

Learning upregulates brain-derived neurotrophic factor
mechanism to facilitate encoding and circuit maintenance

Behavioral Neuroscience

112, 1012-1019

DOI: [10.1037/0735-7044.112.4.1012](https://doi.org/10.1037/0735-7044.112.4.1012)

Citation Report

#	ARTICLE	IF	CITATIONS
1	Neurotrophins and hippocampal synaptic transmission and plasticity. <i>Journal of Neuroscience Research</i> , 1999, 58, 76-87.	1.3	223
2	Hippocampal BDNF mRNA shows a diurnal regulation, primarily in the exon III transcript. <i>Molecular Brain Research</i> , 1999, 71, 11-22.	2.5	66
3	Neurotrophic Factor Strategies for the Treatment of Alzheimer Disease. <i>Alzheimer Disease and Associated Disorders</i> , 2000, 14, S39-S46.	0.6	9
4	Basic fibroblast growth factor as a mediator of the effects of glutamate in the development of long-lasting sensitization to stimulant drugs: studies in the rat. <i>Psychopharmacology</i> , 2000, 151, 152-165.	1.5	61
5	Involvement of Brain-Derived Neurotrophic Factor in Spatial Memory Formation and Maintenance in a Radial Arm Maze Test in Rats. <i>Journal of Neuroscience</i> , 2000, 20, 7116-7121.	1.7	486
6	Positive Modulation of AMPA Receptors Increases Neurotrophin Expression by Hippocampal and Cortical Neurons. <i>Journal of Neuroscience</i> , 2000, 20, 8-21.	1.7	262
7	Modulation of hippocampal synaptic transmission and plasticity by neurotrophins. <i>Progress in Brain Research</i> , 2000, 128, 231-241.	0.9	139
8	Acute nicotine decreases, and chronic nicotine increases the expression of brain-derived neurotrophic factor mRNA in rat hippocampus. <i>Molecular Brain Research</i> , 2000, 85, 234-238.	2.5	140
9	Long-Term Environmental Enrichment Leads to Regional Increases in Neurotrophin Levels in Rat Brain. <i>Experimental Neurology</i> , 2000, 164, 45-52.	2.0	462
10	Exercise influences spatial learning in the radial arm maze. <i>Physiology and Behavior</i> , 2000, 70, 425-429.	1.0	187
11	Brain-derived neurotrophic factor in the control human brain, and in Alzheimer's disease and Parkinson's disease. <i>Progress in Neurobiology</i> , 2001, 63, 71-124.	2.8	760
12	Physical activity's antidepressant treatment combination: impact on brain-derived neurotrophic factor and behavior in an animal model. <i>Behavioural Brain Research</i> , 2001, 120, 87-95.	1.2	308
13	Self-administration cues as signals: Drug self-administration and tolerance.. <i>Journal of Experimental Psychology</i> , 2001, 27, 125-136.	1.9	30
14	9 Neurotrophic factors as potential therapeutic agents in neuronal ceroid lipofuscinosis. <i>Advances in Genetics</i> , 2001, 45, 169-182.	0.8	3
15	Estrogen and exercise interact to regulate brain-derived neurotrophic factor mRNA and protein expression in the hippocampus. <i>European Journal of Neuroscience</i> , 2001, 14, 1992-2002.	1.2	271
16	Spatial learning induces neurotrophin receptor and synapsin I in the hippocampus. <i>Brain Research</i> , 2001, 904, 13-19.	1.1	100
17	Correlation between hippocampal BDNF mRNA expression and memory performance in senescent rats. <i>Brain Research</i> , 2001, 915, 227-233.	1.1	105
18	β -Amyloid-(1-42) Impairs Activity-dependent cAMP-response Element-binding Protein Signaling in Neurons at Concentrations in Which Cell Survival Is Not Compromised. <i>Journal of Biological Chemistry</i> , 2001, 276, 17301-17306.	1.6	195

