Gerald H Jacobs

List of Publications by Year
in descending order

155 papers	8,698 citations	36303 51 h-index	49909 87 g-index
162 all docs	162 docs citations	162 times ranked	3625 citing authors

#	Article	IF	Citations
1	THE DISTRIBUTION AND NATURE OF COLOUR VISION AMONG THE MAMMALS. Biological Reviews, 1993, 68, 413-471.	10.4	609
2	Retinal receptors in rodents maximally sensitive to ultraviolet light. Nature, 1991, 353, 655-656.	27.8	380
3	Trichromatic colour vision in New World monkeys. Nature, 1996, 382, 156-158.	27.8	316
4	Evolution of colour vision in mammals. Philosophical Transactions of the Royal Society B: Biological Sciences, 2009, 364, 2957-2967.	4.0	254
5	Polymorphism of the long-wavelength cone in normal human colour vision. Nature, 1986, 323, 623-625.	27.8	244
6	Ultraviolet Vision in Vertebrates. American Zoologist, 1992, 32, 544-554.	0.7	226
7	Emergence of Novel Color Vision in Mice Engineered to Express a Human Cone Photopigment. Science, 2007, 315, 1723-1725.	12.6	209
8	Cone-based vision of rats for ultraviolet and visible lights. Journal of Experimental Biology, 2001, 204, 2439-2446.	1.7	208
9	Functional consequences of the relative numbers of L and M cones. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 607.	1.5	203
10	Primate color vision: A comparative perspective. Visual Neuroscience, 2008, 25, 619-633.	1.0	195
11	More than three different cone pigments among people with normal color vision. Vision Research, 1993, 33, 117-122.	1.4	193
12	Photopigments and color vision in the nocturnal monkey,Aotus. Vision Research, 1993, 33, 1773-1783.	1.4	168
13	Color vision in the dog. Visual Neuroscience, 1989, 3, 119-125.	1.0	152
14	Influence of cone pigment coexpression on spectral sensitivity and color vision in the mouse. Vision Research, 2004, 44, 1615-1622.	1.4	150
15	Spatial contrast sensitivity in albino and pigmented rats. Vision Research, 1979, 19, 933-937.	1.4	147
16	Losses of functional opsin genes, short-wavelength cone photopigments, and color visionâ€”A significant trend in the evolution of mammalian vision. Visual Neuroscience, 2013, 30, 39-53.	1.0	143
17	Polymorphism in normal human color vision and its mechanism. Vision Research, 1990, 30, 621-636.	1.4	127
18	Opsin gene and photopigment polymorphism in a prosimian primate. Vision Research, 2002, 42, 11-18.	1.4	119

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19	Within-species variations in visual capacity among squirrel monkeys (Saimiri Sciureus): Color vision. Vision Research, 1984, 24, 1267-1277.	1.4	106
20	Photopigment basis for dichromatic color vision in cows, goats, and sheep. Visual Neuroscience, 1998, 15, 581-4.	1.0	104
21	Electroretinogram flicker photometry and its applications. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1996, 13, 641.	1.5	99
22	Genetically engineered mice with an additional class of cone photoreceptors: Implications for the evolution of color vision. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 11706-11711.	7.1	98
23	A perspective on color vision in platyrrhine monkeys. Vision Research, 1998, 38, 3307-3313.	1.4	96
24	Uniformity of colour vision in Old World monkeys. Proceedings of the Royal Society B: Biological Sciences, 1999, 266, 2023-2028.	2.6	93
25	Visual capacities of the owl monkey (Aotus trivirgatus)â€”II. Spatial contrast sensitivity. Vision Research, 1977, 17, 821-825.	1.4	91
26	Photopigments underlying color vision in ringtail lemurs (Lemur catta) and brown lemurs (Eulemur) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5	1.7	91
27	Visual pigments of marine carnivores: pinnipeds, polar bear, and sea otter. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2006, 192, 833-843.	1.6	89
28	Cone Photoreceptor Recovery after Experimental Detachment and Reattachment: An Immunocytochemical, Morphological, and Electrophysiological Study. , 2003, 44, 416.		87
29	The Evolution of Primate Color Vision. Scientific American, 2009, 300, 56-63.	1.0	85
30	Evolution of vertebrate colour vision. Australasian journal of optometry, The, 2004, 87, 206-216.	1.3	84
31	Color vision polymorphism and its photopigment basis in a callitrichid monkey (Saguinus fuscicollis). Vision Research, 1987, 27, 2089-2100.	1.4	82
32	Photopigments of dogs and foxes and their implications for canid vision. Visual Neuroscience, 1993, 10, 173-180.	1.0	81
33	Electroretinogram measurements of cone spectral sensitivity in dichromatic monkeys. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1984, 1, 1175.	1.5	80
34	Regional variations in the relative sensitivity to UV light in the mouse retina. Visual Neuroscience, 1995, 12, 463-468.	1.0	79
35	New World Monkeys and Color. International Journal of Primatology, 2007, 28, 729-759.	1.9	79
36	Genetic basis of polymorphism in the color vision of platyrrhine monkeys. Vision Research, 1993, 33, 269-274.	1.4	77

