAD65 network of the lateral hypothalamus sets physical activity in mice. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4525-4530.	3.3	73
29	Electrical Inhibition of Identified Anorexigenic POMC Neurons by Orexin/Hypocretin. <i>Journal of Neuroscience</i> , 2007, 27, 1529-1533.	1.7	72
30	Leptin Does Not Directly Affect CNS Serotonin Neurons to Influence Appetite. <i>Cell Metabolism</i> , 2011, 13, 584-591.	7.2	67
31	Accumbal D2 cells orchestrate innate risk-avoidance according to orexin signals. <i>Nature Neuroscience</i> , 2018, 21, 29-32.	7.1	66
32	Deletion of TASK1 and TASK3 channels disrupts intrinsic excitability but does not abolish glucose or pH responses of orexin/hypocretin neurons. <i>European Journal of Neuroscience</i> , 2009, 30, 57-64.	1.2	61
33	Glutamate and GABA as rapid effectors of hypothalamic α -peptidergic neurons. <i>Frontiers in Behavioral Neuroscience</i> , 2012, 6, 81.	1.0	60
34	Lateral hypothalamic GAD65 neurons are spontaneously firing and distinct from orexin and melanin-concentrating hormone neurons. <i>Journal of Physiology</i> , 2013, 591, 933-953.	1.3	60
35	Orexin neurons as conditional glucosensors: paradoxical regulation of sugar sensing by intracellular fuels. <i>Journal of Physiology</i> , 2011, 589, 5701-5708.	1.3	59
36	Natural hypothalamic circuit dynamics underlying object memorization. <i>Nature Communications</i> , 2019, 10, 2505.	5.8	59

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37	Cholecystokinin Tunes Firing of an Electrically Distinct Subset of Arcuate Nucleus Neurons by Activating A-Type Potassium Channels. <i>Journal of Neuroscience</i> , 2002, 22, 6380-6387.	1.7	53
38	Metabolic state signalling through central hypocretin/orexin neurons. <i>Journal of Cellular and Molecular Medicine</i> , 2005, 9, 795-803.	1.6	51
39	Role of spontaneous and sensory orexin network dynamics in rapid locomotion initiation. <i>Progress in Neurobiology</i> , 2020, 187, 101771.	2.8	51
40	A genetically encoded sensor for in vivo imaging of orexin neuropeptides. <i>Nature Methods</i> , 2022, 19, 231-241.	9.0	50
41	Stimulation of orexin/hypocretin neurones by thyrotropin-releasing hormone. <i>Journal of Physiology</i> , 2009, 587, 1179-1186.	1.3	49
42	Dichotomous cellular properties of mouse orexin/hypocretin neurons. <i>Journal of Physiology</i> , 2011, 589, 2767-2779.	1.3	49
43	Convergent inputs from electrically and topographically distinct orexin cells to locus coeruleus and ventral tegmental area. <i>European Journal of Neuroscience</i> , 2012, 35, 1426-1432.	1.2	48
44	Paradoxical function of orexin/hypocretin circuits in a mouse model of Huntington's disease. <i>Neurobiology of Disease</i> , 2011, 42, 438-445.	2.1	45
45	Dopamine neuron-derived IGF-1 controls dopamine neuron firing, skill learning, and exploration. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 3817-3826.	3.3	45
46	Sleep & metabolism: The multitasking ability of lateral hypothalamic inhibitory circuitries. <i>Frontiers in Neuroendocrinology</i> , 2017, 44, 27-34.	2.5	44
47	5-HT _{2C} Receptor Agonist Anorectic Efficacy Potentiated by 5-HT _{1B} Receptor Agonist Coapplication: An Effect Mediated via Increased Proportion of Pro-Opiomelanocortin Neurons Activated. <i>Journal of Neuroscience</i> , 2013, 33, 9800-9804.	1.7	43
48	Two neuropeptides recruit different messenger pathways to evoke Ca ²⁺ signals in the same cell. <i>Current Biology</i> , 2000, 10, 993-996.	1.8	41
49	The hypothalamus as a primary coordinator of memory updating. <i>Physiology and Behavior</i> , 2020, 223, 112988.	1.0	41
50	Cellular activation of hypothalamic hypocretin/orexin neurons facilitates short-term spatial memory in mice. <i>Neurobiology of Learning and Memory</i> , 2016, 136, 183-188.	1.0	39
51	Neuropeptide Y Cells Represent a Distinct Glucose-Sensing Population in the Lateral Hypothalamus. <i>Endocrinology</i> , 2011, 152, 4046-4052.	1.4	35
52	5-HT Obesity Medication Efficacy via POMC Activation is Maintained During Aging. <i>Endocrinology</i> , 2014, 155, 3732-3738.	1.4	35
53	Orexin/Hypocretin and Organizing Principles for a Diversity of Wake-Promoting Neurons in the Brain. <i>Current Topics in Behavioral Neurosciences</i> , 2016, 33, 51-74.	0.8	34
54	Reactive and predictive homeostasis: Roles of orexin/hypocretin neurons. <i>Neuropharmacology</i> , 2019, 154, 61-67.	2.0	32

