

Ann M Graybiel

List of Publications by Year in descending order

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79
papers

16,234
citations

47004

47
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78
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86
all docs

86
docs citations

86
times ranked

12384
citing authors

#	ARTICLE	IF	CITATIONS
1	The substantia nigra of the human brain. <i>Brain</i> , 1999, 122, 1437-1448.	7.6	1,481
2	Neurotransmitters and neuromodulators in the basal ganglia. <i>Trends in Neurosciences</i> , 1990, 13, 244-254.	8.6	1,478
3	Habits, Rituals, and the Evaluative Brain. <i>Annual Review of Neuroscience</i> , 2008, 31, 359-387.	10.7	1,431
4	The Basal Ganglia and Adaptive Motor Control. <i>Science</i> , 1994, 265, 1826-1831.	12.6	1,168
5	Amphetamine and cocaine induce drug-specific activation of the c-fos gene in striosome-matrix compartments and limbic subdivisions of the striatum.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1990, 87, 6912-6916.	7.1	849
6	Building Neural Representations of Habits. <i>Science</i> , 1999, 286, 1745-1749.	12.6	808
7	Histochemically distinct compartments in the striatum of human, monkeys, and cat demonstrated by acetylthiocholinesterase staining.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1978, 75, 5723-5726.	7.1	742
8	Activity of striatal neurons reflects dynamic encoding and recoding of procedural memories. <i>Nature</i> , 2005, 437, 1158-1161.	27.8	578
9	Prolonged dopamine signalling in striatum signals proximity and value of distant rewards. <i>Nature</i> , 2013, 500, 575-579.	27.8	444
10	A measure of striatal function predicts motor stereotypy. <i>Nature Neuroscience</i> , 2000, 3, 377-383.	14.8	389
11	Highly restricted origin of prefrontal cortical inputs to striosomes in the macaque monkey. <i>Journal of Neuroscience</i> , 1995, 15, 5999-6013.	3.6	369
12	Basal Ganglia Disorders Associated with Imbalances in the Striatal Striosome and Matrix Compartments. <i>Frontiers in Neuroanatomy</i> , 2011, 5, 59.	1.7	354
13	Differential Dynamics of Activity Changes in Dorsolateral and Dorsomedial Striatal Loops during Learning. <i>Neuron</i> , 2010, 66, 781-795.	8.1	336
14	A Rap guanine nucleotide exchange factor enriched highly in the basal ganglia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 13278-13283.	7.1	323
15	Distributed but convergent ordering of corticostriatal projections: analysis of the frontal eye field and the supplementary eye field in the macaque monkey. <i>Journal of Neuroscience</i> , 1992, 12, 4468-4488.	3.6	313
16	Bursts of beta oscillation differentiate postperformance activity in the striatum and motor cortex of monkeys performing movement tasks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 13687-13692.	7.1	313
17	Input-output organization of the sensorimotor striatum in the squirrel monkey. <i>Journal of Neuroscience</i> , 1994, 14, 599-610.	3.6	301
18	Correspondence between the Dopamine islands and striosomes of the mammalian striatum. <i>Neuroscience</i> , 1984, 13, 1157-1187.	2.3	265

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19	Network-Level Changes in Expression of Inducible Fos/Jun Proteins in the Striatum during Chronic Cocaine Treatment and Withdrawal. <i>Neuron</i> , 1996, 17, 147-156.	8.1	256
20	A Dual Operator View of Habitual Behavior Reflecting Cortical and Striatal Dynamics. <i>Neuron</i> , 2013, 79, 361-374.	8.1	244
21	A Corticostriatal Path Targeting Striosomes Controls Decision-Making under Conflict. <i>Cell</i> , 2015, 161, 1320-1333.	28.9	244
22	Neurochemical architecture of the human striatum. <i>Journal of Comparative Neurology</i> , 1997, 384, 1-25.	1.6	217
23	Localized microstimulation of primate pregenual cingulate cortex induces negative decision-making. <i>Nature Neuroscience</i> , 2012, 15, 776-785.	14.8	216
24	Fibers from the basolateral nucleus of the amygdala selectively innervate striosomes in the caudate nucleus of the cat. <i>Journal of Comparative Neurology</i> , 1988, 269, 506-522.	1.6	161
25	Compartmental origins of striatal efferent projections in the cat. <i>Neuroscience</i> , 1989, 32, 297-321.	2.3	148
26	Striosomes and mood dysfunction in Huntington's disease. <i>Brain</i> , 2007, 130, 206-221.	7.6	136
27	Distinct nigrostriatal projection systems innervate striosomes and matrix in the primate striatum. <i>Brain Research</i> , 1989, 498, 344-350.	2.2	130
28	Repetitive Behaviors in Monkeys Are Linked to Specific Striatal Activation Patterns. <i>Journal of Neuroscience</i> , 2004, 24, 7557-7565.	3.6	128
29	Characterization of Mechanically Matched Hydrogel Coatings to Improve the Biocompatibility of Neural Implants. <i>Scientific Reports</i> , 2017, 7, 1952.	3.3	126
30	Chronic Stress Alters Striosome-Circuit Dynamics, Leading to Aberrant Decision-Making. <i>Cell</i> , 2017, 171, 1191-1205.e28.	28.9	116
31	Striosome dendron bouquets highlight a unique striatonigral circuit targeting dopamine-containing neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11318-11323.	7.1	112
32	Cellular substrate of the histochemically defined striosome/matrix system of the caudate nucleus: A combined golgi and immunocytochemical study in cat and ferret. <i>Neuroscience</i> , 1988, 24, 853-875.	2.3	111
33	Habit formation. <i>Dialogues in Clinical Neuroscience</i> , 2016, 18, 33-43.	3.7	111
34	Differential involvement of striosome and matrix dopamine systems in a transgenic model of dopa-responsive dystonia. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 12551-12556.	7.1	98
35	Concurrent Activation of Dopamine D1 and D2 Receptors Is Required to Evoke Neural and Behavioral Phenotypes of Cocaine Sensitization. <i>Journal of Neuroscience</i> , 2002, 22, 6218-6227.	3.6	96
36	A simple ordering of neocortical areas established by the compartmental organization of their striatal projections. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1990, 87, 6196-6199.	7.1	94

