

# Brian H Smith

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/966058/publications.pdf>

Version: 2024-02-01

109  
papers

5,503  
citations

76326

40  
h-index

91884

69  
g-index

114  
all docs

114  
docs citations

114  
times ranked

3406  
citing authors

#	ARTICLE	IF	CITATIONS
1	Impaired odour discrimination on desynchronization of odour-encoding neural assemblies. <i>Nature</i> , 1997, 390, 70-74.	27.8	912
2	Modulation of Early Olfactory Processing by an Octopaminergic Reinforcement Pathway in the Honeybee. <i>Journal of Neuroscience</i> , 2003, 23, 5370-5380.	3.6	261
3	Context-dependent violations of rational choice in honeybees ( <i>Apis mellifera</i> ) and gray jays ( <i>Junco hyemalis</i> ). <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i> , 2010, 36, 104-114.	1.48	240
4	Intensity and the ratios of compounds in the scent of snapdragon flowers affect scent discrimination by honeybees ( <i>Apis mellifera</i> ). <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2005, 191, 105-114.	1.6	122
5	Associative Conditioning Tunes Transient Dynamics of Early Olfactory Processing. <i>Journal of Neuroscience</i> , 2009, 29, 10191-10202.	3.6	115
6	High-speed odor transduction and pulse tracking by insect olfactory receptor neurons. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 16925-16930.	7.1	109
7	Olfactory conditioning in the honey bee, <i>Apis mellifera</i> : Effects of odor intensity. <i>Physiology and Behavior</i> , 1997, 61, 107-117.	2.1	108
8	Learning modulates the ensemble representations for odors in primary olfactory networks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 10476-10481.	7.1	106
9	Octopamine and tyramine influence the behavioral profile of locomotor activity in the honey bee ( <i>Apis mellifera</i> ). <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i> , 2010, 36, 104-114.	2.0	100
10	Heritable variation for latent inhibition and its correlation with reversal learning in honeybees ( <i>Apis mellifera</i> ). <i>Journal of Experimental Psychology: Learning, Memory, and Cognition</i> , 2010, 36, 104-114.	0.5	98
11	Octopamine receptors in the honeybee ( <i>Apis mellifera</i> ) brain and their disruption by RNA-mediated interference. <i>Journal of Insect Physiology</i> , 2004, 50, 701-713.	2.0	92
12	Conditional withholding of proboscis extension in honeybees ( <i>Apis mellifera</i> ) during discriminative punishment. <i>Journal of Comparative Psychology (Washington, D C: 1983)</i> , 1991, 105, 345-356.	0.5	91
13	The use of electromyogram recordings to quantify odourant discrimination in the honey bee, <i>Apis mellifera</i> . <i>Journal of Insect Physiology</i> , 1989, 35, 369-375.	2.0	89
14	Analysis of Interaction in Binary Odorant Mixtures. <i>Physiology and Behavior</i> , 1998, 65, 397-407.	2.1	81
15	Modulation of motor behavior by dopamine and the D1-like dopamine receptor AmDOP2 in the honey bee. <i>Journal of Insect Physiology</i> , 2010, 56, 422-430.	2.0	81
16	Risk-sensitive foraging: choice behaviour of honeybees in response to variability in volume of reward. <i>Animal Behaviour</i> , 1999, 57, 1055-1061.	1.9	78
17	A computational model of the response of honey bee antennal lobe circuitry to odor mixtures: overshadowing, blocking and unblocking can arise from lateral inhibition. <i>Behavioural Brain Research</i> , 1997, 87, 1-14.	2.2	77
18	Different Thresholds for Detection and Discrimination of Odors in the Honey bee ( <i>Apis mellifera</i> ). <i>Chemical Senses</i> , 2004, 29, 127-135.	2.0	72