#	ARTICLE	IF	CITATIONS
19	Is LTP in the Hippocampus a Useful Model for Learning-Related Alterations in Gene Expression?. <i>Reviews in the Neurosciences</i> , 2001, 12, 289-96.	1.4	4
20	From Acquisition to Consolidation: On the Role of Brain-Derived Neurotrophic Factor Signaling in Hippocampal-Dependent Learning. <i>Learning and Memory</i> , 2002, 9, 224-237.	0.5	593
21	Stress, Metaplasticity, and Antidepressants. <i>Current Molecular Medicine</i> , 2002, 2, 629-638.	0.6	107
22	Spontaneous Limbic Seizures after Intrahippocampal Infusion of Brain-Derived Neurotrophic Factor. <i>Experimental Neurology</i> , 2002, 174, 201-214.	2.0	179
23	Exercise: a behavioral intervention to enhance brain health and plasticity. <i>Trends in Neurosciences</i> , 2002, 25, 295-301.	4.2	2,157
24	Can estrogen play a significant role in the prevention of Alzheimer's disease?. <i>Journal of Neural Transmission Supplementum</i> , 2002, , 227-239.	0.5	17
25	Role for brain-derived neurotrophic factor in learning and memory. <i>Life Sciences</i> , 2002, 70, 735-744.	2.0	342
26	Environmental enrichment attenuates cognitive deficits, but does not alter neurotrophin gene expression in the hippocampus following lateral fluid percussion brain injury. <i>Neuroscience</i> , 2002, 112, 631-637.	1.1	83
27	A high-fat, refined sugar diet reduces hippocampal brain-derived neurotrophic factor, neuronal plasticity, and learning. <i>Neuroscience</i> , 2002, 112, 803-814.	1.1	763
28	Downregulation of BDNF mRNA in the Hippocampal Dentate Gyrus after Re-exposure to Cues Previously Associated with Footshock,. <i>Neuropsychopharmacology</i> , 2002, 27, 133-142.	2.8	235
29	Hippocampal brain-derived neurotrophic factor gene regulation by exercise and the medial septum. <i>Journal of Neuroscience Research</i> , 2002, 68, 511-521.	1.3	112
30	Long-term monitoring of hippocampus-dependent behavior in naturalistic settings: Mutant mice lacking neurotrophin receptor TrkB in the forebrain show spatial learning but impaired behavioral flexibility. <i>Hippocampus</i> , 2002, 12, 27-38.	0.9	64
31	Short-Term Sleep Disturbance Enhances Brain-Derived Neurotrophic Factor Gene Expression in Rat Hippocampus by Acting as Internal Stressor. <i>Journal of Molecular Neuroscience</i> , 2003, 21, 223-232.	1.1	45
32	Deficits in spatial learning and synaptic plasticity induced by the rapid and competitive broad-spectrum cyclooxygenase inhibitor ibuprofen are reversed by increasing endogenous brain-derived neurotrophic factor. <i>European Journal of Neuroscience</i> , 2003, 17, 2438-2446.	1.2	86
33	Increased neurogenesis and brain-derived neurotrophic factor in neurokinin-1 receptor gene knockout mice. <i>European Journal of Neuroscience</i> , 2003, 18, 1828-1836.	1.2	80
34	Differential effects of learning on neurogenesis: learning increases or decreases the number of newly born cells depending on their birth date. <i>Molecular Psychiatry</i> , 2003, 8, 974-982.	4.1	223
35	Spatial learning is delayed and brain-derived neurotrophic factor mRNA expression inhibited by administration of MK-801 in rats. <i>Neuroscience Letters</i> , 2003, 353, 95-98.	1.0	21
36	Pivotal role of attractin in cell survival under oxidative stress in the zitter rat brain with genetic spongiform encephalopathy. <i>Molecular Brain Research</i> , 2003, 111, 111-122.	2.5	19

#	ARTICLE	IF	CITATIONS
37	A saturated-fat diet aggravates the outcome of traumatic brain injury on hippocampal plasticity and cognitive function by reducing brain-derived neurotrophic factor. <i>Neuroscience</i> , 2003, 119, 365-375.	1.1	209
38	Learning deficits in forebrain-restricted brain-derived neurotrophic factor mutant mice. <i>Neuroscience</i> , 2003, 121, 341-354.	1.1	204
39	BDNF and Activity-Dependent Synaptic Modulation. <i>Learning and Memory</i> , 2003, 10, 86-98.	0.5	808
41	Functional brain abnormalities in young adults at genetic risk for late-onset Alzheimer's dementia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 284-289.	3.3	907
42	Acute and long-term synaptic modulation by neurotrophins. <i>Progress in Brain Research</i> , 2004, 146, 135-150.	0.9	70
43	Brain-Derived Neurotrophic Factor and Tyrosine Kinase Receptor B Involvement in Amygdala-Dependent Fear Conditioning. <i>Journal of Neuroscience</i> , 2004, 24, 4796-4806.	1.7	315
44	Exercise, antidepressant treatment, and BDNF mRNA expression in the aging brain. <i>Pharmacology Biochemistry and Behavior</i> , 2004, 77, 209-220.	1.3	116
45	Behaviorally-induced ultrastructural plasticity in the hippocampal region after cerebral ischemia. <i>Brain Research</i> , 2004, 997, 137-146.	1.1	37
46	Acute social defeat reduces neurotrophin expression in brain cortical and subcortical areas in mice. <i>Brain Research</i> , 2004, 1025, 10-20.	1.1	172
47	Altered expression of BDNF and its high-affinity receptor TrkB in response to complex motor learning and moderate exercise. <i>Brain Research</i> , 2004, 1028, 92-104.	1.1	158
48	Recovery from brain injury in animals: relative efficacy of environmental enrichment, physical exercise or formal training (1990-2002). <i>Progress in Neurobiology</i> , 2004, 72, 167-182.	2.8	294
49	Transgenic mice overexpressing the full-length neurotrophin receptor trkB exhibit increased activation of the trkB-PLC β 3 pathway, reduced anxiety, and facilitated learning. <i>Molecular and Cellular Neurosciences</i> , 2004, 26, 166-181.	1.0	165
50	Increased Expression of BDNF and Proliferation of Dentate Granule Cells After Bacterial Meningitis. <i>Journal of Neuropathology and Experimental Neurology</i> , 2005, 64, 806-815.	0.9	46
51	Effects of nefiracetam on the levels of brain-derived neurotrophic factor and synapsin I mRNA and protein in the hippocampus of microsphere-embolized rats. <i>European Journal of Pharmacology</i> , 2005, 507, 49-56.	1.7	7
52	Neurogenesis. , 2005, , 261-289.		0
53	Cognitive performance is highly sensitive to prior experience in mice with a learning and memory deficit: Failure leads to more failure. <i>Learning and Memory</i> , 2005, 12, 461-471.	0.5	8
54	Analysis of the Stress Response in Rats Trained in the Water-Maze: Differential Expression of Corticotropin-Releasing Hormone, CRH-R1, Glucocorticoid Receptors and Brain-Derived Neurotrophic Factor in Limbic Regions. <i>Neuroendocrinology</i> , 2005, 82, 306-319.	1.2	102
55	Adult Neurogenesis: From Precursors to Network and Physiology. <i>Physiological Reviews</i> , 2005, 85, 523-569.	13.1	882