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37	Reexamination of spectral mechanisms in the rat (Rattus norvegicus).. Journal of Comparative Psychology (Washington, D C: 1983), 1986, 100, 21-29.	0.5	70
38	Sensitivity to ultraviolet light in the gerbil (Meriones unguiculatus): Characteristics and mechanisms. Vision Research, 1994, 34, 1433-1441.	1.4	68
39	Polymorphism of the middle wavelength cone in two species of south american monkey: Cebus apella and callicebus moloch. Vision Research, 1987, 27, 1263-1268.	1.4	66
40	Photopigments and colour vision in New World monkeys from the family Atelidae. Proceedings of the Royal Society B: Biological Sciences, 2001, 268, 695-702.	2.6	66
41	Analysis of fusion gene and encoded photopigment of colour-blind humans. Nature, 1989, 342, 679-682.	27.8	65
42	Spectral sensitivity, photopigments, and color vision in the guinea pig (Cavia porcellus).. Behavioral Neuroscience, 1994, 108, 993-1004.	1.2	64
43	Spectral sensitivity of macaque monkeys measured with ERG flicker photometry. Visual Neuroscience, 1997, 14, 921-928.	1.0	64
44	Early afferent signaling in the outer plexiform layer regulates development of horizontal cell morphology. Journal of Comparative Neurology, 2008, 506, 745-758.	1.6	64
45	Genetic basis of photopigment variations in human dichromats. Vision Research, 1995, 35, 2095-2103.	1.4	63
46	Cone pigment variations in four genera of new world monkeys. Vision Research, 2003, 43, 227-236.	1.4	62
47	Contributions of the mouse UV photopigment to the ERG and to vision. Documenta Ophthalmologica, 2007, 115, 137-144.	2.2	62
48	Scotopic and photopic vision in the california ground squirrel: Physiological and anatomical evidence. Journal of Comparative Neurology, 1976, 165, 209-227.	1.6	57
49	Spectral mechanisms and color vision in the tree shrew (Tupaia belangeri). Vision Research, 1986, 26, 291-298.	1.4	57
50	Human Cone Pigment Expressed in Transgenic Mice Yields Altered Vision. Journal of Neuroscience, 1999, 19, 3258-3265.	3.6	57
51	Color vision in squirrel monkeys: Sex-related differences suggest the mode of inheritance. Vision Research, 1985, 25, 141-143.	1.4	56
52	Spectral sensitivity of cones in an ungulate. Visual Neuroscience, 1989, 2, 97-100.	1.0	55
53	Cone photopigments in nocturnal and diurnal procyonids. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1992, 171, 351-358.	1.6	55
54	The prevalence of defective color vision in Old World monkeys and apes. Color Research and Application, 2001, 26, S123-S127.	1.6	54