#	ARTICLE	IF	CITATIONS
19	Selenium Toxicity to Honey Bee ( <i>Apis mellifera</i> L.) Pollinators: Effects on Behaviors and Survival. <i>PLoS ONE</i> , 2012, 7, e34137.	2.5	72
20	Impairment of olfactory discrimination by blockade of GABA and nitric oxide activity in the honey bee antennal lobes.. <i>Behavioral Neuroscience</i> , 2000, 114, 514-525.	1.2	71
21	Ability of honeybee, <i>Apis mellifera</i> , to detect and discriminate odors of varieties of canola ( <i>Brassica</i> ) Tj ETQq1 1 0.784314 rgBT /Overl 2002, 28, 721-740.	1.8	66
22	The Olfactory Memory of the Honeybee <i>Apis Mellifera</i> : I. Odorant Modulation of Short- and Intermediate-Term Memory After Single-Trial Conditioning. <i>Journal of Experimental Biology</i> , 1991, 161, 367-382.	1.7	64
23	Generalization Between Binary Odor Mixtures and Their Components in the Rat. <i>Physiology and Behavior</i> , 1999, 66, 701-707.	2.1	63
24	Olfactory-based discrimination learning in the moth, <i>Manduca sexta</i> . <i>Journal of Insect Physiology</i> , 2001, 47, 375-384.	2.0	62
25	A Computational Framework for Understanding Decision Making through Integration of Basic Learning Rules. <i>Journal of Neuroscience</i> , 2013, 33, 5686-5697.	3.6	59
26	Kin-based male mating preferences in two species of halictine bee. <i>Behavioral Ecology and Sociobiology</i> , 1987, 20, 313-318.	1.4	58
27	A honeybee's ability to learn, recognize, and discriminate odors depends upon odor sampling time and concentration.. <i>Behavioral Neuroscience</i> , 2009, 123, 36-43.	1.2	58
28	Effect of genotype but not of age or caste on olfactory learning performance in the honey bee, <i>Apis mellifera</i> . <i>Animal Behaviour</i> , 1994, 48, 1357-1369.	1.9	57
29	Sensitivity to a change in reward is heritable in the honeybee, <i>Apis mellifera</i> . <i>Animal Behaviour</i> , 2001, 61, 527-534.	1.9	57
30	Acute sublethal exposure to toxic heavy metals alters honey bee ( <i>Apis mellifera</i> ) feeding behavior. <i>Scientific Reports</i> , 2019, 9, 4253.	3.3	57
31	Hyperbolic geometry of the olfactory space. <i>Science Advances</i> , 2018, 4, eaaq1458.	10.3	56
32	Distribution of the Octopamine Receptor AmOA1 in the Honey Bee Brain. <i>PLoS ONE</i> , 2011, 6, e14536.	2.5	56
33	Social competition among gynes in halictine bees: The influence of bee size and pheromones on behavior. <i>Journal of Insect Behavior</i> , 1989, 2, 397-411.	0.7	55
34	Quantitative trait loci associated with reversal learning and latent inhibition in honeybees ( <i>Apis</i> ) Tj ETQq0 0 0 rgBT /Overl lock 10 Tf 50 14	2.1	54
35	Odour concentration affects odour identity in honeybees. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2005, 272, 2417-2422.	2.6	54
36	Effect of an amino acid on feeding preferences and learning behavior in the honey bee, <i>Apis mellifera</i> . <i>Journal of Insect Physiology</i> , 2000, 46, 793-801.	2.0	53