#	ARTICLE	IF	CITATIONS
56	Caloric restriction does not reverse aging-related changes in hippocampal BDNF. <i>Neurobiology of Aging</i> , 2005, 26, 683-688.	1.5	53
57	Stress suppresses and learning induces plasticity in CA3 of rat hippocampus: A three-dimensional ultrastructural study of thorny excrescences and their postsynaptic densities. <i>Neuroscience</i> , 2005, 131, 43-54.	1.1	180
58	Brain-Derived Neurotrophic Factor in Amygdala-Dependent Learning. <i>Neuroscientist</i> , 2005, 11, 323-333.	2.6	130
59	License to Run: Exercise Impacts Functional Plasticity in the Intact and Injured Central Nervous System by Using Neurotrophins. <i>Neurorehabilitation and Neural Repair</i> , 2005, 19, 283-295.	1.4	354
60	Insulin-like growth factor I interfaces with brain-derived neurotrophic factor-mediated synaptic plasticity to modulate aspects of exercise-induced cognitive function. <i>Neuroscience</i> , 2006, 140, 823-833.	1.1	462
61	Corticosterone Actions on the Hippocampal Brain-Derived Neurotrophic Factor Expression are Mediated by Exon IV Promoter. <i>Journal of Neuroendocrinology</i> , 2006, 18, 104-114.	1.2	88
62	Suppression of hippocampal plasticity-related gene expression by sleep deprivation in rats. <i>Journal of Physiology</i> , 2006, 575, 807-819.	1.3	156
63	GMF-Knockout Mice are Unable to Induce Brain-Derived Neurotrophic Factor after Exercise. <i>Neurochemical Research</i> , 2006, 31, 579-584.	1.6	23
64	Brain-derived neurotrophic factor enhances conditioned taste aversion retention. <i>Brain Research</i> , 2006, 1067, 250-255.	1.1	36
65	Apolipoprotein E variants and cognition in healthy individuals: A critical opinion. <i>Brain Research Reviews</i> , 2006, 51, 125-135.	9.1	37
66	Spatial navigation in complex and radial mazes in APP23 animals and neurotrophin signaling as a biological marker of early impairment. <i>Learning and Memory</i> , 2006, 13, 63-71.	0.5	57
67	Upregulation of Neurotrophic Factors Selectively in Frontal Cortex in Response to Olfactory Discrimination Learning. <i>Neural Plasticity</i> , 2007, 2007, 1-6.	1.0	9
68	Bidirectional changes in water-maze learning following recombinant adenovirus-associated viral vector (rAAV)-mediated brain-derived neurotrophic factor expression in the rat hippocampus. <i>Behavioural Pharmacology</i> , 2007, 18, 533-547.	0.8	15
69	Medial temporal lobe activity at recognition increases with the duration of mnemonic delay during an object working memory task. <i>Human Brain Mapping</i> , 2007, 28, 1235-1250.	1.9	31
70	Hippocampus-specific deletion of BDNF in adult mice impairs spatial memory and extinction of aversive memories. <i>Molecular Psychiatry</i> , 2007, 12, 656-670.	4.1	596
71	Candidate genes for panic disorder: insight from human and mouse genetic studies. <i>Genes, Brain and Behavior</i> , 2007, 6, 2-23.	1.1	25
72	Neonatal (+)-methamphetamine increases brain derived neurotrophic factor, but not nerve growth factor, during treatment and results in long-term spatial learning deficits. <i>Psychoneuroendocrinology</i> , 2007, 32, 734-745.	1.3	39
73	(+)â€Methamphetamine increases corticosterone in plasma and BDNF in brain more than forced swim or isolation in neonatal rats. <i>Synapse</i> , 2008, 62, 110-121.	0.6	45

