

# Robert J Lucas

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2916491/publications.pdf>

Version: 2024-02-01

72  
papers

6,253  
citations

159585

30  
h-index

85541

71  
g-index

83  
all docs

83  
docs citations

83  
times ranked

4014  
citing authors

#	ARTICLE	IF	CITATIONS
1	Measuring and using light in the melanopsin age. Trends in Neurosciences, 2014, 37, 1-9.	8.6	879
2	Melanopsin cells are the principal conduits for rod-cone input to non-image-forming vision. Nature, 2008, 453, 102-105.	27.8	734
3	Regulation of Mammalian Circadian Behavior by Non-rod, Non-cone, Ocular Photoreceptors. Science, 1999, 284, 502-504.	12.6	720
4	Characterization of an ocular photopigment capable of driving pupillary constriction in mice. Nature Neuroscience, 2001, 4, 621-626.	14.8	546
5	Human melanopsin forms a pigment maximally sensitive to blue light ( $\lambda_{max} \approx 479$ ) nm. Proceedings of the Royal Society B: Biological Sciences, 2013, 280, 20122987.	2.6	236
6	Melanopsin Contributions to Irradiance Coding in the Thalamo-Cortical Visual System. PLoS Biology, 2010, 8, e1000558.	5.6	226
7	Melanopsin-Based Brightness Discrimination in Mice and Humans. Current Biology, 2012, 22, 1134-1141.	3.9	199
8	Colour As a Signal for Entraining the Mammalian Circadian Clock. PLoS Biology, 2015, 13, e1002127.	5.6	167
9	Recommendations for daytime, evening, and nighttime indoor light exposure to best support physiology, sleep, and wakefulness in healthy adults. PLoS Biology, 2022, 20, e3001571.	5.6	158
10	How rod, cone, and melanopsin photoreceptors come together to enlighten the mammalian circadian clock. Progress in Brain Research, 2012, 199, 1-18.	1.4	152
11	Restoration of Vision with Ectopic Expression of Human Rod Opsin. Current Biology, 2015, 25, 2111-2122.	3.9	144
12	Melanopsin-Driven Light Adaptation in Mouse Vision. Current Biology, 2014, 24, 2481-2490.	3.9	121
13	Cartilage Repair Using Human Embryonic Stem Cell-Derived Chondroprogenitors. Stem Cells Translational Medicine, 2014, 3, 1287-1294.	3.3	101
14	Rods progressively escape saturation to drive visual responses in daylight conditions. Nature Communications, 2017, 8, 1813.	12.8	99
15	Mammalian Inner Retinal Photoreception. Current Biology, 2013, 23, R125-R133.	3.9	91
16	Melanopsin Contributions to the Representation of Images in the Early Visual System. Current Biology, 2017, 27, 1623-1632.e4.	3.9	90
17	Differential Expression of Two Distinct Functional Isoforms of Melanopsin ( <i>Opn4</i> ) in the Mammalian Retina. Journal of Neuroscience, 2009, 29, 12332-12342.	3.6	87
18	Multiple hypothalamic cell populations encoding distinct visual information. Journal of Physiology, 2011, 589, 1173-1194.	2.9	85

