Ronald L Davis

List of Publications by Year
in descending order

145 papers	15,919 citations	19608 61 h-index	18606 119 g-index
153 all docs	153 docs citations	153 times ranked	9211 citing authors

#	Article	IF	Citations
1	Associative learning drives longitudinally graded presynaptic plasticity of neurotransmitter release along axonal compartments. ELife, 2022, 11, .	2.8	13
2	Early Mitochondrial Fragmentation and Dysfunction in a Drosophila Model for Alzheimerâ€™s Disease. Molecular Neurobiology, 2021, 58, 143-155.	1.9	16
3	Dopamine-based mechanism for transient forgetting. Nature, 2021, 591, 426-430.	13.7	29
4	High-Throughput Phenotypic Assay for Compounds That Influence Mitochondrial Health Using iPSC-Derived Human Neurons. SLAS Discovery, 2021, 26, 811-822.	1.4	3
5	Memory suppressor genes: Modulating acquisition, consolidation, and forgetting. Neuron, 2021, 109, 3211-3227.	3.8	26
6	Neuron-based high-content assay and screen for CNS active mitotherapeutics. Science Advances, 2020, 6, eaaw8702.	4.7	20
7	Rac1 Impairs Forgetting-Induced Cellular Plasticity in Mushroom Body Output Neurons. Frontiers in Cellular Neuroscience, 2020, 14, 258.	1.8	14
8	Mechanism of Action and Target Identification: A Matter of Timing in Drug Discovery. IScience, 2020, 23, 101487.	1.9	41
9	High-Throughput Small Molecule Screen Identifies Modulators of Mitochondrial Function in Neurons. IScience, 2020, 23, 100931.	1.9	9
10	Ras acts as a molecular switch between two forms of consolidated memory in <i>Drosophila</i>. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2133-2139.	3.3	12
11	miR-92a Suppresses Mushroom Body-Dependent Memory Consolidation in Drosophila. ENeuro, 2020, 7, ENEURO.0224-20.2020.	0.9	4
12	Aversive Training Induces Both Presynaptic and Postsynaptic Suppression in<i>Drosophila</i>. Journal of Neuroscience, 2019, 39, 9164-9172.	1.7	20
13	Stromalin Constrains Memory Acquisition by Developmentally Limiting Synaptic Vesicle Pool Size. Neuron, 2019, 101, 103-118.e5.	3.8	10
14	Interrogating the Spatiotemporal Landscape of Neuromodulatory GPCR Signaling by Real-Time Imaging of cAMP in Intact Neurons and Circuits. Cell Reports, 2018, 22, 255-268.	2.9	53
15	Elongator complex is required for long-term olfactory memory formation in <i>Drosophila</i>. Learning and Memory, 2018, 25, 183-196.	0.5	3
16	High Content, Phenotypic Assays and Screens for Compounds Modulating Cellular Processes in Primary Neurons. Methods in Enzymology, 2018, 610, 219-250.	0.4	7
17	Brain transcriptome changes in the aging Drosophila melanogaster accompany olfactory memory performance deficits. PLoS ONE, 2018, 13, e0209405.	1.1	26
18	<i>Drosophila mef2</i>is essential for normal mushroom body and wing development. Biology Open, 2018, 7, .	0.6	16