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37	Chemospecificity of ontogenetic units in the striatum: demonstration by combining [3H]thymidine neuronography and histochemical staining.. Proceedings of the National Academy of Sciences of the United States of America, 1982, 79, 198-202.	7.1	90
38	Co-expression of neuropeptides in the cat's striatum: an immunohistochemical study of substance P, dynorphin B and enkephalin. Neuroscience, 1990, 39, 33-58.	2.3	89
39	Two-photon imaging in mice shows striosomes and matrix have overlapping but differential reinforcement-related responses. ELife, 2017, 6, .	6.0	86
40	Long-term dopamine neurochemical monitoring in primates. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 13260-13265.	7.1	80
41	Modular organization of projection neurons in the matrix compartment of the primate striatum. Journal of Neuroscience, 1991, 11, 779-791.	3.6	71
42	Miniaturized neural system for chronic, local intracerebral drug delivery. Science Translational Medicine, 2018, 10, .	12.4	71
43	The Activity-Regulated Cytoskeletal-Associated Protein Arc Is Expressed in Different Striosome-Matrix Patterns Following Exposure to Amphetamine and Cocaine. Journal of Neurochemistry, 2008, 74, 2074-2078.	3.9	66
44	Shifting Responsibly: The Importance of Striatal Modularity to Reinforcement Learning in Uncertain Environments. Frontiers in Human Neuroscience, 2011, 5, 47.	2.0	64
45	Dysregulation of CalDAG-GEFI and CalDAG-GEFII predicts the severity of motor side-effects induced by anti-parkinsonian therapy. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 2892-2896.	7.1	60
46	Stable Encoding of Task Structure Coexists With Flexible Coding of Task Events in Sensorimotor Striatum. Journal of Neurophysiology, 2009, 102, 2142-2160.	1.8	60
47	Radial Glial Lineage Progression and Differential Intermediate Progenitor Amplification Underlie Striatal Compartments and Circuit Organization. Neuron, 2018, 99, 345-361.e4.	8.1	55
48	Striatal Microstimulation Induces Persistent and Repetitive Negative Decision-Making Predicted by Striatal Beta-Band Oscillation. Neuron, 2018, 99, 829-841.e6.	8.1	54
49	Cellular-scale probes enable stable chronic subsecond monitoring of dopamine neurochemicals in a rodent model. Communications Biology, 2018, 1, 144.	4.4	52
50	Subcellular probes for neurochemical recording from multiple brain sites. Lab on A Chip, 2017, 17, 1104-1115.	6.0	51
51	Severe drug-induced repetitive behaviors and striatal overexpression of VAcHt in ChAT-ChR2-EYFP BAC transgenic mice. Frontiers in Neural Circuits, 2014, 8, 57.	2.8	48
52	Dendritic domains of medium spiny neurons in the primate striatum: Relationships to striosomal borders. Journal of Comparative Neurology, 1993, 337, 614-628.	1.6	44
53	Motivation and Affective Judgments Differentially Recruit Neurons in the Primate Dorsolateral Prefrontal and Anterior Cingulate Cortex. Journal of Neuroscience, 2015, 35, 1939-1953.	3.6	42
54	Habit formation coincides with shifts in reinforcement representations in the sensorimotor striatum. Journal of Neurophysiology, 2016, 115, 1487-1498.	1.8	42