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55	Cone-based vision in the aging mouse. Vision Research, 2007, 47, 2037-2046.	1.4	53
56	Visual sensitivity and color vision in ground squirrels. Vision Research, 1971, 11, 511-537.	1.4	52
57	ERG Measurements of the Spectral Sensitivity of Common Chimpanzee (Pan troglodytes). Vision Research, 1996, 36, 2587-2594.	1.4	52
58	Cone receptor variations and their functional consequences in two species of hamster. Visual Neuroscience, 1999, 16, 53-63.	1.0	52
59	Variations in primate color vision: Mechanisms and utility. Evolutionary Anthropology, 1994, 3, 196-205.	3.4	50
60	Spectral sensitivity and color vision of the squirrel monkey.. Journal of Comparative and Physiological Psychology, 1963, 56, 616-621.	1.8	49
61	Photopigments and the dimensionality of animal color vision. Neuroscience and Biobehavioral Reviews, 2018, 86, 108-130.	6.1	49
62	Color vision variations in non-human primates. Trends in Neurosciences, 1986, 9, 320-323.	8.6	47
63	Early color deprivation and subsequent color vision in a dichromatic monkey. Vision Research, 1987, 27, 2009-2013.	1.4	47
64	Spectral sensitivity and colour vision in the ground-dwelling sciurids: Results from golden mantled ground squirrels and comparisons for five species. Animal Behaviour, 1978, 26, 409-421.	1.9	46
65	Within-species variations in visual capacity among squirrel monkeys (Saimiri sciureus): Sensitivity differences. Vision Research, 1983, 23, 239-248.	1.4	45
66	Spectral sensitivity and photopigments of a nocturnal prosimian, the bushbaby (Otolemur) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Td	1.7	43
67	Topography of Photoreceptors and Retinal Ganglion Cells in the Spotted Hyena <i>(Crocuta) Tj ETQq1 1 0.784314 rgBT /Overlock	1.7	42
68	Spectral sensitivity of ground squirrel cones measured with ERG flicker photometry. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1985, 156, 503-509.	1.6	40
69	Spectral properties and retinal distribution of ferret cones. Visual Neuroscience, 2003, 20, 11-17.	1.0	38
70	Center-surround balance in receptive fields of cells in the lateral geniculate nucleus. Vision Research, 1970, 10, 1127-1144.	1.4	37
71	Visual capacities of the owl monkey (Aotus trivirgatus)â€”I. Spectral sensitivity and color vision. Vision Research, 1977, 17, 811-820.	1.4	37
72	Cone pigment polymorphism in New World monkeys: Are all pigments created equal?. Visual Neuroscience, 2004, 21, 217-222.	1.0	37

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73	Polymorphic New World monkeys with more than three M/L cone types. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2005, 22, 2072.	1.5	37
74	Receptive fields in visual systems. Brain Research, 1969, 14, 553-573.	2.2	35
75	Mutational changes in S-cone opsin genes common to both nocturnal and cathemeralAotus monkeys. American Journal of Primatology, 2007, 69, 757-765.	1.7	35
76	Spectral mechanisms in the tree squirrel retina. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1988, 162, 773-780.	1.6	34
77	Visual acuity and spatial contrast sensitivity in tree squirrels. Behavioural Processes, 1982, 7, 367-375.	1.1	33
78	Behavioral measurements of rat spectral sensitivity. Vision Research, 1975, 15, 687-691.	1.4	32
79	The Evolution of Vertebrate Color Vision. Advances in Experimental Medicine and Biology, 2012, 739, 156-172.	1.6	31
80	Single cells in squirrel monkey lateral geniculate nucleus with broad spectral sensitivity. Vision Research, 1964, 4, 221-IN3.	1.4	30
81	Visual sensitivity of ground squirrels to spatial and temporal luminance variations. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1980, 136, 291-299.	1.6	30
82	Photoreceptors and photopigments in a subterranean rodent, the pocket gopher (Thomomys bottae). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2005, 191, 125-134.	1.6	30
83	The Verriest Lecture 2009: Recent progress in understanding mammalian color vision. Ophthalmic and Physiological Optics, 2010, 30, 422-434.	2.0	30
84	Diurnality and cone photopigment polymorphism in strepsirrhines: Examination of linkage inLemur catta. American Journal of Physical Anthropology, 2003, 122, 66-72.	2.1	28
85	Rod photoreceptors and scotopic vision in ground squirrels. Journal of Comparative Neurology, 1980, 189, 113-125.	1.6	27
86	Color Vision in the Ring-Tailed Lemur (Lemur catta). Brain, Behavior and Evolution, 1985, 26, 154-166.	1.7	27
87	Color vision and visual sensitivity in the California ground squirrel (Citellus beecheyi). Vision Research, 1972, 12, 1995-2004.	1.4	25
88	Chromatic Opponent Cells in Squirrel Monkey Lateral Geniculate Nucleus. Nature, 1965, 206, 487-489.	27.8	23
89	The all-cone retina of the garter snake: spectral mechanisms and photopigment. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1992, 170, 701-707.	1.6	23
90	An animal model for studying cone function in retinal detachment. Documenta Ophthalmologica, 2002, 104, 119-132.	2.2	23

