

# Robert J Lucas

## 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.

72 papers	4,546 citations	26 h-index	67 g-index
83 ext. papers	5,498 ext. citations	8.5 avg, IF	5.51 L-index

#	Paper	IF	Citations
72	Recommendations for daytime, evening, and nighttime indoor light exposure to best support physiology, sleep, and wakefulness in healthy adults.. <i>PLoS Biology</i> , <b>2022</b> , 20, e3001571	9.7	22
71	Acute In Vivo Multielectrode Recordings from the Mouse Suprachiasmatic Nucleus. <i>Methods in Molecular Biology</i> , <b>2021</b> , 2130, 249-262	1.4	1
70	A universal protocol for isolating retinal ON bipolar cells across species via fluorescence-activated cell sorting. <i>Molecular Therapy - Methods and Clinical Development</i> , <b>2021</b> , 20, 587-600	6.4	0
69	Using a bistable animal opsin for switchable and scalable optogenetic inhibition of neurons. <i>EMBO Reports</i> , <b>2021</b> , 22, e51866	6.5	4
68	Modulations in irradiance directed at melanopsin, but not cone photoreceptors, reliably alter electrophysiological activity in the suprachiasmatic nucleus and circadian behaviour in mice. <i>Journal of Pineal Research</i> , <b>2021</b> , 70, e12735	10.4	3
67	Bright daytime light enhances circadian amplitude in a diurnal mammal. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	6
66	A Bright Idea for Improving Spatial Memory. <i>Neuron</i> , <b>2021</b> , 109, 197-199	13.9	
65	Extensive cone-dependent spectral opponency within a discrete zone of the lateral geniculate nucleus supporting mouse color vision. <i>Current Biology</i> , <b>2021</b> , 31, 3391-3400.e4	6.3	5
64	Characterization of cephalic and non-cephalic sensory cell types provides insight into joint photo- and mechanoreceptor evolution. <i>ELife</i> , <b>2021</b> , 10,	8.9	4
63	Seasonal variation in UVA light drives hormonal and behavioural changes in a marine annelid via a ciliary opsin. <i>Nature Ecology and Evolution</i> , <b>2021</b> , 5, 204-218	12.3	8
62	Infra-slow modulation of fast beta/gamma oscillations in the mouse visual system. <i>Journal of Physiology</i> , <b>2021</b> , 599, 1631-1650	3.9	3
61	Can We See with Melanopsin?. <i>Annual Review of Vision Science</i> , <b>2020</b> , 6, 453-468	8.2	15
60	Spectral sensitivity of cone vision in the diurnal murid. <i>Journal of Experimental Biology</i> , <b>2020</b> , 223,	3	3
59	Melanopsin Driven Light Responses Across a Large Fraction of Retinal Ganglion Cells in a Dystrophic Retina. <i>Frontiers in Neuroscience</i> , <b>2020</b> , 14, 320	5.1	3
58	Optogenetic Control of the BMP Signaling Pathway. <i>ACS Synthetic Biology</i> , <b>2020</b> , 9, 3067-3078	5.7	7
57	A High-Dimensional Quantification of Mouse Defensive Behaviors Reveals Enhanced Diversity and Stimulus Specificity. <i>Current Biology</i> , <b>2020</b> , 30, 4619-4630.e5	6.3	7
56	Effects of a monocarboxylate transport 1 inhibitor, AZD3965, on retinal and visual function in the rat. <i>British Journal of Pharmacology</i> , <b>2020</b> , 177, 4734-4749	8.6	3

