Robert J Lucas

List of Publications by Citations

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	Measuring and using light in the melanopsin age. *Trends in Neurosciences*, **2014**, 37, 1-9	13.3	651
71	Regulation of mammalian circadian behavior by non-rod, non-cone, ocular photoreceptors. *Science*, **1999**, 284, 502-4	33.3	648
70	Melanopsin cells are the principal conduits for rod-cone input to non-image-forming vision. *Nature*, **2008**, 453, 102-5	50.4	598
69	Characterization of an ocular photopigment capable of driving pupillary constriction in mice. *Nature Neuroscience*, **2001**, 4, 621-6	25.5	468
68	Melanopsin contributions to irradiance coding in the thalamo-cortical visual system. *PLoS Biology*, **2010**, 8, e1000558	9.7	176
67	Human melanopsin forms a pigment maximally sensitive to blue light (λmax ≈479 nm) supporting activation of G(q/11) and G(i/o) signalling cascades. *Proceedings of the Royal Society B: Biological Sciences*, **2013**, 280, 20122987	4.4	170
66	Melanopsin-based brightness discrimination in mice and humans. *Current Biology*, **2012**, 22, 1134-41	6.3	156
65	Colour as a signal for entraining the mammalian circadian clock. *PLoS Biology*, **2015**, 13, e1002127	9.7	128
64	How rod, cone, and melanopsin photoreceptors come together to enlighten the mammalian circadian clock. *Progress in Brain Research*, **2012**, 199, 1-18	2.9	116
63	Restoration of Vision with Ectopic Expression of Human Rod Opsin. *Current Biology*, **2015**, 25, 2111-22	6.3	99
62	Melanopsin-driven light adaptation in mouse vision. *Current Biology*, **2014**, 24, 2481-90	6.3	90
61	Differential expression of two distinct functional isoforms of melanopsin (Opn4) in the mammalian retina. *Journal of Neuroscience*, **2009**, 29, 12332-42	6.6	78
60	Mammalian inner retinal photoreception. *Current Biology*, **2013**, 23, R125-33	6.3	76
59	Multiple hypothalamic cell populations encoding distinct visual information. *Journal of Physiology*, **2011**, 589, 1173-94	3.9	74
58	Cartilage repair using human embryonic stem cell-derived chondroprogenitors. *Stem Cells Translational Medicine*, **2014**, 3, 1287-94	6.9	71
57	Melanopsin Contributions to the Representation of Images in the Early Visual System. *Current Biology*, **2017**, 27, 1623-1632.e4	6.3	63
56	Rods progressively escape saturation to drive visual responses in daylight conditions. *Nature Communications*, **2017**, 8, 1813	17.4	62