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19	Dopamine Neurons Mediate Learning and Forgetting through Bidirectional Modulation of a Memory Trace. Cell Reports, 2018, 25, 651-662.e5.	2.9	97
20	Novel PDE10A transcript diversity in the human striatum: Insights into gene complexity, conservation and regulation. Gene, 2017, 606, 17-24.	1.0	13
21	The Biology of Forgettingâ€"A Perspective. Neuron, 2017, 95, 490-503.	3.8	211
22	Dopamine Receptor DAMB Signals via Gq to Mediate Forgetting in Drosophila. Cell Reports, 2017, 21, 2074-2081.	2.9	73
23	MicroRNA function in Drosophila memory formation. Current Opinion in Neurobiology, 2017, 43, 15-24.	2.0	17
24	Improved Scalability of Neuron-Based Phenotypic Screening Assays for Therapeutic Discovery in Neuropsychiatric Disorders. Molecular Neuropsychiatry, 2017, 3, 141-150.	3.0	16
25	Reciprocal synapses between mushroom body and dopamine neurons form a positive feedback loop required for learning. ELife, 2017, 6, .	2.8	80
26	Drosophila SLC22A Transporter Is a Memory Suppressor Gene that Influences Cholinergic Neurotransmission to the Mushroom Bodies. Neuron, 2016, 90, 581-595.	3.8	25
27	Inhibiting the Mitochondrial Calcium Uniporter during Development Impairs Memory in Adult Drosophila. Cell Reports, 2016, 16, 2763-2776.	2.9	48
28	Developmental inhibition of miR-iab8-3p disrupts mushroom body neuron structure and adult learning ability. Developmental Biology, 2016, 419, 237-249.	0.9	8
29	Novel, primate-specific PDE10A isoform highlights gene expression complexity in human striatum with implications on the molecular pathology of bipolar disorder. Translational Psychiatry, 2016, 6, e742-e742.	2.4	18
30	Scribble Scaffolds a Signalosome for Active Forgetting. Neuron, 2016, 90, 1230-1242.	3.8	80
31	MiR-980 Is a Memory Suppressor MicroRNA that Regulates the Autism-Susceptibility Gene A2bp1. Cell Reports, 2016, 14, 1698-1709.	2.9	39
32	Sleep Facilitates Memory by Blocking Dopamine Neuron-Mediated Forgetting. Cell, 2015, 161, 1656-1667.	13.5	200
33	Identification of Genes That Promote or Inhibit Olfactory Memory Formation in <i>Drosophila</i>. Genetics, 2015, 199, 1173-1182.	1.2	75
34	Aging Impairs Protein-Synthesis-Dependent Long-Term Memory in<i>Drosophila</i>. Journal of Neuroscience, 2015, 35, 1173-1180.	1.7	34
35	microRNAs That Promote or Inhibit Memory Formation in <i>Drosophila melanogaster</i>. Genetics, 2015, 200, 569-580.	1.2	38
36	SnapShot: Olfactory Classical Conditioning of Drosophila. Cell, 2015, 163, 524-524.e1.	13.5	8

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37	Caspase Inhibition in Select Olfactory Neurons Restores Innate Attraction Behavior in Aged Drosophila. PLoS Genetics, 2014, 10, e1004437.	1.5	21
38	Active Forgetting of Olfactory Memories in Drosophila. Progress in Brain Research, 2014, 208, 39-62.	0.9	15
39	Functional neuroanatomy of <i>Drosophila</i> olfactory memory formation. Learning and Memory, 2014, 21, 519-526.	0.5	132
40	Spermidine cures flies of senior moments. Nature Neuroscience, 2013, 16, 1363-1364.	7.1	2
41	Wnt Signaling Is Required for Long-Term Memory Formation. Cell Reports, 2013, 4, 1082-1089.	2.9	30
42	System-Like Consolidation of Olfactory Memories in Drosophila. Journal of Neuroscience, 2013, 33, 9846-9854.	1.7	68
43	Drosophila Memory Research through Four Eras. Handbook of Behavioral Neuroscience, 2013, , 359-377.	0.7	11
44	Aging impairs intermediate-term behavioral memory by disrupting the dorsal paired medial neuron memory trace. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6319-6324.	3.3	44
45	Genetic association of cyclic AMP signaling genes with bipolar disorder. Translational Psychiatry, 2012, 2, e169-e169.	2.4	32
46	Dopamine Is Required for Learning and Forgetting in Drosophila. Neuron, 2012, 74, 530-542.	3.8	243
47	Distinct Traces for Appetitive versus Aversive Olfactory Memories in DPM Neurons of Drosophila. Current Biology, 2012, 22, 1247-1252.	1.8	38
48	Interactions between Intercellular Adhesion Molecule-5 (ICAM-5) and Î²1 integrins regulate neuronal synapse formation. Journal of Cell Science, 2012, 126, 77-89.	1.2	58
49	Compensatory redistribution of neuroligins and Nâ€cadherin following deletion of synaptic Î²1â€integrin. Journal of Comparative Neurology, 2012, 520, 2041-2052.	0.9	54
50	Mushroom-Body Memories: An Obituary Prematurely Written?. Current Biology, 2012, 22, R272-R275.	1.8	6
51	Traces of Drosophila Memory. Neuron, 2011, 70, 8-19.	3.8	272
52	The Long-Term Memory Trace Formed in the<i>Drosophila</i>Î±/Î² Mushroom Body Neurons Is Abolished in Long-Term Memory Mutants. Journal of Neuroscience, 2011, 31, 5643-5647.	1.7	51
53	Î±8â€integrins are required for hippocampal longâ€term potentiation but not for hippocampalâ€dependent learning. Genes, Brain and Behavior, 2010, 9, 402-410.	1.1	31
54	A Late-Phase, Long-Term Memory Trace Forms in the Î³ Neurons of<i>Drosophila</i>Mushroom Bodies after Olfactory Classical Conditioning. Journal of Neuroscience, 2010, 30, 16699-16708.	1.7	92