55	Visual responses in the dorsal lateral geniculate nucleus at early stages of retinal degeneration in PDE6 <sup>0</sup> mice. <i>Journal of Neurophysiology</i> , <b>2019</b> , 122, 1753-1764	3.2	1
54	Form vision from melanopsin in humans. <i>Nature Communications</i> , <b>2019</b> , 10, 2274	17.4	41
53	Pupil responses to hidden photoreceptor-specific modulations in movies. <i>PLoS ONE</i> , <b>2019</b> , 14, e0216307	3.7	0
52	How to Report Light Exposure in Human Chronobiology and Sleep Research Experiments. <i>Clocks &amp; Sleep</i> , <b>2019</b> , 1, 280-289	2.9	49
51	Extraocular, rod-like photoreceptors in a flatworm express xenopsin photopigment. <i>ELife</i> , <b>2019</b> , 8,	8.9	9
50	Cones Support Alignment to an Inconsistent World by Suppressing Mouse Circadian Responses to the Blue Colors Associated with Twilight. <i>Current Biology</i> , <b>2019</b> , 29, 4260-4267.e4	6.3	31
49	Appearance of Maxwell's spot in images rendered using a cyan primary. <i>Vision Research</i> , <b>2019</b> , 165, 72-79	2.1	1
48	Efficacy and Safety of Glycosidic Enzymes for Improved Gene Delivery to the Retina following Intravitreal Injection in Mice. <i>Molecular Therapy - Methods and Clinical Development</i> , <b>2018</b> , 9, 192-202	6.4	15
47	A live cell assay of GPCR coupling allows identification of optogenetic tools for controlling Go and Gi signaling. <i>BMC Biology</i> , <b>2018</b> , 16, 10	7.3	14
46	An all-trans-retinal-binding opsin peropsin as a potential dark-active and light-inactivated G protein-coupled receptor. <i>Scientific Reports</i> , <b>2018</b> , 8, 3535	4.9	17
45	Photoreceptive retinal ganglion cells control the information rate of the optic nerve. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, E11817-E11826	11.5	26
44	Exploiting metamerism to regulate the impact of a visual display on alertness and melatonin suppression independent of visual appearance. <i>Sleep</i> , <b>2018</b> , 41,	1.1	43
43	Convergent evolution of tertiary structure in rhodopsin visual proteins from vertebrates and box jellyfish. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2018</b> , 115, 6201-6206	11.5	10
42	Modulation of Fast Narrowband Oscillations in the Mouse Retina and dLGN According to Background Light Intensity. <i>Neuron</i> , <b>2017</b> , 93, 299-307	13.9	43
41	Chromatic clocks: Color opponency in non-image-forming visual function. <i>Neuroscience and Biobehavioral Reviews</i> , <b>2017</b> , 78, 24-33	9	25
40	Convergence of visual and whisker responses in the primary somatosensory thalamus (ventral posterior medial region) of the mouse. <i>Journal of Physiology</i> , <b>2017</b> , 595, 865-881	3.9	18
39	Optogenetic interrogation reveals separable G-protein-dependent and -independent signalling linking G-protein-coupled receptors to the circadian oscillator. <i>BMC Biology</i> , <b>2017</b> , 15, 40	7.3	4
38	Melanopsin Contributions to the Representation of Images in the Early Visual System. <i>Current Biology</i> , <b>2017</b> , 27, 1623-1632.e4	6.3	63

37	Responses to Spatial Contrast in the Mouse Suprachiasmatic Nuclei. <i>Current Biology</i> , <b>2017</b> , 27, 1633-1640.	6.3	17
36	On a dark place, we find ourselves: Light intensity in critical care units. <i>Intensive Care Medicine Experimental</i> , <b>2017</b> , 5, 9	3.7	17
35	Ethanol Stimulates Locomotion via a G-Signaling Pathway in IL2 Neurons in. <i>Genetics</i> , <b>2017</b> , 207, 1023-1029	4.9	6
34	The impact of temporal modulations in irradiance under light adapted conditions on the mouse suprachiasmatic nuclei (SCN). <i>Scientific Reports</i> , <b>2017</b> , 7, 10582	4.9	9
33	Rods progressively escape saturation to drive visual responses in daylight conditions. <i>Nature Communications</i> , <b>2017</b> , 8, 1813	17.4	62
32	Multiplexing Visual Signals in the Suprachiasmatic Nuclei. <i>Cell Reports</i> , <b>2017</b> , 21, 1418-1425	10.6	6
31	Meclofenamic acid improves the signal to noise ratio for visual responses produced by ectopic expression of human rod opsin. <i>Molecular Vision</i> , <b>2017</b> , 23, 334-345	2.3	7
30	Melanopsin supports irradiance-driven changes in maintained activity in the superior colliculus of the mouse. <i>European Journal of Neuroscience</i> , <b>2016</b> , 44, 2314-23	3.5	6
29	Chemogenetic Activation of ipRGCs Drives Changes in Dark-Adapted (Scotopic) Electroretinogram		14
	<b>2016</b> , 57, 6305-6312		
28	Chemogenetic Activation of Melanopsin Retinal Ganglion Cells Induces Signatures of Arousal and/or Anxiety in Mice. <i>Current Biology</i> , <b>2016</b> , 26, 2358-63	6.3	34
27	Colour as a signal for entraining the mammalian circadian clock. <i>PLoS Biology</i> , <b>2015</b> , 13, e1002127	9.7	128
26	Restoration of Vision with Ectopic Expression of Human Rod Opsin. <i>Current Biology</i> , <b>2015</b> , 25, 2111-22	6.3	99
25	Melanopsin-driven increases in maintained activity enhance thalamic visual response reliability across a simulated dawn. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, E5734-43	11.5	34
24	Melanopsin-derived visual responses under light adapted conditions in the mouse dLGN. <i>PLoS ONE</i> , <b>2015</b> , 10, e0123424	3.7	23
23	Spatial receptive fields in the retina and dorsal lateral geniculate nucleus of mice lacking rods and cones. <i>Journal of Neurophysiology</i> , <b>2015</b> , 114, 1321-30	3.2	22
22	Cartilage repair using human embryonic stem cell-derived chondroprogenitors. <i>Stem Cells Translational Medicine</i> , <b>2014</b> , 3, 1287-94	6.9	71
21	Measuring and using light in the melanopsin age. <i>Trends in Neurosciences</i> , <b>2014</b> , 37, 1-9	13.3	651
20	Melanopsin-driven light adaptation in mouse vision. <i>Current Biology</i> , <b>2014</b> , 24, 2481-90	6.3	90