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55	Low-voltage-activated A-current controls the firing dynamics of mouse hypothalamic orexin neurons. <i>European Journal of Neuroscience</i> , 2004, 20, 3281-3285.	1.2	31
56	Gain Control by Concerted Changes in IA and IH Conductances. <i>Neural Computation</i> , 2005, 17, 991-995.	1.3	29
57	Direct and indirect control of orexin/hypocretin neurons by glycine receptors. <i>Journal of Physiology</i> , 2011, 589, 639-651.	1.3	28
58	Electrical Signaling in Central Orexin/Hypocretin Circuits: Tuning Arousal and Appetite to Fit the Environment. <i>Neuroscientist</i> , 2004, 10, 286-291.	2.6	27
59	AgRP neuron activity is required for alcohol-induced overeating. <i>Nature Communications</i> , 2017, 8, 14014.	5.8	23
60	Orexin neurons and inhibitory AgRP ⁺ orexin circuits guide spatial exploration in mice. <i>Journal of Physiology</i> , 2020, 598, 4371-4383.	1.3	23
61	Ultra-sparse Connectivity within the Lateral Hypothalamus. <i>Current Biology</i> , 2020, 30, 4063-4070.e2.	1.8	22
62	Control of fear extinction by hypothalamic melanin-concentrating hormone-expressing neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 22514-22521.	3.3	21
63	A unifying computational framework for stability and flexibility of arousal. <i>Frontiers in Systems Neuroscience</i> , 2014, 8, 192.	1.2	20
64	Biophysical re-equilibration of Ca ²⁺ fluxes as a simple biologically plausible explanation for complex intracellular Ca ²⁺ release patterns. <i>FEBS Letters</i> , 2006, 580, 463-468.	1.3	19
65	How orexin signals bias action: Hypothalamic and accumbal circuits. <i>Brain Research</i> , 2020, 1731, 145943.	1.1	19
66	Orexin/Hypocretin and MCH Neurons: Cognitive and Motor Roles Beyond Arousal. <i>Frontiers in Neuroscience</i> , 2021, 15, 639313.	1.4	18
67	Neuropeptides as Primary Mediators of Brain Circuit Connectivity. <i>Frontiers in Neuroscience</i> , 2021, 15, 644313.	1.4	18
68	Projections from the dorsomedial division of the bed nucleus of the stria terminalis to hypothalamic nuclei in the mouse. <i>Journal of Comparative Neurology</i> , 2021, 529, 929-956.	0.9	17
69	Do orexin/hypocretin neurons signal stress or reward?. <i>Peptides</i> , 2021, 145, 170629.	1.2	16
70	Optogenetics: potentials for addiction research. <i>Addiction Biology</i> , 2011, 16, 519-531.	1.4	15
71	Ingested non-essential amino acids recruit brain orexin cells to suppress eating in mice. <i>Current Biology</i> , 2022, 32, 1812-1821.e4.	1.8	15
72	Optogenetic activation of striatal D1R and D2R cells differentially engages downstream connected areas beyond the basal ganglia. <i>Cell Reports</i> , 2021, 37, 110161.	2.9	15

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73	K ⁺ channels stimulated by glucose: a new energy-sensing pathway. <i>Pflugers Archiv European Journal of Physiology</i> , 2007, 454, 19-27.	1.3	13
74	Silencing of ventromedial hypothalamic neurons by glucose-stimulated K ⁺ currents. <i>Pflugers Archiv European Journal of Physiology</i> , 2009, 458, 777-783.	1.3	12
75	Fast and Slow Oscillations Recruit Molecularly-Distinct Subnetworks of Lateral Hypothalamic Neurons <i>In Situ</i> . <i>ENeuro</i> , 2018, 5, ENEURO.0012-18.2018.	0.9	11
76	Rational inattention in mice. <i>Science Advances</i> , 2022, 8, eabj8935.	4.7	10
77	Fast sensory representations in the lateral hypothalamus and their roles in brain function. <i>Physiology and Behavior</i> , 2020, 222, 112952.	1.0	9
78	Mechanisms of Gain Control by Voltage-Gated Channels in Intrinsically-Firing Neurons. <i>PLoS ONE</i> , 2015, 10, e0115431.	1.1	8
79	Shedding new light on brain metabolism and glial function. <i>Journal of Physiology</i> , 2002, 544, 334-334.	1.3	7
80	Unraveling electrical signaling strategies in hypothalamic feeding circuits. <i>Trends in Endocrinology and Metabolism</i> , 2005, 16, 202-203.	3.1	7
81	Sweet and Low on Leptin: Hormonal Regulation of Sweet Taste Buds. <i>Diabetes</i> , 2015, 64, 3651-3652.	0.3	7
82	Hypothalamic deep brain stimulation as a strategy to manage anxiety disorders. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2113518119.	3.3	6
83	Natural VTA activity during NREM sleep influences future exploratory behavior. <i>IScience</i> , 2022, 25, 104396.	1.9	6
84	Tuning Low-Voltage-Activated A-Current for Silent Gain Modulation. <i>Neural Computation</i> , 2012, 24, 3181-3190.	1.3	5
85	Hypothalamic Heuristics for Survival. <i>Trends in Endocrinology and Metabolism</i> , 2019, 30, 689-691.	3.1	5
86	Diet and sleep: is hypothalamus the link?. <i>Current Opinion in Physiology</i> , 2020, 15, 224-229.	0.9	4
87	Subsecond Ensemble Dynamics of Orexin Neurons Link Sensation and Action. <i>Frontiers of Neurology and Neuroscience</i> , 2021, 45, 52-60.	3.0	4
88	Orexin neuron activity in mating mice - a pilot study. <i>Neuroanatomy and Behaviour</i> , 2021, 3, e17-e17.	1.5	3
89	Brain glucose feedback predicts food choice (Commentary on Wakabayashi <i>et al.</i>). <i>European Journal of Neuroscience</i> , 2016, 43, 1420-1421.	1.2	2
90	A Circuit Perspective on State-Dependent Effects of Dopamine Stimulants. <i>Neuron</i> , 2019, 103, 755-756.	3.8	0

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91	Metabolic Influence on the Hypocretin/Orexin Neurons. , 2011, , 211-216.		0