#	ARTICLE	IF	CITATIONS
74	Brain foods: the effects of nutrients on brain function. <i>Nature Reviews Neuroscience</i> , 2008, 9, 568-578.	4.9	931
75	Activation of phasic pontine wave generator in the rat: a mechanism for expression of plasticity-related genes and proteins in the dorsal hippocampus and amygdala. <i>European Journal of Neuroscience</i> , 2008, 27, 1876-1892.	1.2	84
76	Brain-derived neurotrophic factor functions as a metabotrophin to mediate the effects of exercise on cognition. <i>European Journal of Neuroscience</i> , 2008, 28, 2278-2287.	1.2	297
77	Genetic increase in brain-derived neurotrophic factor levels enhances learning and memory. <i>Brain Research</i> , 2008, 1241, 103-109.	1.1	59
78	Neuromedin U inhibits inflammation-mediated memory impairment and neuronal cell-death in rodents. <i>Neuroscience Research</i> , 2008, 61, 113-119.	1.0	38
79	The influences of diet and exercise on mental health through hormesis. <i>Ageing Research Reviews</i> , 2008, 7, 49-62.	5.0	125
80	Emergence of an egocentric cue guiding and allocentric inferring strategy that mirrors hippocampal brain-derived neurotrophic factor (BDNF) expression in the Morris water maze. <i>Neurobiology of Learning and Memory</i> , 2008, 89, 462-479.	1.0	34
81	BDNF: A key regulator for protein synthesis-dependent LTP and long-term memory?. <i>Neurobiology of Learning and Memory</i> , 2008, 89, 312-323.	1.0	646
82	BDNF reverses the CTA memory deficits produced by inhibition of protein synthesis. <i>Neurobiology of Learning and Memory</i> , 2008, 90, 584-587.	1.0	40
83	Injection of neural progenitor cells improved learning and memory dysfunction after cerebral ischemia. <i>Experimental Neurology</i> , 2008, 211, 194-202.	2.0	32
84	The Neurotrophin-Inducible Gene <i>Vgf</i> Regulates Hippocampal Function and Behavior through a Brain-Derived Neurotrophic Factor-Dependent Mechanism. <i>Journal of Neuroscience</i> , 2008, 28, 9857-9869.	1.7	128
85	High-dose dietary supplementation of vitamin A induces brain-derived neurotrophic factor and nerve growth factor production in mice with simultaneous deficiency of vitamin A and zinc. <i>Nutritional Neuroscience</i> , 2008, 11, 228-234.	1.5	13
86	A possible role for protein synthesis, extracellular signal-regulated kinase, and brain-derived neurotrophic factor in long-term spatial memory retention in the water maze.. <i>Behavioral Neuroscience</i> , 2008, 122, 805-815.	0.6	5
87	Brain Plasticity and Genetic Factors. <i>Topics in Stroke Rehabilitation</i> , 2009, 16, 282-299.	1.0	55
88	Brain-derived neurotrophic factor (BDNF) overexpression in the forebrain results in learning and memory impairments. <i>Neurobiology of Disease</i> , 2009, 33, 358-368.	2.1	101
89	Antagonism of glutamate receptors in the CA1 to perirhinal cortex projection prevents long-term potentiation and attenuates levels of brain-derived neurotrophic factor. <i>Brain Research</i> , 2009, 1265, 53-64.	1.1	13
90	Controlled contusion injury alters molecular systems associated with cognitive performance. <i>Journal of Neuroscience Research</i> , 2009, 87, 795-805.	1.3	61
91	Improvement of Two-Way Active Avoidance Memory Requires Protein Kinase A Activation and Brain-Derived Neurotrophic Factor Expression in the Dorsal Hippocampus. <i>Journal of Molecular Neuroscience</i> , 2009, 38, 257-264.	1.1	21

#	ARTICLE	IF	CITATIONS
92	Plasma BDNF is reduced among middle-aged and elderly women with impaired insulin function: Evidence of a compensatory mechanism. <i>Brain and Cognition</i> , 2009, 71, 147-152.	0.8	25
93	Selective cognitive deficits and reduced hippocampal brain-derived neurotrophic factor mRNA expression in small-conductance calcium-activated K ⁺ channel deficient mice. <i>Neuroscience</i> , 2009, 163, 73-81.	1.1	26
94	Prenatal auditory stimulation alters the levels of CREB mRNA, pCREB and BDNF expression in chick hippocampus. <i>International Journal of Developmental Neuroscience</i> , 2009, 27, 583-590.	0.7	29
95	Influences of chronic venlafaxine, olanzapine and nicotine on the hippocampal and cortical concentrations of brain-derived neurotrophic factor (BDNF). <i>Pharmacological Reports</i> , 2009, 61, 1017-1023.	1.5	63
96	Stress and Adult Neurogenesis in the Mammalian Central Nervous System. , 0, , 71-91.		4
97	Memory and Plasticity in the Olfactory System. <i>Frontiers in Neuroscience</i> , 2009, , 367-394.	0.0	6
99	Chronic Caffeine Treatment Prevents Sleep Deprivation-Induced Impairment of Cognitive Function and Synaptic Plasticity. <i>Sleep</i> , 2010, 33, 437-444.	0.6	127
100	Exercise as an intervention for the age-related decline in neural metabolic support. <i>Frontiers in Aging Neuroscience</i> , 2010, 2, .	1.7	17
101	Neuroscientists as Cartographers: Mapping the Crossroads of Gonadal Hormones, Memory and Age Using Animal Models. <i>Molecules</i> , 2010, 15, 6050-6105.	1.7	37
102	Spatial Learning and Expression Patterns of PP1 mRNA in Mouse Hippocampus. <i>Neuropsychobiology</i> , 2010, 61, 188-196.	0.9	14
103	Regulation of learning and memory by meningeal immunity: a key role for IL-4. <i>Journal of Experimental Medicine</i> , 2010, 207, 1067-1080.	4.2	640
104	Normal Hearing Is Required for the Emergence of Long-Lasting Inhibitory Potentiation in Cortex. <i>Journal of Neuroscience</i> , 2010, 30, 331-341.	1.7	51
105	Hippocampal mossy fiber sprouting induced by forced and voluntary physical exercise. <i>Physiology and Behavior</i> , 2010, 101, 302-308.	1.0	25
106	Genetic Influences on Neural Plasticity. <i>PM and R</i> , 2010, 2, S227-40.	0.9	43
107	Methylphenidate affects memory, brain-derived neurotrophic factor immunocontent and brain acetylcholinesterase activity in the rat. <i>Neurobiology of Learning and Memory</i> , 2010, 94, 247-253.	1.0	69
108	BDNF expression in perirhinal cortex is associated with exercise-induced improvement in object recognition memory. <i>Neurobiology of Learning and Memory</i> , 2010, 94, 278-284.	1.0	103
109	A simple role for BDNF in learning and memory?. <i>Frontiers in Molecular Neuroscience</i> , 2010, 3, 1.	1.4	583
110	The Pathophysiology of Concussions in Youth. <i>Physical Medicine and Rehabilitation Clinics of North America</i> , 2011, 22, 577-602.	0.7	84