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55	A Distinct Set of Drosophila Brain Neurons Required for Neurofibromatosis Type 1-Dependent Learning and Memory. Journal of Neuroscience, 2010, 30, 10135-10143.	1.7	54
56	Olfactory Learning in Drosophila. Physiology, 2010, 25, 338-346.	1.6	158
57	Rac in the Act of Forgetting. Cell, 2010, 140, 456-458.	13.5	21
58	Gilgamesh Is Required for rutabaga-Independent Olfactory Learning in Drosophila. Neuron, 2010, 67, 810-820.	3.8	38
59	Eight different types of dopaminergic neurons innervate the Drosophila mushroom body neuropil: anatomical and physiological heterogeneity. Frontiers in Neural Circuits, 2009, 3, 5.	1.4	425
60	A Dual Role for the Adaptor Protein DRK in<i>Drosophila</i>Olfactory Learning and Memory. Journal of Neuroscience, 2009, 29, 2611-2625.	1.7	36
61	The GABAA Receptor RDL Suppresses the Conditioned Stimulus Pathway for Olfactory Learning. Journal of Neuroscience, 2009, 29, 1573-1579.	1.7	48
62	The GABAergic anterior paired lateral neuron suppresses and is suppressed by olfactory learning. Nature Neuroscience, 2009, 12, 53-59.	7.1	202
63	Dynamics of Learning-Related cAMP Signaling andÂStimulus Integration in the Drosophila Olfactory Pathway. Neuron, 2009, 64, 510-521.	3.8	199
64	Out of sight, but not out of mind. Nature, 2008, 453, 1193-1194.	13.7	8
65	Spatial and Temporal Control of Gene Expression in Drosophila Using the Inducible GeneSwitch GAL4 System. I. Screen for Larval Nervous System Drivers. Genetics, 2008, 178, 215-234.	1.2	115
66	Cyclic AMP Imaging Sheds Light on PDF Signaling in Circadian Clock Neurons. Neuron, 2008, 58, 161-163.	3.8	3
67	Chapter 18 Olfactory memory traces in Drosophila. Progress in Brain Research, 2008, 169, 293-304.	0.9	56
68	Drosophila Homer Is Required in a Small Set of Neurons Including the Ellipsoid Body for Normal Ethanol Sensitivity and Tolerance. Journal of Neuroscience, 2007, 27, 4541-4551.	1.7	87
69	Î±3-Integrins are required for hippocampal long-term potentiation and working memory. Learning and Memory, 2007, 14, 606-615.	0.5	48
70	Exploratory Activity in Drosophila Requires the kurtz Nonvisual Arrestin. Genetics, 2007, 175, 1197-1212.	1.2	58
71	The Scent of Drosophila Sex. Neuron, 2007, 54, 14-16.	3.8	8
72	GABAA Receptor RDL Inhibits Drosophila Olfactory Associative Learning. Neuron, 2007, 56, 1090-1102.	3.8	136