55	Reproducible and sustained regulation of Gαi signalling using a metazoan opsin as an optogenetic tool. *PLoS ONE*, **2012**, 7, e30774	3.7	62
54	A distinct contribution of short-wavelength-sensitive cones to light-evoked activity in the mouse pretectal olivary nucleus. *Journal of Neuroscience*, **2011**, 31, 16833-43	6.6	55
53	How to Report Light Exposure in Human Chronobiology and Sleep Research Experiments. *Clocks & Sleep*, **2019**, 1, 280-289	2.9	49
52	Modulation of Fast Narrowband Oscillations in the Mouse Retina and dLGN According to Background Light Intensity. *Neuron*, **2017**, 93, 299-307	13.9	43
51	Exploiting metamerism to regulate the impact of a visual display on alertness and melatonin suppression independent of visual appearance. *Sleep*, **2018**, 41,	1.1	43
50	Form vision from melanopsin in humans. *Nature Communications*, **2019**, 10, 2274	17.4	41
49	Melanopsin-driven increases in maintained activity enhance thalamic visual response reliability across a simulated dawn. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E5734-43	11.5	34
48	Chemogenetic Activation of Melanopsin Retinal Ganglion Cells Induces Signatures of Arousal and/or Anxiety in Mice. *Current Biology*, **2016**, 26, 2358-63	6.3	34
47	Cones Support Alignment to an Inconsistent World by Suppressing Mouse Circadian Responses to the Blue Colors Associated with Twilight. *Current Biology*, **2019**, 29, 4260-4267.e4	6.3	31
46	Photoreceptive retinal ganglion cells control the information rate of the optic nerve. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E11817-E11826	11.5	26
45	Chromatic clocks: Color opponency in non-image-forming visual function. *Neuroscience and Biobehavioral Reviews*, **2017**, 78, 24-33	9	25
44	Melanopsin-derived visual responses under light adapted conditions in the mouse dLGN. *PLoS ONE*, **2015**, 10, e0123424	3.7	23
43	Chromophore regeneration: melanopsin does its own thing. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 10153-10154	11.5	23
42	Spatial receptive fields in the retina and dorsal lateral geniculate nucleus of mice lacking rods and cones. *Journal of Neurophysiology*, **2015**, 114, 1321-30	3.2	22
41	Recommendations for daytime, evening, and nighttime indoor light exposure to best support physiology, sleep, and wakefulness in healthy adults.. *PLoS Biology*, **2022**, 20, e3001571	9.7	22
40	Recommendations for Healthy Daytime, Evening, and Night-Time Indoor Light Exposure		19
39	Convergence of visual and whisker responses in the primary somatosensory thalamus (ventral posterior medial region) of the mouse. *Journal of Physiology*, **2017**, 595, 865-881	3.9	18
38	Responses to Spatial Contrast in the Mouse Suprachiasmatic Nuclei. *Current Biology*, **2017**, 27, 1633-1640.e3	6.3	17

37	Uh a dark place, we find ourselvesUlight intensity in critical care units. *Intensive Care Medicine Experimental*, **2017**, 5, 9	3.7	17
36	An all-trans-retinal-binding opsin peropsin as a potential dark-active and light-inactivated G protein-coupled receptor. *Scientific Reports*, **2018**, 8, 3535	4.9	17
35	Can We See with Melanopsin?. *Annual Review of Vision Science*, **2020**, 6, 453-468	8.2	15
34	Efficacy and Safety of Glycosidic Enzymes for Improved Gene Delivery to the Retina following Intravitreal Injection in Mice. *Molecular Therapy - Methods and Clinical Development*, **2018**, 9, 192-202	6.4	15
33	A live cell assay of GPCR coupling allows identification of optogenetic tools for controlling Go and Gi signaling. *BMC Biology*, **2018**, 16, 10	7.3	14
32	Chemogenetic Activation of ipRGCs Drives Changes in Dark-Adapted (Scotopic) Electroretinogram **2016**, 57, 6305-6312		14
31	Non-Rod, Non-Cone Photoreception in Rodents and Teleost Fish. *Novartis Foundation Symposium*, **2008**, 3-30		11
30	Convergent evolution of tertiary structure in rhodopsin visual proteins from vertebrates and box jellyfish. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, 6201-6206	11.5	10
29	The impact of temporal modulations in irradiance under light adapted conditions on the mouse suprachiasmatic nuclei (SCN). *Scientific Reports*, **2017**, 7, 10582	4.9	9
28	Extraocular, rod-like photoreceptors in a flatworm express xenopsin photopigment. *ELife*, **2019**, 8,	8.9	9
27	Seasonal variation in UVA light drives hormonal and behavioural changes in a marine annelid via a ciliary opsin. *Nature Ecology and Evolution*, **2021**, 5, 204-218	12.3	8
26	Meclofenamic acid improves the signal to noise ratio for visual responses produced by ectopic expression of human rod opsin. *Molecular Vision*, **2017**, 23, 334-345	2.3	7
25	Optogenetic Control of the BMP Signaling Pathway. *ACS Synthetic Biology*, **2020**, 9, 3067-3078	5.7	7
24	A High-Dimensional Quantification of Mouse Defensive Behaviors Reveals Enhanced Diversity and Stimulus Specificity. *Current Biology*, **2020**, 30, 4619-4630.e5	6.3	7
23	Ethanol Stimulates Locomotion via a G-Signaling Pathway in IL2 Neurons in. *Genetics*, **2017**, 207, 1023-1039	4	6
22	Melanopsin supports irradiance-driven changes in maintained activity in the superior colliculus of the mouse. *European Journal of Neuroscience*, **2016**, 44, 2314-23	3.5	6
21	Multiplexing Visual Signals in the Suprachiasmatic Nuclei. *Cell Reports*, **2017**, 21, 1418-1425	10.6	6
20	Bright daytime light enhances circadian amplitude in a diurnal mammal. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	6