#	ARTICLE	IF	CITATIONS
111	Genetics of white matter development: A DTI study of 705 twins and their siblings aged 12 to 29. <i>NeuroImage</i> , 2011, 54, 2308-2317.	2.1	232
112	A role for MAPK and PI-3K signaling pathways in brain-derived neurotrophic factor modification of conditioned taste aversion retention. <i>Behavioural Brain Research</i> , 2011, 217, 248-252.	1.2	29
113	Tonic Premarin dose-dependently enhances memory, affects neurotrophin protein levels and alters gene expression in middle-aged rats. <i>Neurobiology of Aging</i> , 2011, 32, 680-697.	1.5	60
114	Physical exercise during adolescence versus adulthood: differential effects on object recognition memory and brain-derived neurotrophic factor levels. <i>Neuroscience</i> , 2011, 194, 84-94.	1.1	135
115	Effects of stress and motivation on performing a spatial task. <i>Neurobiology of Learning and Memory</i> , 2011, 95, 277-285.	1.0	44
116	Effects of environmental enrichment and voluntary exercise on neurogenesis, learning and memory, and pattern separation: BDNF as a critical variable?. <i>Seminars in Cell and Developmental Biology</i> , 2011, 22, 536-542.	2.3	207
117	Activation of brain-derived neurotrophic factor/tropomyosin-related kinase B signaling accompanying filial imprinting in domestic chicks (<i>Gallus gallus domesticus</i>). <i>NeuroReport</i> , 2011, 22, 929-934.	0.6	11
118	Exercise Paradigms to Study Brain Injury Recovery in Rodents. <i>American Journal of Physical Medicine and Rehabilitation</i> , 2011, 90, 452-465.	0.7	47
119	Associative learning increases adult neurogenesis during a critical period. <i>European Journal of Neuroscience</i> , 2011, 33, 175-181.	1.2	53
120	Region-Specific Involvement of BDNF Secretion and Synthesis in Conditioned Taste Aversion Memory Formation. <i>Journal of Neuroscience</i> , 2011, 31, 2079-2090.	1.7	60
121	Neonatal Citalopram Treatment Inhibits the 5-HT Depleting Effects of MDMA Exposure in Rats. <i>ACS Chemical Neuroscience</i> , 2012, 3, 12-21.	1.7	4
122	Sustained expression of brain-derived neurotrophic factor is required for maintenance of dendritic spines and normal behavior. <i>Neuroscience</i> , 2012, 212, 1-18.	1.1	86
123	Chapter 16. Neuroprotective Effects of Caffeine in Sleep Deprivation. <i>Food and Nutritional Components in Focus</i> , 2012, , 287-313.	0.1	0
124	Network, Cellular, and Molecular Mechanisms Underlying Long-Term Memory Formation. <i>Current Topics in Behavioral Neurosciences</i> , 2012, 15, 73-115.	0.8	11
125	Improved Working Memory Following Novel Combinations of Physical and Cognitive Activity. <i>Neurorehabilitation and Neural Repair</i> , 2012, 26, 523-532.	1.4	64
126	Exercise Does Not Protect against MPTP-Induced Neurotoxicity in BDNF Haploinsufficient Mice. <i>PLoS ONE</i> , 2012, 7, e43250.	1.1	43
127	Melatonin ameliorates cognitive impairment induced by sleep deprivation in rats: Role of oxidative stress, BDNF and CaMKII. <i>Behavioural Brain Research</i> , 2013, 256, 72-81.	1.2	108
128	Use it and boost it with physical and mental activity. <i>Hippocampus</i> , 2013, 23, 1125-1135.	0.9	39

