Gordon W Arbuthnott

List of Publications by Year in Descending Order

140 papers	9,301 citations	44 h-index	95 g-index
157 ext. papers	9,891 ext. citations	5.3 avg, IF	5.63 L-index

#	Paper	IF	Citations
140	Striatal bilateral control of skilled forelimb movement. *Cell Reports*, **2021**, 34, 108651	10.6	2
139	Prelimbic cortical targets of ventromedial thalamic projections include inhibitory interneurons and corticostriatal pyramidal neurons in the rat. *Brain Structure and Function*, **2020**, 225, 2057-2076	4	1
138	Cholinergic modulation of striatal microcircuits. *European Journal of Neuroscience*, **2019**, 49, 604-622	3.5	45
137	Synchronized activation of striatal direct and indirect pathways underlies the behavior in unilateral dopamine-depleted mice. *European Journal of Neuroscience*, **2019**, 49, 1512-1528	3.5	10
136	Thalamic afferents to prefrontal cortices from ventral motor nuclei in decision-making. *European Journal of Neuroscience*, **2019**, 49, 646-657	3.5	15
135	Fiber-bundle-basis sparse reconstruction for high resolution wide-field microendoscopy. *Biomedical Optics Express*, **2018**, 9, 1843-1851	3.5	3
134	Cerebellar sub-divisions differ in exercise-induced plasticity of noradrenergic axons and in their association with resilience to activity-based anorexia. *Brain Structure and Function*, **2017**, 222, 317-339	4	10
133	Are the Symptoms of Parkinsonism Cortical in Origin?. *Computational and Structural Biotechnology Journal*, **2017**, 15, 21-25	6.8	6
132	Refinement of learned skilled movement representation in motor cortex deep output layer. *Nature Communications*, **2017**, 8, 15834	17.4	30
131	The neostriatum: two entities, one structure?. *Brain Structure and Function*, **2016**, 221, 1737-49	4	23
130	Advances in Fibre Microendoscopy for Neuronal Imaging. *Optical Data Processing and Storage*, **2016** , 2,		5
129	Presynaptic D1 heteroreceptors and mGlu autoreceptors act at individual cortical release sites to modify glutamate release. *Brain Research*, **2016**, 1639, 74-87	3.7	10
128	Rebuilding a realistic corticostriatal "social network" from dissociated cells. *Frontiers in Systems Neuroscience*, **2015**, 9, 63	3.5	4
127	Cell Assembly Signatures Defined by Short-Term Synaptic Plasticity in Cortical Networks. *International Journal of Neural Systems*, **2015**, 25, 1550026	6.2	21
126	Basal ganglia-thalamus and the "crowning enigma". *Frontiers in Neural Circuits*, **2015**, 9, 71	3.5	10
125	Extrasynaptic glutamate NMDA receptors: key players in striatal function. *Neuropharmacology*, **2015**, 89, 54-63	5.5	12
124	Thalamostriatal synapses-another substrate for dopamine action?. *Progress in Brain Research*, **2014**, 211, 1-11	2.9	5

123	Cortical effects of deep brain stimulation: implications for pathogenesis and treatment of Parkinson disease. *JAMA Neurology*, **2014**, 71, 100-3	17.2	41
122	FRETing over dopamine: single cell cAMP and protein kinase A responses to 100 ms dopamine application. *Journal of Physiology*, **2013**, 591, 3107	3.9	
121	Development of dissociated cryopreserved rat cortical neurons in vitro. *Journal of Neuroscience Methods*, **2012**, 205, 324-33	3	12
120	Therapeutic deep brain stimulation in Parkinsonian rats directly influences motor cortex. *Neuron*, **2012**, 76, 1030-41	13.9	218
119	Selective loss of AMPA receptors at corticothalamic synapses in the epileptic stargazer mouse. *Neuroscience*, **2012**, 217, 19-31	3.9	28
118	The corticostriatal system in dissociated cell culture. *Frontiers in Systems Neuroscience*, **2011**, 5, 52	3.5	10