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73	Drosophila Î±/Î² Mushroom Body Neurons Form a Branch-Specific, Long-Term Cellular Memory Trace after Spaced Olfactory Conditioning. Neuron, 2006, 52, 845-855.	3.8	237
74	Insect olfactory memory in time and space. Current Opinion in Neurobiology, 2006, 16, 679-685.	2.0	39
75	A Drosophila Nonvisual Arrestin Is Required for the Maintenance of Olfactory Sensitivity. Chemical Senses, 2006, 31, 49-62.	1.1	23
76	Â1-Integrins Are Required for Hippocampal AMPA Receptor-Dependent Synaptic Transmission, Synaptic Plasticity, and Working Memory. Journal of Neuroscience, 2006, 26, 223-232.	1.7	150
77	Roles for Drosophila mushroom body neurons in olfactory learning and memory. Learning and Memory, 2006, 13, 659-668.	0.5	109
78	Thedachshund gene is required for the proper guidance and branching of mushroom body axons inDrosophila melanogaster. Journal of Neurobiology, 2005, 64, 133-144.	3.7	16
79	Isolation of mRNA from specific tissues of Drosophila by mRNA tagging. Nucleic Acids Research, 2005, 33, e148-e148.	6.5	71
80	OLFACTORY MEMORY FORMATION INDROSOPHILA: From Molecular to Systems Neuroscience. Annual Review of Neuroscience, 2005, 28, 275-302.	5.0	530
81	Remote Control of Fruit Fly Behavior. Cell, 2005, 121, 6-7.	13.5	4
82	Drosophila DPM Neurons Form a Delayed and Branch-Specific Memory Trace after Olfactory Classical Conditioning. Cell, 2005, 123, 945-957.	13.5	134
83	Thirty years of olfactory learning and memory research in Drosophila melanogaster. Progress in Neurobiology, 2005, 76, 328-347.	2.8	199
84	Pharmacogenetic rescue in time and space of the rutabaga memory impairment by using Gene-Switch. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 198-203.	3.3	144
85	The Role of cAMP Response Element-Binding Protein in Drosophila Long-Term Memory. Journal of Neuroscience, 2004, 24, 8823-8828.	1.7	117
86	Gene expression systems in Drosophila: a synthesis of time and space. Trends in Genetics, 2004, 20, 384-391.	2.9	258
87	Olfactory Learning. Neuron, 2004, 44, 31-48.	3.8	173
88	Spatiotemporal Gene Expression Targeting with the TARGET and Gene-Switch Systems in Drosophila. Science Signaling, 2004, 2004, pl6-pl6.	1.6	595
89	Altered Representation of the Spatial Code for Odors after Olfactory Classical Conditioning. Neuron, 2004, 42, 437-449.	3.8	205
90	Octopamine receptor OAMB is required for ovulation in Drosophila melanogaster. Developmental Biology, 2003, 264, 179-190.	0.9	147