#	ARTICLE	IF	CITATIONS
129	Effects of a cognitive training on spatial learning and associated functional brain activations. BMC Neuroscience, 2013, 14, 73.	0.8	39
130	Occlusal disharmony leads to learning deficits associated with decreased cellular proliferation in the hippocampal dentate gyrus of SAMP8 mice. Neuroscience Letters, 2013, 534, 228-232.	1.0	22
131	NMDA receptor dysfunction contributes to impaired brain-derived neurotrophic factor-induced facilitation of hippocampal synaptic transmission in a tau transgenic model. Aging Cell, 2013, 12, 11-23.	3.0	64
132	CNS-specific immunity at the choroid plexus shifts toward destructive Th2 inflammation in brain aging. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2264-2269.	3.3	234
133	Neurotrophins and Synaptic Plasticity. Current Topics in Behavioral Neurosciences, 2013, 15, 117-136.	0.8	119
134	The Influence of Exercise on Cognitive Abilities. , 2013, 3, 403-428.		402
135	Cognitive enhancement: a comparative review of computerized and athletic training programs. International Review of Sport and Exercise Psychology, 2013, 6, 155-183.	3.1	52
136	Exercise protects against chronic restraint stress-induced oxidative stress in the cortex and hippocampus. Brain Research, 2013, 1509, 66-78.	1.1	31
137	Involvement of Brain-Derived Neurotrophic Factor in Late-Life Depression. American Journal of Geriatric Psychiatry, 2013, 21, 433-449.	0.6	68
138	Beneficial effects of physical exercise on neuroplasticity and cognition. Neuroscience and Biobehavioral Reviews, 2013, 37, 2243-2257.	2.9	651
139	Activity-dependent, stress-responsive BDNF signaling and the quest for optimal brain health and resilience throughout the lifespan. Neuroscience, 2013, 239, 228-240.	1.1	130
140	Treatment In vitro of Retinal Cells with IL-4 Increases the Survival of Retinal Ganglion Cells: The Involvement of BDNF. Neurochemical Research, 2013, 38, 162-173.	1.6	11
141	Feedback Mechanism in Depolarization-Induced Sustained Activation of Extracellular Signal-Regulated Kinase in the Hippocampus. Scientific Reports, 2013, 3, 1103.	1.6	17
143	Cognitive Performance of Göttingen Minipigs Is Affected by Diet in a Spatial Hole-Board Discrimination Test. PLoS ONE, 2013, 8, e79429.	1.1	14
144	Low-intensity treadmill exercise and bright light upregulate brain-derived neurotrophic factor expression and intracellular signaling pathway in rat hippocampus and cerebral cortex. Animal Cells and Systems, 2014, 18, 135-142.	0.8	2
145	Involvement of BDNF Signaling Transmission from Basolateral Amygdala to Infralimbic Prefrontal Cortex in Conditioned Taste Aversion Extinction. Journal of Neuroscience, 2014, 34, 7302-7313.	1.7	39
146	Hippocampal brain-derived neurotrophic factor mediates recovery from chronic stress-induced spatial reference memory deficits. European Journal of Neuroscience, 2014, 40, 3351-3362.	1.2	29
147	A Possible Link between Food and Mood: Dietary Impact on Gut Microbiota and Behavior in BALB/c Mice. PLoS ONE, 2014, 9, e103398.	1.1	124

#	ARTICLE	IF	CITATIONS
148	BDNF and Synaptic Plasticity, Cognitive Function, and Dysfunction. Handbook of Experimental Pharmacology, 2014, 220, 223-250.	0.9	678
150	Review: Environmental enrichment and brain repair: harnessing the therapeutic effects of cognitive stimulation and physical activity to enhance experience-dependent plasticity. Neuropathology and Applied Neurobiology, 2014, 40, 13-25.	1.8	197
151	Hippocampal BDNF treatment facilitates consolidation of spatial memory in spontaneous place recognition in rats. Behavioural Brain Research, 2014, 263, 210-216.	1.2	23
152	BDNF and memory processing. Neuropharmacology, 2014, 76, 677-683.	2.0	296
153	Late-onset dementia: a mosaic of prototypical pathologies modifiable by diet and lifestyle. Npj Aging and Mechanisms of Disease, 2015, 1, .	4.5	24
154	Measure of anxiety-related behaviors and hippocampal BDNF levels associated to the amnesic effect induced by MK-801 evaluated in the modified elevated plus-maze in rats. Physiology and Behavior, 2015, 147, 359-363.	1.0	20
155	The effect of a selective neuronal nitric oxide synthase inhibitor 3-bromo 7-nitroindazole on spatial learning and memory in rats. Pharmacology Biochemistry and Behavior, 2015, 131, 19-25.	1.3	14
156	Cellular and molecular neuronal plasticity. Handbook of Clinical Neurology / Edited By P J Vinken and C W Bruyn, 2015, 128, 681-690.	1.0	17
158	Dietary-induced obesity disrupts trace fear conditioning and decreases hippocampal reelin expression. Brain, Behavior, and Immunity, 2015, 43, 68-75.	2.0	44
159	The Effects of Acute Exercise on Memory and Brain-Derived Neurotrophic Factor (BDNF). Journal of Sport and Exercise Psychology, 2016, 38, 331-340.	0.7	91
160	Molar loss and powder diet leads to memory deficit and modifies the mRNA expression of brain-derived neurotrophic factor in the hippocampus of adult mice. BMC Neuroscience, 2016, 17, 81.	0.8	27
161	Activation of Sigma-1 receptor ameliorates anxiety-like behavior and cognitive impairments in a rat model of post-traumatic stress disorder. Behavioural Brain Research, 2016, 311, 408-415.	1.2	25
162	Opposing presynaptic roles of BDNF and ProBDNF in the regulation of persistent activity in the entorhinal cortex. Molecular Brain, 2016, 9, 23.	1.3	34
163	Minocycline protects against lipopolysaccharide-induced cognitive impairment in mice. Psychopharmacology, 2016, 233, 905-916.	1.5	55
164	Neurotrophic factors in Parkinson's disease are regulated by exercise: Evidence-based practice. Journal of the Neurological Sciences, 2016, 363, 5-15.	0.3	64
165	Caffeine and REM sleep deprivation: Effect on basal levels of signaling molecules in area CA1. Molecular and Cellular Neurosciences, 2016, 71, 125-131.	1.0	23
166	Effects of occlusal disharmony on the hippocampal dentate gyrus in aged senescence-accelerated mouse prone 8 (SAMP8). Archives of Oral Biology, 2016, 65, 95-101.	0.8	9
167	Hippocampus-dependent spatial memory impairment due to molar tooth loss is ameliorated by an enriched environment. Archives of Oral Biology, 2016, 61, 1-7.	0.8	37