117	Power fluctuations in beta and gamma frequencies in rat globus pallidus: association with specific phases of slow oscillations and differential modulation by dopamine D1 and D2 receptors. *Journal of Neuroscience*, **2011**, 31, 6098-107	6.6	25
116	Of Rats and Patients: Some Thoughts About Why Rats Turn in Circles and Parkinson's Disease Patients Cannot Move Normally. *Neuromethods*, **2011**, 317-323	0.4	
115	Functional anatomy: dynamic States in Basal Ganglia circuits. *Frontiers in Neuroanatomy*, **2010**, 4, 144	3.6	11
114	Neuropharmacology **2010**, 45-76		3
113	Gating of Cortical Input to the Striatum. *Handbook of Behavioral Neuroscience*, **2010**, 341-351	0.7	6
112	The rotational model and microdialysis: Significance for dopamine signalling, clinical studies, and beyond. *Progress in Neurobiology*, **2010**, 90, 176-89	10.9	33
111	Striatal interneurons in dissociated cell culture. *Histochemistry and Cell Biology*, **2010**, 134, 1-12	2.4	10
110	Cortical effects of subthalamic stimulation correlate with behavioral recovery from dopamine antagonist induced akinesia. *Cerebral Cortex*, **2009**, 19, 1055-63	5.1	78
109	Dealing with the devil in the detail - some thoughts about the next model of the basal ganglia. *Parkinsonism and Related Disorders*, **2009**, 15 Suppl 3, S139-42	3.6	3
108	Slowly progressive dopamine cell loss--a model on which to test neuroprotective strategies for Parkinson's disease?. *Reviews in the Neurosciences*, **2009**, 20, 85-94	4.7	6
107	Neuromodulation and Neurodynamics of Striatal Inhibitory Networks: Implications for Parkinson's Disease **2009**, 1-11		
106	Microglial activation is not prevented by tacrolimus but dopamine neuron damage is reduced in a rat model of Parkinson's disease progression. *Brain Research*, **2008**, 1216, 78-86	3.7	9

105	Actions of adenosine A 2A receptors on synaptic connections of spiny projection neurons in the neostriatal inhibitory network. *Journal of Neurophysiology*, **2008**, 99, 1884-9	3.2	22
104	The influence of the subthalamic nucleus upon the damage to the dopamine system following lesions of globus pallidus in rats. *European Journal of Neuroscience*, **2007**, 26, 642-8	3.5	10
103	Striatal contributions to reward and decision making: making sense of regional variations in a reiterated processing matrix. *Annals of the New York Academy of Sciences*, **2007**, 1104, 192-212	6.5	116
102	Simulation of GABA function in the basal ganglia: computational models of GABAergic mechanisms in basal ganglia function. *Progress in Brain Research*, **2007**, 160, 313-29	2.9	41
101	Resonant antidromic cortical circuit activation as a consequence of high-frequency subthalamic deep-brain stimulation. *Journal of Neurophysiology*, **2007**, 98, 3525-37	3.2	203
100	Space, time and dopamine. *Trends in Neurosciences*, **2007**, 30, 62-9	13.3	225
99	Neurone specific regulation of dendritic spines in vivo by post synaptic density 95 protein (PSD-95). *Brain Research*, **2006**, 1090, 89-98	3.7	59
98	Delayed synaptic degeneration in the CNS of Wlds mice after cortical lesion. *Brain*, **2006**, 129, 1546-56	11.2	51
97	Selective elimination of glutamatergic synapses on striatopallidal neurons in Parkinson disease models. *Nature Neuroscience*, **2006**, 9, 251-9	25.5	598
96	Evidence of a breakdown of corticostriatal connections in Parkinson's disease. *Neuroscience*, **2005**, 132, 741-54	3.9	198
95	Activation of NOS Interneurones in Striatum after Excitotoxic Lesions of Rat Globus Pallidus **2005**, 485-491		
94	Death of dopaminergic neurones in the rat substantia nigra can be induced by damage to globus pallidus. *European Journal of Neuroscience*, **2004**, 20, 1737-44	3.5	16
