Tomi Pentti Johannes RantamÃ¤ki

List of Publications by Year
in descending order

57 papers	3,533 citations	172386 29 h-index	149623 56 g-index
62 all docs	62 docs citations	62 times ranked	4851 citing authors

#	Article	IF	Citations
1	The role of BDNF and its receptors in depression and antidepressant drug action: Reactivation of developmental plasticity. Developmental Neurobiology, 2010, 70, 289-297.	1.5	725
2	Role of neurotrophic factors in depression. Current Opinion in Pharmacology, 2007, 7, 18-21.	1.7	610
3	Pharmacologically Diverse Antidepressants Rapidly Activate Brain-Derived Neurotrophic Factor Receptor TrkB and Induce Phospholipase-CÎ³ Signaling Pathways in Mouse Brain. Neuropsychopharmacology, 2007, 32, 2152-2162.	2.8	277
4	Enhanced BDNF Signaling is Associated with an Antidepressant-like Behavioral Response and Changes in Brain Monoamines. Cellular and Molecular Neurobiology, 2005, 25, 973-980.	1.7	112
5	Antidepressant Drugs Transactivate TrkB Neurotrophin Receptors in the Adult Rodent Brain Independently of BDNF and Monoamine Transporter Blockade. PLoS ONE, 2011, 6, e20567.	1.1	110
6	Role of Brain-Derived Neurotrophic Factor in the Aetiology of Depression. CNS Drugs, 2010, 24, 1-7.	2.7	100
7	Cholesterol Loss Enhances TrkB Signaling in Hippocampal Neurons Aging in Vitro. Molecular Biology of the Cell, 2008, 19, 2101-2112.	0.9	89
8	The antidepressant-like effects of glutamatergic drugs ketamine and AMPA receptor potentiator LY 451646 are preserved in bdnf+/â^' heterozygous null mice. Neuropharmacology, 2012, 62, 391-397.	2.0	89
9	BDNF and TrkB in neuronal differentiation of Fmr1-knockout mouse. Neurobiology of Disease, 2011, 41, 469-480.	2.1	81
10	Impaired TrkB receptor signaling contributes to memory impairment in APP/PS1 mice. Neurobiology of Aging, 2012, 33, 1122.e23-1122.e39.	1.5	81
11	Isoflurane produces antidepressant effects and induces TrkB signaling in rodents. Scientific Reports, 2017, 7, 7811.	1.6	70
12	Modulation of BDNF cleavage by plasminogen-activator inhibitor-1 contributes to Alzheimer's neuropathology and cognitive deficits. Biochimica Et Biophysica Acta - Molecular Basis of Disease, 2017, 1863, 991-1001.	1.8	69
13	A role for BDNF/TrkB signaling in behavioral and physiological consequences of social defeat stress. Genes, Brain and Behavior, 2011, 10, 424-433.	1.1	66
14	VGF (TLQP-62)-induced neurogenesis targets early phase neural progenitor cells in the adult hippocampus and requires glutamate and BDNF signaling. Stem Cell Research, 2014, 12, 762-777.	0.3	62
15	The Impact of Bdnf Gene Deficiency to the Memory Impairment and Brain Pathology of APPswe/PS1dE9 Mouse Model of Alzheimerâ€™s Disease. PLoS ONE, 2013, 8, e68722.	1.1	55
16	Neurotrophins in Depression and Antidepressant Effects. Novartis Foundation Symposium, 2008, 289, 43-59.	1.2	53
17	Darkness Reduces BDNF Expression in the Visual Cortex and Induces Repressive Chromatin Remodeling at the BDNF Gene in Both Hippocampus and Visual Cortex. Cellular and Molecular Neurobiology, 2010, 30, 1117-1123.	1.7	50
18	Alterations in BDNF and phospho-CREB levels following chronic oral nicotine treatment and its withdrawal in dopaminergic brain areas of mice. Neuroscience Letters, 2011, 491, 108-112.	1.0	47