#	ARTICLE	IF	CITATIONS
37	Variation in complex olfactory stimuli and its influence on odour recognition. Proceedings of the Royal Society B: Biological Sciences, 2004, 271, 147-152.	2.6	52
38	Experimentally induced change in infectious period affects transmission dynamics in a social group. Proceedings of the Royal Society B: Biological Sciences, 2007, 274, 61-65.	2.6	52
39	Octopamine modulates activity of neural networks in the honey bee antennal lobe. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2013, 199, 947-962.	1.6	49
40	Nonassociative plasticity alters competitive interactions among mixture components in early olfactory processing. European Journal of Neuroscience, 2013, 37, 63-79.	2.6	48
41	Latent inhibition in the honey bee, <i>Apis mellifera</i> : Is it a unitary phenomenon?. Animal Cognition, 2010, 13, 805-815.	1.8	47
42	An analysis of blocking in odorant mixtures: An increase but not a decrease in intensity of reinforcement produces unblocking.. Behavioral Neuroscience, 1997, 111, 57-69.	1.2	46
43	Molecular Features of Odorants Systematically Influence Slow Temporal Responses Across Clusters of Coordinated Antennal Lobe Units in the Moth <i>Manduca sexta</i> . Journal of Neurophysiology, 2004, 92, 236-254.	1.8	46
44	An Analysis of Variability in the Feeding Motor Program of the Honey Bee; the Role of Learning in Releasing a Modal Action Pattern. Ethology, 1989, 82, 68-81.	1.1	44
45	Acute exposure to selenium disrupts associative conditioning and long-term memory recall in honey bees ( <i>Apis mellifera</i> ). Ecotoxicology and Environmental Safety, 2016, 127, 71-79.	6.0	43
46	Colony field test reveals dramatically higher toxicity of a widely-used mito-toxic fungicide on honey bees ( <i>Apis mellifera</i> ). Environmental Pollution, 2021, 269, 115964.	7.5	43
47	Individual learning phenotypes drive collective behavior. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 17949-17956.	7.1	41
48	Olfactory memory formation and the influence of reward pathway during appetitive learning by honey bees. Journal of Experimental Biology, 2007, 210, 4024-4033.	1.7	40
49	A Proboscis Extension Response Protocol for Investigating Behavioral Plasticity in Insects: Application to Basic, Biomedical, and Agricultural Research. Journal of Visualized Experiments, 2014, , e51057.	0.3	39
50	Individual differences in learning and biogenic amine levels influence the behavioural division between foraging honeybee scouts and recruits. Journal of Animal Ecology, 2019, 88, 236-246.	2.8	39
51	Modulation of the honey bee ( <i>Apis mellifera</i> ) sting response by octopamine. Journal of Insect Physiology, 1995, 41, 671-680.	2.0	38
52	Ensemble Response in Mushroom Body Output Neurons of the Honey Bee Outpaces Spatiotemporal Odor Processing Two Synapses Earlier in the Antennal Lobe. PLoS ONE, 2012, 7, e50322.	2.5	38
53	Swelling of the retromolar region and cheek associated with limited opening. Journal of Oral and Maxillofacial Surgery, 1993, 51, 304-309.	1.2	35
54	<i>Apis mellifera</i> octopamine receptor 1 (AmOA1) expression in antennal lobe networks of the honey bee ( <i>Apis mellifera</i> ) and fruit fly ( <i>Drosophila melanogaster</i> ). Frontiers in Systems Neuroscience, 2013, 7, 70.	2.5	35

#	ARTICLE	IF	CITATIONS
55	Learning Modifies Odor Mixture Processing to Improve Detection of Relevant Components. <i>Journal of Neuroscience</i> , 2015, 35, 179-197.	3.6	35
56	Heritable variation in learning performance affects foraging preferences in the honey bee ( <i>Apis mellifera</i> ). <i>Journal of Chemical Ecology</i> , 2010, 36, 107-114.	1.4	31
57	Diverse single-stranded DNA viruses associated with honey bees ( <i>Apis mellifera</i> ). <i>Infection, Genetics and Evolution</i> , 2019, 71, 179-188.	2.3	31
58	Pheromonal covariation and kinship in social bee <i>Lasioglossum zephyrum</i> (Hymenoptera: Halictidae). <i>Journal of Chemical Ecology</i> , 1988, 14, 87-94.	1.8	29
59	Caste-specific differences in risk sensitivity in honeybees, <i>Apis mellifera</i> . <i>Animal Behaviour</i> , 2005, 69, 859-868.	1.9	29
60	Selection on a haploid genotype for discrimination learning performance: Correlation between drone honey bees ( <i>Apis mellifera</i> ) and their worker progeny (Hymenoptera: Apidae). <i>Journal of Insect Behavior</i> , 1995, 8, 637-652.	0.7	28
61	The effect of foraging specialization on various learning tasks in the honey bee ( <i>Apis mellifera</i> ). <i>Behavioral Ecology and Sociobiology</i> , 2009, 64, 135-148.	1.4	28
62	Expression of heat shock proteins in adult honey bee ( <i>Apis mellifera</i> L.) workers under hot-arid subtropical ecosystems. <i>Saudi Journal of Biological Sciences</i> , 2019, 26, 1372-1376.	3.8	28
63	A Multiscale Review of Behavioral Variation in Collective Foraging Behavior in Honey Bees. <i>Insects</i> , 2019, 10, 370.	2.2	28
64	A common fungicide, Pristine <sup>®</sup> , impairs olfactory associative learning performance in honey bees ( <i>Apis mellifera</i> ). <i>Journal of Chemical Ecology</i> , 2010, 36, 28-35.	7.5	28
65	Effects of genealogical relationship and colony age on the dominance hierarchy in the primitively eusocial bee <i>Lasioglossum zephyrum</i> . <i>Animal Behaviour</i> , 1987, 35, 211-217.	1.9	27
66	Gain Control Network Conditions in Early Sensory Coding. <i>PLoS Computational Biology</i> , 2013, 9, e1003133.	3.2	27
67	Learning about natural variation of odor mixtures enhances categorization in early olfactory processing. <i>Journal of Experimental Biology</i> , 2016, 219, 2752-62.	1.7	26
68	Task allocation and site fidelity jointly influence foraging regulation in honeybee colonies. <i>Royal Society Open Science</i> , 2017, 4, 170344.	2.4	25
69	Comparison of RNAi knockdown effect of tyramine receptor 1 induced by dsRNA and siRNA in brains of the honey bee, <i>Apis mellifera</i> . <i>Journal of Insect Physiology</i> , 2018, 111, 47-52.	2.0	24
70	An agenda of future tasks for international and indigenous NGOs: Views from the North. <i>World Development</i> , 1987, 15, 87-93.	4.9	23
71	Odorant mixtures elicit less variable and faster responses than pure odorants. <i>PLoS Computational Biology</i> , 2018, 14, e1006536.	3.2	23
72	Universal Social Competence Promotion Programme in School: Does it Work for Children with Low Socio-Economic Background?. <i>Advances in School Mental Health Promotion</i> , 2009, 2, 51-60.	0.8	21