93	Functional Interactions within the Subthalamic Nucleus. *Advances in Behavioral Biology*, **2002**, 359-368		3
92	Identification of the source of the bilateral projection system from cortex to somatosensory neostriatum and an exploration of its physiological actions. *Neuroscience*, **2001**, 103, 87-96	3.9	46
91	Computational models of the basal ganglia. *Movement Disorders*, **2000**, 15, 762-70	7	51
90	Pathologic gambling in Parkinson's disease: a behavioral manifestation of pharmacologic treatment?. *Movement Disorders*, **2000**, 15, 869-72	7	251
89	Corticofugal axons from adjacent 'barrel' columns of rat somatosensory cortex: cortical and thalamic terminal patterns. *Journal of Anatomy*, **2000**, 196 (Pt 3), 379-90	2.9	23
88	Dopamine and synaptic plasticity in the neostriatum. *Journal of Anatomy*, **2000**, 196 (Pt 4), 587-96	2.9	136

87	Acute in vivo neurotoxicity of peptides from Maedi Visna virus transactivating protein Tat. *Brain Research*, **1999**, 830, 285-91	3.7	16
86	Double anterograde tracing of outputs from adjacent "barrel columns" of rat somatosensory cortex. Neostriatal projection patterns and terminal ultrastructure. *Neuroscience*, **1999**, 88, 119-33	3.9	72
85	Modulation by dopamine of rat corticostriatal input. *Advances in Pharmacology*, **1998**, 42, 733-6	5.7	12
84	Effects of potassium channel blockers on synaptic plasticity in the corticostriatal pathway. *Neuropharmacology*, **1998**, 37, 523-33	5.5	18
83	Plasticity of synapses in the rat neostriatum after unilateral lesion of the nigrostriatal dopaminergic pathway. *Journal of Neuroscience*, **1998**, 18, 4732-43	6.6	249
82	Plasticity of striatopallidal terminals following unilateral lesion of the dopaminergic nigrostriatal pathway: a morphological study. *Experimental Brain Research*, **1997**, 116, 39-49	2.3	25
81	Dopamine reverses the depression of rat corticostriatal synapses which normally follows high-frequency stimulation of cortex in vitro. *Neuroscience*, **1996**, 70, 1-5	3.9	260
80	Dopamine cells are neurones too!. *Trends in Neurosciences*, **1996**, 19, 279-80	13.3	7
79	Inhibition of neuronal nitric oxide synthase by 7-nitroindazole: effects upon local cerebral blood flow and glucose use in the rat. *Journal of Cerebral Blood Flow and Metabolism*, **1995**, 15, 766-73	7.3	86
78	In vivo detection of immunoreactive neurokinin A release within rat substantia nigra and its dependency on a dopaminergic input. *Brain Research*, **1995**, 679, 241-8	3.7	6
77	Neurotoxic mechanisms of transactivating protein Tat of Maedi-Visna virus. *Neuroscience Letters*, **1995**, 197, 215-8	3.3	24
76	Identified cholinergic neurones in the adult rat brain are enriched in GAP-43 mRNA: a double in situ hybridisation study. *Journal of Chemical Neuroanatomy*, **1995**, 9, 17-26	3.2	13
75	The basic domain of the lentiviral Tat protein is responsible for damages in mouse brain: involvement of cytokines. *Virology*, **1994**, 205, 519-29	3.6	136
74	Involvement of viral regulatory gene products in the pathogenesis of lentivirus infections. *Annals of the New York Academy of Sciences*, **1994**, 724, 107-24	6.5	2
73	Cerebrovascular autoregulation in response to hypertension induced by NG-nitro-L-arginine methyl ester. *Neuroscience*, **1994**, 59, 13-20	3.9	40
72	Some Consequences of Local Blockade of Nitric-Oxide Synthase in the Rat Neostriatum. *Advances in Behavioral Biology*, **1994**, 171-178		3
71	Substance P release from rat nucleus accumbens and striatum: an in vivo study using antibody microprobes. *Brain Research*, **1993**, 610, 234-41	3.7	15