#	ARTICLE	IF	CITATIONS
168	Estrogens as neuroprotectants: Estrogenic actions in the context of cognitive aging and brain injury. <i>Progress in Neurobiology</i> , 2017, 157, 188-211.	2.8	157
169	Neurogenesis Inhibition Prevents Enriched Environment to Prolong and Strengthen Social Recognition Memory, But Not to Increase BDNF Expression. <i>Molecular Neurobiology</i> , 2017, 54, 3309-3316.	1.9	15
170	IL-13-Mediated Regulation of Learning and Memory. <i>Journal of Immunology</i> , 2017, 198, 2681-2688.	0.4	86
171	Synaptopathic mechanisms of neurodegeneration and dementia: Insights from Huntington's disease. <i>Progress in Neurobiology</i> , 2017, 153, 18-45.	2.8	52
172	Decreased hippocampal brain-derived neurotrophic factor and impaired cognitive function by hypoglossal nerve transection in rats. <i>Journal of Cellular and Molecular Medicine</i> , 2017, 21, 3752-3760.	1.6	4
173	Aerobic exercise and a BDNF-mimetic therapy rescue learning and memory in a mouse model of Down syndrome. <i>Scientific Reports</i> , 2017, 7, 16825.	1.6	63
174	The brain-derived neurotrophic factor Val66Met polymorphism affects encoding of object locations during active navigation. <i>European Journal of Neuroscience</i> , 2017, 45, 1501-1511.	1.2	8
175	High-intensity training enhances executive function in children in a randomized, placebo-controlled trial. <i>ELife</i> , 2017, 6, .	2.8	59
176	Increased Hippocampal ProBDNF Contributes to Memory Impairments in Aged Mice. <i>Frontiers in Aging Neuroscience</i> , 2017, 9, 284.	1.7	46
177	Effect of Sevoflurane Anesthesia on Brain Is Mediated by lncRNA HOTAIR. <i>Journal of Molecular Neuroscience</i> , 2018, 64, 346-351.	1.1	23
178	Neuronal RNA-binding protein HuD regulates addiction-related gene expression and behavior. <i>Genes, Brain and Behavior</i> , 2018, 17, e12454.	1.1	25
179	Light modulates hippocampal function and spatial learning in a diurnal rodent species: A study using male Nile grass rat (<i>Arvicanthis niloticus</i>). <i>Hippocampus</i> , 2018, 28, 189-200.	0.9	36
180	Association between structural brain network efficiency and intelligence increases during adolescence. <i>Human Brain Mapping</i> , 2018, 39, 822-836.	1.9	45
181	Dysfunction in Brain-Derived Neurotrophic Factor Signaling Pathway and Susceptibility to Schizophrenia, Parkinson's and Alzheimer's Diseases. <i>Current Gene Therapy</i> , 2018, 18, 45-63.	0.9	83
182	Cognitive Rehabilitation Improves Ischemic Stroke-Induced Cognitive Impairment: Role of Growth Factors. <i>Journal of Stroke and Cerebrovascular Diseases</i> , 2019, 28, 104299.	0.7	40
183	Conditioned taste aversion memory extinction temporally induces insular cortical BDNF release and inhibits neuronal apoptosis. <i>Neuropsychiatric Disease and Treatment</i> , 2019, Volume 15, 2403-2414.	1.0	4
184	Brain-Derived Neurotrophic Factor: A Key Molecule for Memory in the Healthy and the Pathological Brain. <i>Frontiers in Cellular Neuroscience</i> , 2019, 13, 363.	1.8	740
185	Systemic Blockade of the CB1 Receptor Augments Hippocampal Gene Expression Involved in Synaptic Plasticity but Perturbs Hippocampus-Dependent Learning Task. <i>Cannabis and Cannabinoid Research</i> , 2019, 4, 33-41.	1.5	5