19	Extensive cone-dependent spectral opponency within a discrete zone of the lateral geniculate nucleus supporting mouse color vision. *Current Biology*, **2021**, 31, 3391-3400.e4	6.3	5
18	Optogenetic interrogation reveals separable G-protein-dependent and -independent signalling linking G-protein-coupled receptors to the circadian oscillator. *BMC Biology*, **2017**, 15, 40	7.3	4
17	Using a bistable animal opsin for switchable and scalable optogenetic inhibition of neurons. *EMBO Reports*, **2021**, 22, e51866	6.5	4
16	Characterization of cephalic and non-cephalic sensory cell types provides insight into joint photo- and mechanoreceptor evolution. *ELife*, **2021**, 10,	8.9	4
15	Spectral sensitivity of cone vision in the diurnal murid. *Journal of Experimental Biology*, **2020**, 223,	3	3
14	Melanopsin Driven Light Responses Across a Large Fraction of Retinal Ganglion Cells in a Dystrophic Retina. *Frontiers in Neuroscience*, **2020**, 14, 320	5.1	3
13	Effects of a monocarboxylate transport 1 inhibitor, AZD3965, on retinal and visual function in the rat. *British Journal of Pharmacology*, **2020**, 177, 4734-4749	8.6	3
12	Modulations in irradiance directed at melanopsin, but not cone photoreceptors, reliably alter electrophysiological activity in the suprachiasmatic nucleus and circadian behaviour in mice. *Journal of Pineal Research*, **2021**, 70, e12735	10.4	3
11	Infra-slow modulation of fast beta/gamma oscillations in the mouse visual system. *Journal of Physiology*, **2021**, 599, 1631-1650	3.9	3
10	A high dimensional quantification of mouse defensive behaviours reveals enhanced diversity and stimulus specificity		2
9	Two light sensors decode moonlight versus sunlight to adjust a plastic circadian/circalunidian clock to moon phase		2
8	Visual responses in the dorsal lateral geniculate nucleus at early stages of retinal degeneration in PDE6 mice. *Journal of Neurophysiology*, **2019**, 122, 1753-1764	3.2	1
7	Daytime light enhances the amplitude of circadian output in a diurnal mammal		1
6	Acute In Vivo Multielectrode Recordings from the Mouse Suprachiasmatic Nucleus. *Methods in Molecular Biology*, **2021**, 2130, 249-262	1.4	1
5	Daily electrical activity in the master circadian clock of a diurnal mammal		1
4	Appearance of Maxwell's spot in images rendered using a cyan primary. *Vision Research*, **2019**, 165, 72-79	2.1	1
3	Pupil responses to hidden photoreceptor-specific modulations in movies. *PLoS ONE*, **2019**, 14, e0216307	3.7	0
2	A universal protocol for isolating retinal ON bipolar cells across species via fluorescence-activated cell sorting. *Molecular Therapy - Methods and Clinical Development*, **2021**, 20, 587-600	6.4	0

1 A Bright Idea for Improving Spatial Memory. *Neuron*, **2021**, 109, 197-199 13.9