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19	Acetylcholinesterase inhibitors rapidly activate Trk neurotrophin receptors in the mouse hippocampus. Neuropharmacology, 2011, 61, 1291-1296.	2.0	45
20	Regulation of Brain-Derived Neurotrophic Factor (BDNF) and Cerebral Dopamine Neurotrophic Factor (CDNF) by Anti-Parkinsonian Drug Therapy In Vivo. Cellular and Molecular Neurobiology, 2010, 30, 361-368.	1.7	42
21	Brief Isoflurane Anesthesia Produces Prominent Phosphoproteomic Changes in the Adult Mouse Hippocampus. ACS Chemical Neuroscience, 2016, 7, 749-756.	1.7	39
22	The effects of acute and long-term lithium treatments on trkB neurotrophin receptor activation in the mouse hippocampus and anterior cingulate cortex. Neuropharmacology, 2006, 50, 421-427.	2.0	38
23	Brain-Derived Neurotrophic Factor Controls Activity-Dependent Maturation of CA1 Synapses by Downregulating Tonic Activationof Presynaptic Kainate Receptors. Journal of Neuroscience, 2009, 29, 11294-11303.	1.7	37
24	The Responsiveness of TrkB to BDNF and Antidepressant Drugs Is Differentially Regulated during Mouse Development. PLoS ONE, 2012, 7, e32869.	1.1	37
25	Antidepressant drug action â€" From rapid changes on network function to network rewiring. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2016, 64, 285-292.	2.5	36
26	Ketamine induces rapid and sustained antidepressant-like effects in chronic pain induced depression: Role of MAPK signaling pathway. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2020, 100, 109898.	2.5	36
27	Cortical Excitability and Activation of TrkB Signaling During Rebound Slow Oscillations Are Critical for Rapid Antidepressant Responses. Molecular Neurobiology, 2019, 56, 4163-4174.	1.9	35
28	Targeting TrkB neurotrophin receptor to treat depression. Expert Opinion on Therapeutic Targets, 2008, 12, 705-715.	1.5	34
29	Distinctive behavioral and cellular responses to fluoxetine in the mouse model for Fragile X syndrome. Frontiers in Cellular Neuroscience, 2014, 8, 150.	1.8	32
30	P11 promoter methylation predicts the antidepressant effect of electroconvulsive therapy. Translational Psychiatry, 2018, 8, 25.	2.4	32
31	TrkB neurotrophin receptor at the core of antidepressant effects, but how?. Cell and Tissue Research, 2019, 377, 115-124.	1.5	30
32	Encoding, Consolidation, and Renormalization in Depression: Synaptic Homeostasis, Plasticity, and Sleep Integrate Rapid Antidepressant Effects. Pharmacological Reviews, 2020, 72, 439-465.	7.1	28
33	Nimodipine Activates TrkB Neurotrophin Receptors and Induces Neuroplastic and Neuroprotective Signaling Events in the Mouse Hippocampus and Prefrontal Cortex. Cellular and Molecular Neurobiology, 2015, 35, 189-196.	1.7	26
34	Effects of Maternal Smoking and Exposure to Methylmercury on Brain-Derived Neurotrophic Factor Concentrations in Umbilical Cord Serum. Toxicological Sciences, 2010, 117, 263-269.	1.4	25
35	Sleep homeostasis and depression: Studies with the rat clomipramine model of depression. Neuroscience, 2012, 212, 149-158.	1.1	24
36	Brief isoflurane anesthesia regulates striatal AKTâ€GSK3Î² signaling and ameliorates motor deficits in a rat model of earlyâ€stage Parkinsonâ€²s disease. Journal of Neurochemistry, 2017, 142, 456-463.	2.1	22