70	Neurotoxicity of peptide analogues of the transactivating protein tat from Maedi-Visna virus and human immunodeficiency virus. *Neuroscience*, **1993**, 53, 1-6	3.9	104

69	Distribution of thyrotrophin-releasing hormone receptor messenger RNA in rat pituitary and brain. *Neuroscience*, **1993**, 53, 877-87	3.9	38
68	The corticostriatal system on computer simulation: an intermediate mechanism for sequencing of actions. *Progress in Brain Research*, **1993**, 99, 325-39	2.9	22
67	The thorny problem of what dopamine does in psychiatric disease. *Progress in Brain Research*, **1993**, 99, 341-50	2.9	7
66	Ultrastructural characteristics of enkephalin-immunoreactive boutons and their postsynaptic targets in the shell and core of the nucleus accumbens of the rat. *Journal of Comparative Neurology*, **1993**, 332, 224-36	3.4	35
65	Dendritic domains of medium spiny neurons in the primate striatum: relationships to striosomal borders. *Journal of Comparative Neurology*, **1993**, 337, 614-28	3.4	39
64	Morphological changes in the rat neostriatum after unilateral 6-hydroxydopamine injections into the nigrostriatal pathway. *Experimental Brain Research*, **1993**, 93, 17-27	2.3	127
63	Astrocytes immunoreactive for glial fibrillary acidic protein (GFAP) are increased in the mediobasal hypothalamus in hypogonadal (hpg) mice. *Molecular and Cellular Neurosciences*, **1992**, 3, 473-81	4.8	4
62	Serotonin hyperinnervation after foetal nigra or raphe transplantation in the neostriatum of adult rats. *Neuroscience Letters*, **1991**, 128, 281-4	3.3	16
61	A light and electron microscopical study of enkephalin-immunoreactive structures in the rat neostriatum after removal of the nigrostriatal dopaminergic pathway. *Neuroscience*, **1991**, 42, 715-30	3.9	52
60	Identification of grafted neurons with fluorescent-labelled microbeads. *Progress in Brain Research*, **1990**, 82, 385-90	2.9	6
59	Effects of selective monoamine oxidase inhibitors on the in vivo release and metabolism of dopamine in the rat striatum. *Journal of Neurochemistry*, **1990**, 55, 981-8	6	129
58	In vivo mechanisms underlying dopamine release from rat nigrostriatal terminals: I. Studies using veratrine and ouabain. *Journal of Neurochemistry*, **1990**, 54, 1834-43	6	42
57	In vivo mechanisms underlying dopamine release from rat nigrostriatal terminals: II. Studies using potassium and tyramine. *Journal of Neurochemistry*, **1990**, 54, 1844-51	6	72
56	Brain microdialysis studies on the control of dopamine release and metabolism in vivo. *Journal of Neuroscience Methods*, **1990**, 34, 73-81	3	29
55	Glial fibrillary acidic protein (GFAP)-immunoreactive astrocytes are increased in the hypothalamus of androgen-insensitive testicular feminized (Tfm) mice. *Neuroscience Letters*, **1990**, 118, 77-81	3.3	29
54	Electrophysiological properties of nigrothalamic neurons after 6-hydroxydopamine lesions in the rat. *Neuroscience*, **1990**, 38, 447-56	3.9	67
53	Distribution and synaptic contacts of the cortical terminals arising from neurons in the rat ventromedial thalamic nucleus. *Neuroscience*, **1990**, 38, 47-60	3.9	51
52	Dopamine release and metabolism in the rat striatum: an analysis by 'in vivo' brain microdialysis **1990**, 48, 281-93		77

51	Electrophysiological and anatomical observations concerning the pallidostriatal pathway in the rat. *Experimental Brain Research*, **1989**, 74, 303-10	2.3	29
50	The influence of the estrous cycle on the activity of striatal neurons recorded from freely moving rats. *Neuroscience Letters*, **1989**, 107, 233-8	3.3	2
49	Spine density on neostriatal neurones changes with 6-hydroxydopamine lesions and with age. *Brain Research*, **1989**, 503, 334-8	3.7	187
