

# Richard Axel

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

44 papers	14,790 citations	28 h-index	46 g-index
46 ext. papers	16,915 ext. citations	33.6 avg, IF	6.33 L-index

#	Paper	IF	Citations
44	Individual bitter-sensing neurons in <i>Drosophila</i> exhibit both ON and OFF responses that influence synaptic plasticity. <i>Current Biology</i> , <b>2021</b> ,	6.3	2
43	Evolving the olfactory system with machine learning. <i>Neuron</i> , <b>2021</b> , 109, 3879-3892.e5	13.9	1
42	Olfactory landmarks and path integration converge to form a cognitive spatial map. <i>Neuron</i> , <b>2021</b> ,	13.9	4
41	Embryonic development of the camouflaging dwarf cuttlefish, <i>Sepia bandensis</i> . <i>Developmental Dynamics</i> , <b>2021</b> , 250, 1688-1703	2.9	0
40	Representational drift in primary olfactory cortex. <i>Nature</i> , <b>2021</b> , 594, 541-546	50.4	29
39	Context-Dependent Decision Making in a Premotor Circuit. <i>Neuron</i> , <b>2020</b> , 106, 316-328.e6	13.9	22
38	The pheromone darcin drives a circuit for innate and reinforced behaviours. <i>Nature</i> , <b>2020</b> , 578, 137-141	50.4	23
37	Synaptic Organization of Anterior Olfactory Nucleus Inputs to Piriform Cortex. <i>Journal of Neuroscience</i> , <b>2020</b> , 40, 9414-9425	6.6	0
36	Transient and Persistent Representations of Odor Value in Prefrontal Cortex. <i>Neuron</i> , <b>2020</b> , 108, 209-224.e6	13.9	15
35	A virtual burrow assay for head-fixed mice measures habituation, discrimination, exploration and avoidance without training. <i>ELife</i> , <b>2019</b> , 8,	8.9	6
34	Acetic acid activates distinct taste pathways in to elicit opposing, state-dependent feeding responses. <i>ELife</i> , <b>2019</b> , 8,	8.9	24
33	Author response: Acetic acid activates distinct taste pathways in <i>Drosophila</i> to elicit opposing, state-dependent feeding responses <b>2019</b> ,		2
32	Odor Perception on the Two Sides of the Brain: Consistency Despite Randomness. <i>Neuron</i> , <b>2018</b> , 98, 736-742.e3	13.9	25
31	Optimal Degrees of Synaptic Connectivity. <i>Neuron</i> , <b>2017</b> , 93, 1153-1164.e7	13.9	143
30	Representations of Novelty and Familiarity in a Mushroom Body Compartment. <i>Cell</i> , <b>2017</b> , 169, 956-969.e12	41.2	69
29	Neural Representations of Unconditioned Stimuli in Basolateral Amygdala Mediate Innate and Learned Responses. <i>Cell</i> , <b>2015</b> , 162, 134-45	56.2	136
28	The participation of cortical amygdala in innate, odour-driven behaviour. <i>Nature</i> , <b>2014</b> , 515, 269-73	50.4	184

27	Identifying functional connections of the inner photoreceptors in <i>Drosophila</i> using Tango-Trace. <i>Neuron</i> , <b>2014</b> , 83, 630-44	13.9	34
26	The neuronal architecture of the mushroom body provides a logic for associative learning. <i>ELife</i> , <b>2014</b> , 3, e04577	8.9	538
25	Author response: The neuronal architecture of the mushroom body provides a logic for associative learning <b>2014</b> ,		2
24	Random convergence of olfactory inputs in the <i>Drosophila</i> mushroom body. <i>Nature</i> , <b>2013</b> , 497, 113-7	50.4	257
23	Visualizing neuromodulation in vivo: TANGO-mapping of dopamine signaling reveals appetite control of sugar sensing. <i>Cell</i> , <b>2012</b> , 148, 583-95	56.2	207
22	Recurrent circuitry dynamically shapes the activation of piriform cortex. <i>Neuron</i> , <b>2011</b> , 72, 49-56	13.9	136
21	Distinct representations of olfactory information in different cortical centres. <i>Nature</i> , <b>2011</b> , 472, 213-6	50.4	328
20	A dimorphic pheromone circuit in <i>Drosophila</i> from sensory input to descending output. <i>Nature</i> , <b>2010</b> , 468, 686-90	50.4	253
19	Generating sparse and selective third-order responses in the olfactory system of the fly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2010</b> , 107, 10713-8	11.5	121
18	Representations of odor in the piriform cortex. <i>Neuron</i> , <b>2009</b> , 63, 854-64	13.9	412
17	The <i>Drosophila</i> pheromone cVA activates a sexually dimorphic neural circuit. <i>Nature</i> , <b>2008</b> , 452, 473-7	50.4	274
16	Scents and sensibility: a molecular logic of olfactory perception (Nobel lecture). <i>Angewandte Chemie - International Edition</i> , <b>2005</b> , 44, 6110-27	16.4	132
15	A single population of olfactory sensory neurons mediates an innate avoidance behaviour in <i>Drosophila</i> . <i>Nature</i> , <b>2004</b> , 431, 854-9	50.4	421
14	Two-photon calcium imaging reveals an odor-evoked map of activity in the fly brain. <i>Cell</i> , <b>2003</b> , 112, 271-82	56.2	661
13	Spatial representation of the glomerular map in the <i>Drosophila</i> protocerebrum. <i>Cell</i> , <b>2002</b> , 109, 229-41	56.2	469
12	A chemosensory gene family encoding candidate gustatory and olfactory receptors in <i>Drosophila</i> . <i>Cell</i> , <b>2001</b> , 104, 661-73	56.2	522
11	An olfactory sensory map in the fly brain. <i>Cell</i> , <b>2000</b> , 102, 147-59	56.2	827
10	A spatial map of olfactory receptor expression in the <i>Drosophila</i> antenna. <i>Cell</i> , <b>1999</b> , 96, 725-36	56.2	902

9	Visualizing an olfactory sensory map. <i>Cell</i> , <b>1996</b> , 87, 675-86	56.2	1638
8	Editing of glutamate receptor subunit B pre-mRNA in vitro by site-specific deamination of adenosine. <i>Nature</i> , <b>1995</b> , 374, 77-81	50.4	121
7	Topographic organization of sensory projections to the olfactory bulb. <i>Cell</i> , <b>1994</b> , 79, 981-91	56.2	1054
6	A novel multigene family may encode odorant receptors: a molecular basis for odor recognition. <i>Cell</i> , <b>1991</b> , 65, 175-87	56.2	3740
5	Crystal structure of an HIV-binding recombinant fragment of human CD4. <i>Nature</i> , <b>1990</b> , 348, 419-26	50.4	526
4	A soluble form of CD4 (T4) protein inhibits AIDS virus infection. <i>Nature</i> , <b>1988</b> , 331, 82-4	50.4	520
3	Individual bitter-sensing neurons in <i>Drosophila</i> exhibit both ON and OFF responses that influence synaptic plasticity		1
2	Representational drift in primary olfactory cortex		4
1	Flygenvectors: The spatial and temporal structure of neural activity across the fly brain		5