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37	Repeated brief isoflurane anesthesia during early postnatal development produces negligible changes on adult behavior in male mice. PLoS ONE, 2017, 12, e0175258.	1.1	20
38	Ketamine-induced regulation of TrkB-GSK3Î² signaling is accompanied by slow EEG oscillations and sedation but is independent of hydroxynorketamine metabolites. Neuropharmacology, 2019, 157, 107684.	2.0	18
39	Rapid Activation of the Extracellular Signal-Regulated Kinase 1/2 (ERK1/2) Signaling Pathway by Electroconvulsive Shock in the Rat Prefrontal Cortex Is Not Associated with TrkB Neurotrophin Receptor Activation. Cellular and Molecular Neurobiology, 2007, 27, 585-594.	1.7	17
40	Utilization of in situ ELISA method for examining Trk receptor phosphorylation in cultured cells. Journal of Neuroscience Methods, 2014, 222, 142-146.	1.3	17
41	Dual mechanism of TRKB activation by anandamide through CB1 and TRPV1 receptors. PeerJ, 2019, 7, e6493.	0.9	16
42	ADHD-like behaviors caused by inactivation of a transcription factor controlling the balance of inhibitory and excitatory neuron development in the mouse anterior brainstem. Translational Psychiatry, 2020, 10, 357.	2.4	15
43	Dose-dependent effects of isoflurane on TrkB and GSK3Î² signaling: Importance of burst suppression pattern. Neuroscience Letters, 2019, 694, 29-33.	1.0	10
44	A comprehensive p75 neurotrophin receptor gene network and pathway analyses identifying new target genes. Scientific Reports, 2020, 10, 14984.	1.6	10
45	Combined ipsilateral limb use score as an index of motor deficits and neurorestoration in parkinsonian rats. Journal of Neuroscience Research, 2017, 95, 1858-1870.	1.3	9
46	Sleep-State Dependent Alterations in Brain Functional Connectivity under Urethane Anesthesia in a Rat Model of Early-Stage Parkinsonâ€™s Disease. ENeuro, 2019, 6, ENEURO.0456-18.2019.	0.9	9
47	NCAM-deficient mice show prominent abnormalities in serotonergic and BDNF systems in brain â€“ Restoration by chronic amitriptyline. European Neuropsychopharmacology, 2015, 25, 2394-2403.	0.3	7
48	Dyskinesia and brain-derived neurotrophic factor levels after long-term levodopa and nicotinic receptor agonist treatments in female mice with near-total unilateral dopaminergic denervation. BMC Neuroscience, 2018, 19, 77.	0.8	6
49	Lack of antidepressant effects of burst-suppressing isoflurane anesthesia in adult male Wistar outbred rats subjected to chronic mild stress. PLoS ONE, 2020, 15, e0235046.	1.1	6
50	A wake-up call: Sleep physiology and related translational discrepancies in studies of rapid-acting antidepressants. Progress in Neurobiology, 2021, 206, 102140.	2.8	6
51	Searching for ketamine's antidepressant mechanisms: From synaptic plasticity to dentate gyrus cell proliferation. Acta Physiologica, 2019, 225, e13252.	1.8	5
52	Depression and antidepressant actionâ€”from molecules to networks. Cell and Tissue Research, 2019, 377, 1-4.	1.5	4
53	Rapidâ€acting antidepressants and the regulation of TrkB neurotrophic signallingâ€”Insights from ketamine, nitrous oxide, seizures and anaesthesia. Basic and Clinical Pharmacology and Toxicology, 2021, 129, 95-103.	1.2	4
54	Digital autoradiography for efficient functional imaging without anesthesia in experimental animals: Reversing phencyclidine-induced functional alterations using clozapine. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 2020, 100, 109887.	2.5	3

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55	Commentary: Commonly Used Anesthesia/Euthanasia Methods for Brain Collection Differentially Impact MAPK Activity in Male and Female C57BL/6 Mice. Frontiers in Cellular Neuroscience, 2019, 13, 219.	1.8	2
56	Improving Group Work Practices in Teaching Life Sciences: Trialogical Learning. Research in Science Education, 2019, 49, 809-828.	1.4	2
57	Tianeptine induces expression of dual specificity phosphatases and evokes rebound emergence of cortical slow wave electrophysiological activity. Neuroscience Letters, 2021, 764, 136200.	1.0	0