#	ARTICLE	IF	CITATIONS
73	Stratum, Tree, and Flower Selection by Tropical Bees: Implications for the Reproductive Biology of Outcrossing <i>Cochlospermum Vitifolium</i> in Panama. <i>Ecology</i> , 1982, 63, 712-720.	3.2	19
74	The Biogenic Amine Tyramine and its Receptor (AmTyr1) in Olfactory Neuropils in the Honey Bee ( <i>Apis mellifera</i> ) Tj ETQq0 0 0 rgBT /Overlock 10 T	2.5	18
75	Olfactory associative behavioral differences in three honey bee <i>Apis mellifera</i> L. races under the arid zone ecosystem of central Saudi Arabia. <i>Saudi Journal of Biological Sciences</i> , 2019, 26, 563-568.	3.8	18
76	The effect of individual learning on collective foraging in honey bees in differently structured landscapes. <i>Animal Behaviour</i> , 2021, 179, 113-123.	1.9	18
77	Analyzing neuronal networks using discrete-time dynamics. <i>Physica D: Nonlinear Phenomena</i> , 2010, 239, 515-528.	2.8	17
78	Nesting strategies of primitively eusocial bees: A model of nest usurpation during the solitary state of the nesting cycle. <i>Journal of Theoretical Biology</i> , 1990, 144, 445-471.	1.7	15
79	Experience-dependent tuning of early olfactory processing in the adult honey bee, <i>Apis mellifera</i> . <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	15
80	Active sensing in a dynamic olfactory world. <i>Journal of Computational Neuroscience</i> , 2022, 50, 1-6.	1.0	15
81	Olfactory Interference during Inhibitory Backward Pairing in Honey Bees. <i>PLoS ONE</i> , 2008, 3, e3513.	2.5	13
82	Comparative study of chemical neuroanatomy of the olfactory neuropil in mouse, honey bee, and human. <i>Biological Cybernetics</i> , 2018, 112, 127-140.	1.3	13
83	Controlling Tracheal Mites (Acari: Tarsonemidae) in Honey Bees (Hymenoptera: Apidae) with Vegetable Oil. <i>Journal of Economic Entomology</i> , 1994, 87, 910-916.	1.8	12
84	Osmotic concentration in three races of honey bee, <i>Apis mellifera</i> L. under environmental conditions of arid zone. <i>Saudi Journal of Biological Sciences</i> , 2017, 24, 1081-1085.	3.8	12
85	Improved diagnosis of Parkinson's disease from a detailed olfactory phenotype. <i>Annals of Clinical and Translational Neurology</i> , 2017, 4, 714-721.	3.7	12
86	Learning and memory in workers reared by nutritionally stressed honey bee ( <i>Apis mellifera</i> L.) colonies. <i>Physiology and Behavior</i> , 2008, 95, 609-616.	2.1	11
87	Field cross-fostering and in vitro rearing demonstrate negative effects of both larval and adult exposure to a widely used fungicide in honey bees ( <i>Apis mellifera</i> ). <i>Ecotoxicology and Environmental Safety</i> , 2021, 217, 112251.	6.0	11
88	The active ingredients of a mitotoxic fungicide negatively affect pollen consumption and worker survival in laboratory-reared honey bees ( <i>Apis mellifera</i> ). <i>Ecotoxicology and Environmental Safety</i> , 2021, 226, 112841.	6.0	10
89	Novelty detection in early olfactory processing of the honey bee, <i>Apis mellifera</i> . <i>PLoS ONE</i> , 2022, 17, e0265009.	2.5	10
90	SwarmSight: Measuring the temporal progression of animal group activity levels from natural-scene and laboratory videos. <i>Behavior Research Methods</i> , 2017, 49, 576-587.	4.0	9