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91	Rods in the antelope ground squirrel. Vision Research, 1976, 16, 875-IV.	1.4	22
92	Cone Pigment of the Great Horned Owl. Condor, 1987, 89, 434.	1.6	22
93	Characterization of opsin gene alleles affecting color vision in a wild population of titi monkeys (Callicebus brunneus). American Journal of Primatology, 2011, 73, 189-196.	1.7	22
94	Increment-threshold functions for different rodent species. Vision Research, 1975, 15, 375-378.	1.4	21
95	Differences in spectral response properties of lgn cells in male and female squirrel monkeys. Vision Research, 1983, 23, 461-468.	1.4	21
96	Color Vision Variation and Foraging Behavior in Wild Neotropical Titi Monkeys (Callicebus brunneus): Possible Mediating Roles for Spatial Memory and Reproductive Status. International Journal of Primatology, 2011, 32, 1058-1075.	1.9	20
97	Individual variations in color vision among squirrel monkeys (Saimiri sciureus) of different geographical origins.. Journal of Comparative Psychology (Washington, D C: 1983), 1984, 98, 347-357.	0.5	20
98	Electroretinographic luminosity functions of the Aotus monkey. American Journal of Physiology, 1963, 204, 47-50.	5.0	19
99	Spectrally-opponent responses in ground squirrel optic nerve. Vision Research, 1980, 20, 9-13.	1.4	19
100	Color vision variations in Old and New World primates. American Journal of Primatology, 1989, 18, 35-44.	1.7	19
101	Duplicity theory and ground squirrels: Linkages between photoreceptors and visual function. Visual Neuroscience, 1990, 5, 311-318.	1.0	19
102	The Discovery of Spectral Opponency in Visual Systems and its Impact on Understanding the Neurobiology of Color Vision. Journal of the History of the Neurosciences, 2014, 23, 287-314.	0.9	18
103	Dichromacy in the Ground Squirrel. Nature, 1969, 223, 414-415.	27.8	17
104	Vision in the prairie dog: Spectral sensitivity and color vision.. Journal of Comparative and Physiological Psychology, 1973, 84, 240-245.	1.8	16
105	Naturalistic color discriminations in polymorphic platyrrhine monkeys: Effects of stimulus luminance and duration examined with functional substitution. Visual Neuroscience, 2007, 24, 17-23.	1.0	16
106	Increment-threshold spectral sensitivity in the squirrel monkey.. Journal of Comparative and Physiological Psychology, 1972, 79, 425-431.	1.8	15
107	Scotopic and Photopic Visual Capacities of an Arboreal Squirrel (Sciurus niger). Brain, Behavior and Evolution, 1974, 10, 307-321.	1.7	15
108	Rod and cone function in coneless mice. Visual Neuroscience, 2005, 22, 807-816.	1.0	15