#	ARTICLE	IF	CITATIONS
187	Sleep Deprivation, Cognitive Functions, and Countermeasures. , 2019, , 41-56.		0
188	Comparison of the effects of PACAP-38 and its analog, acetyl-[Ala15, Ala20] PACAP-38-propylamide, on spatial memory, post-learning BDNF expression and oxidative stress in rat. Behavioural Brain Research, 2019, 359, 247-257.	1.2	9
189	Neuromuscular electrical stimulation increases serum brain-derived neurotrophic factor in humans. Experimental Brain Research, 2019, 237, 47-56.	0.7	19
190	A brief primer on the mediational role of <sc>BDNF</sc> in the exerciseâ€memory link. Clinical Physiology and Functional Imaging, 2019, 39, 9-14.	0.5	85
191	Shortâ€term highâ€intensity interval training increases systemic brainâ€derived neurotrophic factor (BDNF) in healthy women. European Journal of Sport Science, 2020, 20, 516-524.	1.4	17
192	The role of brain-derived neurotrophic factor in neural circuit development and function. , 2020, , 443-466.		4
193	The Potential Mechanisms of the Neuroprotective Actions of Oil Palm Phenolics: Implications for Neurodegenerative Diseases. Molecules, 2020, 25, 5159.	1.7	7
194	Anhedonic-like behavior and BDNF dysregulation following a single injection of cocaine during adolescence. Neuropharmacology, 2020, 175, 108161.	2.0	10
195	Sevoflurane anesthesia-mediated oxidative stress and cognitive impairment in hippocampal neurons of old rats can be ameliorated by expression of brain derived neurotrophic factor. Neuroscience Letters, 2020, 721, 134785.	1.0	25
196	Environmental enrichment improves hypomyelination, synaptic alterations, and memory deficits caused by tooth loss in aged SAMP8 mice. Archives of Oral Biology, 2021, 123, 105039.	0.8	3
197	Critical aspects of neurodevelopment. Neurobiology of Learning and Memory, 2021, 180, 107415.	1.0	5
198	Application of contrast-enhanced magnetic resonance imaging in the assessment of blood-cerebrospinal fluid barrier integrity. Neuroscience and Biobehavioral Reviews, 2021, 127, 171-183.	2.9	8
199	Intersecting Genetics with Lifestyle: the Role of Exercise and Diet in Synaptic Plasticity and Cognitive Enhancement. , 0, , 337-375.		1
200	A narrative review of brain-derived neurotrophic factor (BDNF) on cognitive performance in Alzheimerâ€™s disease. Growth Factors, 2020, 38, 210-225.	0.5	8
201	Tachykinins and Tachykinin Receptor Antagonists in Depression: Therapeutic Implications. , 2011, , 350-357.		7
202	Early and Moderate Sensory Stimulation Exerts a Protective Effect on Perilesion Representations of Somatosensory Cortex after Focal Ischemic Damage. PLoS ONE, 2014, 9, e99767.	1.1	8
203	Epigenetic alterations in the suprachiasmatic nucleus and hippocampus contribute to age-related cognitive decline. Oncotarget, 2015, 6, 23181-23203.	0.8	31
204	Locomotor Recovery Potential after Spinal Cord Injury. , 2004, , 53-91.		3

#	ARTICLE	IF	CITATIONS
205	Influence of Treadmill Exercise Under Heat Stress Conditions on Serotonin Expression, Cell Proliferation, and Short-term Memory in the Rats Brains. Korean Journal of Sport Science, 2009, 20, 743-754.	0.0	1
206	â€Two Hitâ€™ Neurodevelopmental Mechanisms in Schizophrenia: Focus on Animal Models and the Role of BDNF. , 2015, , 335-351.		1
207	Genetically Informative Investigations of Neurophysiological Traits. , 2016, , 231-268.		0
209	Brain Derived Neurotrophic Factor Interacts with Diabetes Status to Influence Memory and Hippocampal Volume in Older Adults. SSRN Electronic Journal, 0, , .	0.4	0
210	The potential mechanism underlying hippocampus-dependent memory decline caused by high-fat and high-sugar diet and the interventions to combat diet-induced cognitive decline. AIP Conference Proceedings, 2022, , .	0.3	0
211	Heat shock factor <scp>HSF1</scp> regulates <scp>BDNF</scp> gene promoters upon acute stress in the hippocampus, together with <scp>pCREB</scp>. Journal of Neurochemistry, 2023, 165, 131-148.	2.1	2
213	Individual differences and knockout in zebrafish reveal similar cognitive effects of BDNF between teleosts and mammals. Proceedings of the Royal Society B: Biological Sciences, 2022, 289, .	1.2	5
214	Melatonin Enhances Object Recognition Memory through Melatonin MT1 and MT2 Receptor-Mediated and Non-Receptor-Mediated Mechanisms in Male Mice. Journal of Behavioral and Brain Science, 2022, 12, 640-657.	0.2	2
215	The Role of BDNF as a Biomarker in Cognitive and Sensory Neurodegeneration. Journal of Personalized Medicine, 2023, 13, 652.	1.1	9