#	ARTICLE	IF	CITATIONS
19	How to Report Light Exposure in Human Chronobiology and Sleep Research Experiments. <i>Clocks &amp; Sleep</i> , 2019, 1, 280-289.	2.0	82
20	Reproducible and Sustained Regulation of G $\beta$ s Signalling Using a Metazoan Opsin as an Optogenetic Tool. <i>PLoS ONE</i> , 2012, 7, e30774.	2.5	80
21	Form vision from melanopsin in humans. <i>Nature Communications</i> , 2019, 10, 2274.	12.8	74
22	Modulation of Fast Narrowband Oscillations in the Mouse Retina and dLGN According to Background Light Intensity. <i>Neuron</i> , 2017, 93, 299-307.	8.1	73
23	Exploiting metamerism to regulate the impact of a visual display on alertness and melatonin suppression independent of visual appearance. <i>Sleep</i> , 2018, 41, .	1.1	72
24	A Distinct Contribution of Short-Wavelength-Sensitive Cones to Light-Evoked Activity in the Mouse Pretectal Olivary Nucleus. <i>Journal of Neuroscience</i> , 2011, 31, 16833-16843.	3.6	62
25	Chemogenetic Activation of Melanopsin Retinal Ganglion Cells Induces Signatures of Arousal and/or Anxiety in Mice. <i>Current Biology</i> , 2016, 26, 2358-2363.	3.9	60
26	Cones Support Alignment to an Inconsistent World by Suppressing Mouse Circadian Responses to the Blue Colors Associated with Twilight. <i>Current Biology</i> , 2019, 29, 4260-4267.e4.	3.9	55
27	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> , 2015, 112, E5734-43.	7.1	48
28	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> , 2018, 115, E11817-E11826.	7.1	39
29	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> , 2021, 118, .	7.1	39
30	Can We See with Melanopsin?. <i>Annual Review of Vision Science</i> , 2020, 6, 453-468.	4.4	37
31	Melanopsin-Derived Visual Responses under Light Adapted Conditions in the Mouse dLGN. <i>PLoS ONE</i> , 2015, 10, e0123424.	2.5	34
32	Chromatic clocks: Color opponency in non-image-forming visual function. <i>Neuroscience and Biobehavioral Reviews</i> , 2017, 78, 24-33.	6.1	34
33	An all-trans-retinal-binding opsin peropsin as a potential dark-active and light-inactivated G protein-coupled receptor. <i>Scientific Reports</i> , 2018, 8, 3535.	3.3	34
34	A live cell assay of GPCR coupling allows identification of optogenetic tools for controlling G $\alpha$ and G $\beta$ signaling. <i>BMC Biology</i> , 2018, 16, 10.	3.8	33
35	â€œIn a dark place, we find ourselvesâ€™: light intensity in critical care units. <i>Intensive Care Medicine Experimental</i> , 2017, 5, 9.	1.9	32
36	Spatial receptive fields in the retina and dorsal lateral geniculate nucleus of mice lacking rods and cones. <i>Journal of Neurophysiology</i> , 2015, 114, 1321-1330.	1.8	30

#	ARTICLE	IF	CITATIONS
37	Extraocular, rod-like photoreceptors in a flatworm express xenopsin photopigment. <i>ELife</i> , 2019, 8, .	6.0	27
38	Responses to Spatial Contrast in the Mouse Suprachiasmatic Nuclei. <i>Current Biology</i> , 2017, 27, 1633-1640.e3.	3.9	25
39	Seasonal variation in UVA light drives hormonal and behavioural changes in a marine annelid via a ciliary opsin. <i>Nature Ecology and Evolution</i> , 2021, 5, 204-218.	7.8	24
40	Chromophore regeneration: Melanopsin does its own thing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 10153-10154.	7.1	23
41	Convergence of visual and whisker responses in the primary somatosensory thalamus (ventral) Tj ETQq1 1 0.784314, rgBT /Overlock 10	2.9	23
42	Chemogenetic Activation of ipRGCs Drives Changes in Dark-Adapted (Scotopic) Electroretinogram. , 2016, 57, 6305.		22
43	Optogenetic Control of the BMP Signaling Pathway. <i>ACS Synthetic Biology</i> , 2020, 9, 3067-3078.	3.8	22
44	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> , 2018, 9, 192-202.	4.1	20
45	A High-Dimensional Quantification of Mouse Defensive Behaviors Reveals Enhanced Diversity and Stimulus Specificity. <i>Current Biology</i> , 2020, 30, 4619-4630.e5.	3.9	20
46	Using a bistable animal opsin for switchable and scalable optogenetic inhibition of neurons. <i>EMBO Reports</i> , 2021, 22, e51866.	4.5	20
47	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> , 2018, 115, 6201-6206.	7.1	19
48	The impact of temporal modulations in irradiance under light adapted conditions on the mouse suprachiasmatic nuclei (SCN). <i>Scientific Reports</i> , 2017, 7, 10582.	3.3	17
49	Two light sensors decode moonlight versus sunlight to adjust a plastic circadian/circalunidian clock to moon phase. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	7.1	17
50	Non-Rod, Non-Cone Photoreception in Rodents and Teleost Fish. <i>Novartis Foundation Symposium</i> , 2008, , 3-30.	1.1	16
51	Daily electrical activity in the master circadian clock of a diurnal mammal. <i>ELife</i> , 2021, 10, .	6.0	16
52	Extensive cone-dependent spectral opponency within a discrete zone of the lateral geniculate nucleus supporting mouse color vision. <i>Current Biology</i> , 2021, 31, 3391-3400.e4.	3.9	15
53	Ethanol Stimulates Locomotion via a $Ca^{2+}$ -Signaling Pathway in IL2 Neurons in <i>Caenorhabditis elegans</i> . <i>Genetics</i> , 2017, 207, 1023-1039.	2.9	14
54	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> , 2021, 70, e12735.	7.4	12