48	An afterhyperpolarization recorded in striatal cells 'in vitro': effect of dopamine administration. *Experimental Brain Research*, **1988**, 71, 399-405	2.3	42
47	Graft-derived recovery from 6-OHDA lesions: specificity of ventral mesencephalic graft tissues. *Experimental Brain Research*, **1988**, 71, 411-24	2.3	132
46	Amphetamine-induced dopamine release in the rat striatum: an in vivo microdialysis study. *Journal of Neurochemistry*, **1988**, 50, 346-55	6	267
45	Electrophysiological demonstration of host cortical inputs to striatal grafts. *Neuroscience Letters*, **1987**, 83, 275-81	3.3	78
44	Spectrin-like protein (fodrin) in nerve cells in culture. *Biochemical Society Transactions*, **1986**, 14, 356-357	5.1	
43	Immunohistochemical localization of a spectrin-like protein (fodrin) in nerve cells in culture. *Neuroscience Letters*, **1986**, 63, 33-8	3.3	8
42	Different patterns of molecular forms of somatostatin are released by the rat median eminence and hypothalamus. *Neuroscience Letters*, **1985**, 57, 215-20	3.3	12
41	Electrophysiological properties of single units in dopamine-rich mesencephalic transplants in rat brain. *Neuroscience Letters*, **1985**, 57, 205-10	3.3	168
40	Separation of the motor consequences from other actions of unilateral 6-hydroxydopamine lesions in the nigrostriatal neurones of rat brain. *Brain Research*, **1985**, 348, 220-8	3.7	21
39	Schneider's first-rank symptoms of schizophrenia. An association with increased growth hormone response to apomorphine. *Archives of General Psychiatry*, **1984**, 41, 1040-3		26
38	The anatomical substrate of the turning behaviour seen after lesions in the nigrostriatal dopamine system. *Neuroscience*, **1983**, 8, 87-95	3.9	32
37	The electrophysiology of dopamine (D2) receptors: a study of the actions of dopamine on corticostriatal transmission. *Neuroscience*, **1983**, 10, 349-55	3.9	125
36	Oestradiol-17 beta increases the firing rate of antidromically identified neurones of the rat neostriatum. *Neuroendocrinology*, **1983**, 37, 106-10	5.6	34
35	Support for the hypothesis that the actions of dopamine are not merely motor. *Behavioral and Brain Sciences*, **1982**, 5, 54-55	0.9	2
34	Increases in dopamine metabolism are not a general feature of intracranial self-stimulation. *Life Sciences*, **1982**, 30, 1081-5	6.8	9

33	Participation of projections from substantia nigra reticulata to the lower brain stem in tuning behavior. *Experimental Neurology*, **1982**, 78, 380-90	5.7	13
32	Some non-fluorescent connections of the nigro-neostriatal dopamine neurones. *Brain Research Bulletin*, **1982**, 9, 367-8	3.9	16
31	The effect of DSP-4 on some positively reinforced operant behaviors in the rat. *Pharmacology Biochemistry and Behavior*, **1982**, 16, 197-202	3.9	12
30	Crossed connections of the substantia nigra in the rat. *Journal of Comparative Neurology*, **1982**, 207, 283-303	3.4	391
29	Orthograde transport of Nuclear yellow: a problem and its solution. *Journal of Neuroscience Methods*, **1982**, 6, 365-8	3	5
28	The pattern of innervation of the corpus striatum by the substantia nigra. *Neuroscience*, **1981**, 6, 2063-7	3.9	53
27	Uptake of 5-hydroxytryptamine in the catecholamine containing areas of the hypothalamus of the rat after treatment with phenelzine and tryptophan. *British Journal of Pharmacology*, **1981**, 73, 143-8	8.6	2
26	The role of dopamine in pontine intracranial self-stimulation: a re-examination of the problem. *Neuroscience Letters*, **1981**, 26, 169-75	3.3	3