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55	Habit Learning by Naive Macaques Is Marked by Response Sharpening of Striatal Neurons Representing the Cost and Outcome of Acquired Action Sequences. <i>Neuron</i> , 2015, 87, 853-868.	8.1	41
56	A system for recording neural activity chronically and simultaneously from multiple cortical and subcortical regions in nonhuman primates. <i>Journal of Neurophysiology</i> , 2012, 107, 1979-1995.	1.8	36
57	Predominant Striatal Input to the Lateral Habenula in Macaques Comes from Striosomes. <i>Current Biology</i> , 2019, 29, 51-61.e5.	3.9	29
58	Advance cueing produces enhanced action-boundary patterns of spike activity in the sensorimotor striatum. <i>Journal of Neurophysiology</i> , 2011, 105, 1861-1878.	1.8	28
59	Striatal Cholinergic Interneurons Modulate Spike-Timing in Striosomes and Matrix by an Amphetamine-Sensitive Mechanism. <i>Frontiers in Neuroanatomy</i> , 2017, 11, 20.	1.7	28
60	Striosomes Mediate Value-Based Learning Vulnerable in Age and a Huntington's Disease Model. <i>Cell</i> , 2020, 183, 918-934.e49.	28.9	27
61	Dynamic ordering of early generated striatal cells destined to form the striosomal compartment of the striatum. <i>Journal of Comparative Neurology</i> , 2015, 523, 943-962.	1.6	23
62	Dopamine and beta-band oscillations differentially link to striatal value and motor control. <i>Science Advances</i> , 2020, 6, .	10.3	23
63	Combinatorial Developmental Controls on Striatonigral Circuits. <i>Cell Reports</i> , 2020, 31, 107778.	6.4	21
64	Learning new sequential stepping patterns requires striatal plasticity during the earliest phase of acquisition. <i>European Journal of Neuroscience</i> , 2017, 45, 901-911.	2.6	20
65	Focal, remote-controlled, chronic chemical modulation of brain microstructures. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7254-7259.	7.1	18
66	A non-invasive head-holding device for chronic neural recordings in awake behaving monkeys. <i>Journal of Neuroscience Methods</i> , 2015, 240, 154-160.	2.5	17
67	Steerable Microinvasive Probes for Localized Drug Delivery to Deep Tissue. <i>Small</i> , 2019, 15, e1901459.	10.0	17
68	A novel instrumented multiplex running wheel system, Step-Wheel, for monitoring and controlling complex sequential stepping in mice. <i>Journal of Neurophysiology</i> , 2011, 106, 479-487.	1.8	14
69	Microstimulation of primate neocortex targeting striosomes induces negative decision-making. <i>European Journal of Neuroscience</i> , 2020, 51, 731-741.	2.6	13
70	Platform for micro-invasive membrane-free biochemical sampling of brain interstitial fluid. <i>Science Advances</i> , 2020, 6, .	10.3	11
71	Multiplexed action-outcome representation by striatal striosome-matrix compartments detected with a mouse cost-benefit foraging task. <i>Nature Communications</i> , 2022, 13, 1541.	12.8	11
72	Striatal transcriptome changes linked to drug-induced repetitive behaviors. <i>European Journal of Neuroscience</i> , 2021, 53, 2450-2468.	2.6	9

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73	CalDAG-GEFI mediates striatal cholinergic modulation of dendritic excitability, synaptic plasticity and psychomotor behaviors. <i>Neurobiology of Disease</i> , 2021, 158, 105473.	4.4	8
74	Computationally Guided Intracerebral Drug Delivery via Chronically Implanted Microdevices. <i>Cell Reports</i> , 2020, 31, 107734.	6.4	5
75	Causal Evidence for Induction of Pessimistic Decision-Making in Primates by the Network of Frontal Cortex and Striosomes. <i>Frontiers in Neuroscience</i> , 2021, 15, 649167.	2.8	5
76	Effects of acute and repeated administration of the selective M ₄ PAM VU0152099 on cocaine versus food choice in male rats. <i>Addiction Biology</i> , 2022, 27, e13145.	2.6	5
77	Cannabinoid Receptor 1 Is Required for Neurodevelopment of Striosome-Dendron Bouquets. <i>ENeuro</i> , 2022, 9, ENEURO.0318-21.2022.	1.9	4
78	Templates for Neural Dynamics in the Striatum: Striosomes and Matrisomes. , 2010, , 120-126.		3
79	Simultaneous recording and marking of brain microstructures. <i>Journal of Neural Engineering</i> , 2020, 17, 044001.	3.5	1