#	ARTICLE	IF	CITATIONS
55	Multiplexing Visual Signals in the Suprachiasmatic Nuclei. <i>Cell Reports</i> , 2017, 21, 1418-1425.	6.4	11
56	Optogenetic interrogation reveals separable G-protein-dependent and -independent signalling linking G-protein-coupled receptors to the circadian oscillator. <i>BMC Biology</i> , 2017, 15, 40.	3.8	10
57	Melanopsin Driven Light Responses Across a Large Fraction of Retinal Ganglion Cells in a Dystrophic Retina. <i>Frontiers in Neuroscience</i> , 2020, 14, 320.	2.8	10
58	Characterization of cephalic and non-cephalic sensory cell types provides insight into joint photo- and mechanoreceptor evolution. <i>ELife</i> , 2021, 10, .	6.0	10
59	Clocks, criteria and critical genes. <i>Nature Genetics</i> , 1999, 22, 217-219.	21.4	9
60	Meclofenamic acid improves the signal to noise ratio for visual responses produced by ectopic expression of human rod opsin. <i>Molecular Vision</i> , 2017, 23, 334-345.	1.1	9
61	Melanopsin supports irradiance-driven changes in maintained activity in the superior colliculus of the mouse. <i>European Journal of Neuroscience</i> , 2016, 44, 2314-2323.	2.6	7
62	Infra-slow modulation of fast beta/gamma oscillations in the mouse visual system. <i>Journal of Physiology</i> , 2021, 599, 1631-1650.	2.9	7
63	Visual responses in the dorsal lateral geniculate nucleus at early stages of retinal degeneration in rd1 PDE6 <sup>12</sup> mice. <i>Journal of Neurophysiology</i> , 2019, 122, 1753-1764.	1.8	6
64	Pupil responses to hidden photoreceptor-specific modulations in movies. <i>PLoS ONE</i> , 2019, 14, e0216307.	2.5	6
65	Effects of a monocarboxylate transport 1 inhibitor, AZD3965, on retinal and visual function in the rat. <i>British Journal of Pharmacology</i> , 2020, 177, 4734-4749.	5.4	6
66	The spectral sensitivity of cone vision in the diurnal murid, <i>Rhabdomys pumilio</i> . <i>Journal of Experimental Biology</i> , 2020, 223, .	1.7	5
67	Appearance of Maxwell's spot in images rendered using a cyan primary. <i>Vision Research</i> , 2019, 165, 72-79.	1.4	4
68	Viral Transduction of Human Rod Opsin or Channelrhodopsin Variants to Mouse ON Bipolar Cells Does Not Impact Retinal Anatomy or Cause Measurable Death in the Targeted Cells. <i>International Journal of Molecular Sciences</i> , 2021, 22, 13111.	4.1	4
69	Divergent G-protein selectivity across melanopsins from mice and humans. <i>Journal of Cell Science</i> , 2022, 135, .	2.0	3
70	A Bright Idea for Improving Spatial Memory. <i>Neuron</i> , 2021, 109, 197-199.	8.1	1
71	A universal protocol for isolating retinal ON bipolar cells across species via fluorescence-activated cell sorting. <i>Molecular Therapy - Methods and Clinical Development</i> , 2021, 20, 587-600.	4.1	1
72	Acute In Vivo Multielectrode Recordings from the Mouse Suprachiasmatic Nucleus. <i>Methods in Molecular Biology</i> , 2021, 2130, 249-262.	0.9	1