#	ARTICLE	IF	CITATIONS
91	Colony-level non-associative plasticity of alarm responses in the stingless honey bee, <i>Tetragonisca angustula</i> . <i>Behavioral Ecology and Sociobiology</i> , 2018, 72, 1.	1.4	9
92	Glomerular Organization in the Antennal Lobe of the Oriental Fruit Fly <i>Bactrocera dorsalis</i> . <i>Frontiers in Neuroanatomy</i> , 2018, 12, 71.	1.7	9
93	Editorial: Biogenic Amines and Neuromodulation of Animal Behavior. <i>Frontiers in Systems Neuroscience</i> , 2018, 12, 31.	2.5	8
94	Unbalanced fatty acid diets impair discrimination ability of honey bee workers to damaged and healthy brood odors. <i>Journal of Experimental Biology</i> , 2022, 225, .	1.7	7
95	Non-parametric change point detection for spike trains. , 2016, , .		6
96	Early olfactory, but not gustatory processing, is affected by the selection of heritable cognitive phenotypes in honey bee. <i>Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology</i> , 2021, 207, 17-26.	1.6	6
97	Experimental psychology meets behavioral ecology: what laboratory studies of learning polymorphisms mean for learning under natural conditions, and vice versa. <i>Journal of Neurogenetics</i> , 2020, 34, 178-183.	1.4	5
98	Alternative model systems for cognitive variation: eusocial-insect colonies. <i>Trends in Cognitive Sciences</i> , 2022, , .	7.8	4
99	Genealogical relationship and social dominance in bees: A reply to Kukul & May. <i>Animal Behaviour</i> , 1988, 36, 1850-1851.	1.9	3
100	On piecewise polynomial regression under general dependence conditions, with an application to calcium-imaging data. <i>Sankhya B</i> , 2014, 76, 49-81.	0.9	3
101	Heritable Cognitive Phenotypes Influence Appetitive Learning but not Extinction in Honey Bees. <i>Annals of the Entomological Society of America</i> , 2021, 114, 606-613.	2.5	3
102	Hyperbolic odorant mixtures as a basis for more efficient signaling between flowering plants and bees. <i>PLoS ONE</i> , 2022, 17, e0270358.	2.5	3
103	SwarmSight: Real-time Tracking of Insect Antenna Movements and Proboscis Extension Reflex Using a Common Preparation and Conventional Hardware. <i>Journal of Visualized Experiments</i> , 2017, , .	0.3	2
104	Anti-RDL and Anti-mGlutR1 Receptors Antibody Testing in Honeybee Brain Sections using CRISPR-Cas9. <i>Journal of Visualized Experiments</i> , 2020, , .	0.3	1
105	How Can We Fully Realize the Potential of Mathematical and Biological Models to Reintegrate Biology?. <i>Integrative and Comparative Biology</i> , 2021, , .	2.0	1
106	An Incrementally Variable Phase-Locked Control for a Polyphase Inverter. <i>IEEE Transactions on Instrumentation and Measurement</i> , 1978, 27, 74-76.	4.7	0
107	Re-encounters and southbound migration of Sand Martin pulli from a Scottish colony over a 15-year period. <i>Ringing and Migration</i> , 2018, 33, 94-97.	0.4	0
108	Voluntary Agencies in the Welfare State. <i>Journal of Health Politics, Policy and Law</i> , 1984, 9, 173-177.	1.9	0

#	ARTICLE	IF	CITATIONS
109	Neurobiology and Behavior of Honeybees. Randolph Menzel , Alison Mercer. Quarterly Review of Biology, 1988, 63, 250-250.	0.1	0