19	Mammalian inner retinal photoreception. <i>Current Biology</i> , <b>2013</b> , 23, R125-33	6.3	76
18	Human melanopsin forms a pigment maximally sensitive to blue light ( $\lambda_{\text{max}} \approx 479 \text{ nm}$ ) supporting activation of G(q/11) and G(i/o) signalling cascades. <i>Proceedings of the Royal Society B: Biological Sciences</i> , <b>2013</b> , 280, 20122987	4.4	170
17	Melanopsin-based brightness discrimination in mice and humans. <i>Current Biology</i> , <b>2012</b> , 22, 1134-41	6.3	156
16	Reproducible and sustained regulation of G $\beta$ signalling using a metazoan opsin as an optogenetic tool. <i>PLoS ONE</i> , <b>2012</b> , 7, e30774	3.7	62
15	How rod, cone, and melanopsin photoreceptors come together to enlighten the mammalian circadian clock. <i>Progress in Brain Research</i> , <b>2012</b> , 199, 1-18	2.9	116
14	Multiple hypothalamic cell populations encoding distinct visual information. <i>Journal of Physiology</i> , <b>2011</b> , 589, 1173-94	3.9	74
13	A distinct contribution of short-wavelength-sensitive cones to light-evoked activity in the mouse pretectal olivary nucleus. <i>Journal of Neuroscience</i> , <b>2011</b> , 31, 16833-43	6.6	55
12	Melanopsin contributions to irradiance coding in the thalamo-cortical visual system. <i>PLoS Biology</i> , <b>2010</b> , 8, e1000558	9.7	176
11	Differential expression of two distinct functional isoforms of melanopsin (Opn4) in the mammalian retina. <i>Journal of Neuroscience</i> , <b>2009</b> , 29, 12332-42	6.6	78
10	Melanopsin cells are the principal conduits for rod-cone input to non-image-forming vision. <i>Nature</i> , <b>2008</b> , 453, 102-5	50.4	598
9	Non-Rod, Non-Cone Photoreception in Rodents and Teleost Fish. <i>Novartis Foundation Symposium</i> , <b>2008</b> , 3-30		11
8	Chromophore regeneration: melanopsin does its own thing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2006</b> , 103, 10153-10154	11.5	23
7	Characterization of an ocular photopigment capable of driving pupillary constriction in mice. <i>Nature Neuroscience</i> , <b>2001</b> , 4, 621-6	25.5	468
6	Regulation of mammalian circadian behavior by non-rod, non-cone, ocular photoreceptors. <i>Science</i> , <b>1999</b> , 284, 502-4	33.3	648
5	Recommendations for Healthy Daytime, Evening, and Night-Time Indoor Light Exposure		19
4	Daytime light enhances the amplitude of circadian output in a diurnal mammal		1
3	A high dimensional quantification of mouse defensive behaviours reveals enhanced diversity and stimulus specificity		2
2	Daily electrical activity in the master circadian clock of a diurnal mammal		1

1

Two light sensors decode moonlight versus sunlight to adjust a plastic circadian/circalunidian clock to moon phase

2