25	Altered paw preference after unilateral 6-hydroxy-dopamine injections into lateral hypothalamus. *Neuropsychologia*, **1981**, 19, 463-7	3.2	54
24	Non-dopamine containing efferents of substantia nigra: the pathway to the lower brain stem. *Journal of Neural Transmission*, **1980**, 47, 221-6	4.3	35
23	The use of ultra-violet setting glue for microelectrode fabrication. *Journal of Neuroscience Methods*, **1980**, 3, 203-4	3	6
22	Cyclic nucleotide losses during tissue processing for immunohistochemistry. *Journal of Histochemistry and Cytochemistry*, **1980**, 28, 54-5	3.4	25
21	Identification of 5-hydroxytryptamine in the presence of catecholamines by microspectrofluorimetry. *Journal of Pharmacological Methods*, **1980**, 3, 97-102		2
20	Possible links between hypothalamus and substantia nigra in the rat. *Appetite*, **1980**, 1, 43-51	4.5	17
19	The dopamine synapse and the notion of 'pleasure centres' in the brain. *Trends in Neurosciences*, **1980**, 3, 199-200	13.3	3
18	Electrophysiological evidence for an input from the anterior olfactory nucleus to substantia nigra. *Experimental Neurology*, **1979**, 66, 16-29	5.7	12
17	Interactions between serotonergic and dopaminergic systems in rat brain demonstrated by small unilateral lesions of the raphe nuclei. *European Journal of Pharmacology*, **1979**, 57, 295-305	5.3	84
16	Lithium neurotoxicity. I. The concentration of lithium in dopaminergic systems of rat brain determined by flameless atomic absorption spectrophotometry. *Acta Pharmacologica Et Toxicologica*, **1978**, 42, 259-63		5

15	The effect of chronic lithium administration on dopamine metabolism in rat striatum. *Psychopharmacology*, **1978**, 56, 163-6	4.7	37
14	CHOLINE IN ALZHEIMER'S DISEASE. *Lancet, The*, **1978**, 312, 1054	40	
13	The striatonigral fibres and the feedback control of dopamine metabolism. *Psychological Medicine*, **1978**, 8, 471-82	6.9	27
12	Feedback loop or output pathway in striato-nigral fibres?. *Nature*, **1977**, 265, 363-5	50.4	158
11	THE RELATIONSHIP BETWEEN NORADRENALINE TURNOVER IN CEREBRAL CORTEX AND ELECTRICAL SELF-STIMULATION THROUGH ELECTRODES IN THE REGION OF LOCUS COERULEUS. *Journal of Neurochemistry*, **1975**, 24, 677-681	6	23
10	Turning behavior induced by electrical stimulation of the nigro-neostriatal system of the rat. *Experimental Neurology*, **1975**, 47, 162-72	5.7	61
9	The effect of unilateral and bilateral lesions in the locus coeruleus on the levels of 3-methoxy-4-hydroxyphenylglycol (MHPG) in neocortex. *Experientia*, **1973**, 29, 52-3		18
8	Lesions of the locus ceruleus and noradrenaline metabolism in cerebral cortex. *Experimental Neurology*, **1973**, 41, 411-7	5.7	24
7	Function of catecholamine-containing neurones in mammalian central nervous system. *Nature: New Biology*, **1972**, 238, 245-6		38
6	Intracranial self-stimulation with electrodes in the region of the locus coeruleus. *Brain Research*, **1972**, 36, 275-87	3.7	196
5	Central catecholamine turnover and self-stimulation behaviour. *Brain Research*, **1971**, 27, 406-13	3.7	86
4	Relation of contraversive turning to unilateral release of dopamine from the nigrostriatal pathway in rats. *Experimental Neurology*, **1971**, 30, 484-91	5.7	108
3	Depletion of catecholamines in vivo induced by electrical stimulation of central monoamine pathways. *Brain Research*, **1970**, 24, 471-83	3.7	116
2	Quantitative recording of rotational behavior in rats after 6-hydroxy-dopamine lesions of the nigrostriatal dopamine system. *Brain Research*, **1970**, 24, 485-93	3.7	1799
1	Noradrenaline uptake into cerebral cortex: a histochemical study. *Journal of Neurochemistry*, **1969**, 16, 1599-604	6	13