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91	Spatiotemporal Rescue of Memory Dysfunction in Drosophila. Science, 2003, 302, 1765-1768.	6.0	1,167
92	An adjustable-threshold algorithm for the identification of objects in three-dimensional images. Bioinformatics, 2003, 19, 1431-1435.	1.8	12
93	Detection of Calcium Transients in<i>Drosophila</i>Mushroom Body Neurons with Camgaroo Reporters. Journal of Neuroscience, 2003, 23, 64-72.	1.7	100
94	Integrin Requirement for Hippocampal Synaptic Plasticity and Spatial Memory. Journal of Neuroscience, 2003, 23, 7107-7116.	1.7	175
95	SRC-1 Null Mice Exhibit Moderate Motor Dysfunction and Delayed Development of Cerebellar Purkinje Cells. Journal of Neuroscience, 2003, 23, 213-222.	1.7	137
96	Conditional expression of UAS-transgenes in the adult eye with a new gene-switch vector system. Genesis, 2002, 34, 127-131.	0.8	42
97	Mushroom Bodies, Ca2+ Oscillations, and the Memory Gene amnesiac. Neuron, 2001, 30, 653-656.	3.8	27
98	Presenilin-1 and Memories of the Forebrain. Neuron, 2001, 32, 763-765.	3.8	6
99	Drosophila fasciclinII Is Required for the Formation of Odor Memories and for Normal Sensitivity to Alcohol. Cell, 2001, 105, 757-768.	13.5	124
100	Molecular biology and anatomy ofDrosophila olfactory associative learning. BioEssays, 2001, 23, 571-581.	1.2	122
101	The Role of Drosophila Mushroom Body Signaling in Olfactory Memory. Science, 2001, 293, 1330-1333.	6.0	428
102	Neurofibromin progress on the fly. Nature, 2000, 403, 846-847.	13.7	7
103	Learning Performance of Normal and Mutant<i>Drosophila</i>after Repeated Conditioning Trials with Discrete Stimuli. Journal of Neuroscience, 2000, 20, 2944-2953.	1.7	109
104	Integrin-Mediated Regulation of Synaptic Morphology, Transmission, and Plasticity. Journal of Neuroscience, 2000, 20, 6868-6878.	1.7	118
105	<i>kurtz</i>, a Novel Nonvisual Arrestin, Is an Essential Neural Gene in Drosophila. Genetics, 2000, 155, 1281-1295.	1.2	81
106	New Series of Drosophila Expression Vectors Suitable for Behavioral Rescue. BioTechniques, 1999, 27, 54-56.	0.8	15
107	Cyclic AMP phosphodiesterases are localized in regions of the mouse brain associated with reinforcement, movement, and affect. Journal of Comparative Neurology, 1999, 407, 287-301.	0.9	205
108	Larval and pupal development of the mushroom bodies in the honey bee,Apis mellifera. , 1999, 414, 97-113.		140

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109	Epigenetic Spreading of the Drosophila Dosage Compensation Complex from roX RNA Genes into Flanking Chromatin. Cell, 1999, 98, 513-522.	13.5	291
110	Integrin-mediated short-term memory in Drosophila. Nature, 1998, 391, 455-460.	13.7	281
111	14-3-3 proteins in neuronal development and function. Molecular Neurobiology, 1998, 16, 269-284.	1.9	142
112	A Novel Octopamine Receptor with Preferential Expression in<i>Drosophila</i>Mushroom Bodies. Journal of Neuroscience, 1998, 18, 3650-3658.	1.7	259
113	The opt1 gene ofDrosophila melanogaster encodes a proton-dependent dipeptide transporter. American Journal of Physiology - Cell Physiology, 1998, 275, C857-C869.	2.1	30
114	Outward Currents inDrosophilaLarval Neurons:dunceLacks a Maintained Outward Current Component Downregulated by cAMP. Journal of Neuroscience, 1998, 18, 1399-1407.	1.7	27
115	Tripartite Mushroom Body Architecture Revealed by Antigenic Markers. Learning and Memory, 1998, 5, 38-51.	0.5	356
116	Leonardo, a Drosophila 14-3-3 Protein Involved in Learning, Regulates Presynaptic Function. Neuron, 1997, 19, 391-402.	3.8	158
117	roX1 RNA Paints the X Chromosome of Male Drosophila and Is Regulated by the Dosage Compensation System. Cell, 1997, 88, 445-457.	13.5	280
118	Biochemistry of insect learning: Lessons from bees and flies. Insect Biochemistry and Molecular Biology, 1996, 26, 327-335.	1.2	44
119	DAMB, a Novel Dopamine Receptor Expressed Specifically in Drosophila Mushroom Bodies. Neuron, 1996, 16, 1127-1135.	3.8	255
120	Olfactory Learning Deficits in Mutants for leonardo, a Drosophila Gene Encoding a 14-3-3 Protein. Neuron, 1996, 17, 931-944.	3.8	215
121	Neuroanatomy: Mushrooming mushroom bodies. Current Biology, 1996, 6, 146-148.	1.8	37
122	TheDrosophila brain revisited by enhancer detection. Journal of Neurobiology, 1996, 31, 88-102.	3.7	52
123	A mouse homolog of dunce, a gene important for learning and memory indrosophila, is preferentially expressed in olfactory receptor neurons. Journal of Neurobiology, 1995, 28, 102-113.	3.7	49
124	The cyclic AMP system andDrosophila learning. Molecular and Cellular Biochemistry, 1995, 149-150, 271-278.	1.4	115
125	The cyclic AMP system and Drosophila learning. , 1995, 149-150, 271-278.		59
126	Progress in understanding the Drosophila dnc locus. Comparative Biochemistry and Physiology Part B: Comparative Biochemistry, 1994, 108, 1-9.	0.2	7

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127	Preferential expression in mushroom bodies of the catalytic subunit of protein kinase A and its role in learning and memory. Neuron, 1993, 11, 197-208.	3.8	287
128	Mushroom bodies and drosophila learning. Neuron, 1993, 11, 1-14.	3.8	395
129	Genetic dissection of the learning/memory gene dunce of Drosophila melanogaster.. Genes and Development, 1993, 7, 1447-1458.	2.7	70
130	Preferential expression of the drosophila rutabaga gene in mushroom bodies, neural centers for learning in insects. Neuron, 1992, 9, 619-627.	3.8	239
131	The Drosophila learning and memory gene rutabaga encodes a Ca2+calmodulin-responsive adenylyl cyclase. Cell, 1992, 68, 479-489.	13.5	561
132	Characterization of the memory gene dunce of Drosophila melanogaster. Journal of Molecular Biology, 1991, 222, 553-565.	2.0	96
133	The cyclic AMP phosphodiesterase encoded by the drosophila dunce gene is concentrated in the mushroom body neuropil. Neuron, 1991, 6, 455-467.	3.8	243
134	The Drosophila dunce locus: learning and memory genes in the fly. Trends in Genetics, 1991, 7, 224-229.	2.9	45
135	Molecular characterization of human and bovine rod photoreceptor cGMP phosphodiesterase Î±-subunit and chromosomal localization of the human gene. Genomics, 1990, 6, 272-283.	1.3	105
136	Copia RNA levels are elevated in dunce mutants and modulated by cAMP. Nucleic Acids Research, 1989, 17, 8313-8326.	6.5	14
137	An interchromosomal gene conversion of the Drosophila dunce locus identified with restriction site polymorphisms: A potential involvement of transposable elements in gene conversion. Molecular Genetics and Genomics, 1987, 208, 315-324.	2.4	5
138	At least two genes reside within a large intron of the dunce gene of Drosophila. Nature, 1987, 329, 721-724.	13.7	95
139	GENETIC ANALYSIS OF CHROMOMERE 3D4 IN <i>DROSOPHILA MELANOGASTER</i>: THE <i>DUNCE</i> AND <i>SPERM-AMOTILE</i> GENES. Genetics, 1982, 100, 587-596.	1.2	36
140	Defect in cyclic AMP phosphodiesterase due to the dunce mutation of learning in Drosophila melanogaster. Nature, 1981, 289, 79-81.	13.7	418
141	Dunce mutants of Drosophila melanogaster: mutants defective in the cyclic AMP phosphodiesterase enzyme system.. Journal of Cell Biology, 1981, 90, 101-107.	2.3	133
142	A partial characterization of the cyclic nucleotide phosphodiesterases of Drosophila melanogaster. Archives of Biochemistry and Biophysics, 1980, 203, 412-421.	1.4	24
143	Genetic manipulation of cyclic AMP levels in Drosophila,melanogaster. Biochemical and Biophysical Research Communications, 1978, 81, 1180-1186.	1.0	17
144	A clonal analysis of tergite development in Drosophila of Ultraabdominal and paradoxical genotypes. Developmental Biology, 1977, 58, 114-123.	0.9	7

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145	Fruit Flies Can Teach Us How We Forget. Frontiers for Young Minds, 0, 5, .	0.8	0