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109	L and M cone proportions in polymorphic New World monkeys. Visual Neuroscience, 2006, 23, 365-370.	1.0	15
110	Discrimination of luminance and chromaticity differences by dichromatic and trichromatic monkeys. Vision Research, 1990, 30, 387-397.	1.4	13
111	Cone spectral sensitivity in the harbor seal (Phoca vitulina) and implications for color vision. Canadian Journal of Zoology, 1998, 76, 2114-2118.	1.0	13
112	Prospects for trichromatic color vision in male Cebus monkeys. Behavioural Brain Research, 1999, 101, 109-112.	2.2	12
113	Color Vision in the Spider Monkey (Ateles). Folia Primatologica, 1982, 38, 86-98.	0.7	11
114	Spectral sensitivity of vervet monkeys (Cercopithecus aethiops sabaeus) and the issue of catarrhine trichromacy. American Journal of Primatology, 1991, 23, 185-195.	1.7	11
115	Progress toward understanding the evolution of primate color vision. Evolutionary Anthropology, 2003, 11, 132-135.	3.4	11
116	Spectral components in theb-wave of the ground squirrel electroretinogram. Vision Research, 1979, 19, 1243-1247.	1.4	10
117	Temporal properties of the short-wavelength cone mechanism: Comparison of receptor and postreceptor signals in the ground squirrel. Vision Research, 1988, 28, 1077-1082.	1.4	10
118	Spectral Sensitivity of Gibbons: Implications for Photopigments and Color Vision. Folia Primatologica, 2001, 72, 26-29.	0.7	10
119	Absence of functional short-wavelength sensitive cone pigments in hamsters (Mesocricetus). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2008, 194, 429-439.	1.6	10
120	Electroretinogram of the squirrel monkey.. Journal of Comparative and Physiological Psychology, 1963, 56, 405-409.	1.8	9
121	Flicker photometric ERG measurements of short wavelength sensitive cones. Documenta Ophthalmologica Proceedings Series, 1991, , 341-346.	0.0	9
122	Some characteristics of the eye and the electroretinogram of the prairie dog. Experimental Neurology, 1972, 37, 538-549.	4.1	8
123	Cone pigments in a North American marsupial, the opossum (Didelphis virginiana). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2010, 196, 379-384.	1.6	8
124	Visual sensitivity in the squirrel monkey. American Journal of Physical Anthropology, 1973, 38, 371-375.	2.1	7
125	<title>Evolution of mechanisms for color vision</title>. , 1990, 1250, 287.		7
126	Evolution of color vision and its reflections in contemporary mammals. , 2015, , 110-130.		5

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127	Electrophysiological evidence for rod and cone-based vision in the nocturnal flying squirrel. Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 1976, 109, 1-16.	1.6	4
128	Behavioral and electrophysiological sensitivity to temporally modulated visual stimuli in the ground squirrel. Visual Neuroscience, 1991, 6, 593-606.	1.0	4
129	Data and interpretation in comparative color vision. Behavioral and Brain Sciences, 1992, 15, 40-41.	0.7	4
130	Visual System of the Squirrel Monkey. , 1985, , 271-293.		4
131	Vision1 1This review and the research reported by the writers have been supported by research grants GB-15969 and GB-12303 from the National Science Foundation and EY-00014 from the National Eye Institute, U.S. Public Health Service.. Behavior of Non-human Primates, 1971, 3, 107-157.	0.5	4
132	Spectral sensitivity of non-opponent cells in the lateral geniculate nucleus. Vision Research, 1971, 11, 1179-1182.	1.4	3
133	Spectral mechanisms in the retina of the Arctic ground squirrel. Canadian Journal of Zoology, 1977, 55, 1454-1460.	1.0	3
134	The prevalence of defective color vision in Old World monkeys and apes. Color Research and Application, 2001, 26, S123-S127.	1.6	3
135	Photopigment Variations and the Evolution of Anthropoid Vision. , 2004, , 645-664.		3
136	ERG flicker photometric evaluation of spectral sensitivity in protanopes and protanomalous trichromats. Documenta Ophthalmologica Proceedings Series, 1993, , 25-31.	0.0	3
137	Deuteranope spectral sensitivity measured with ERG flicker photometry. Documenta Ophthalmologica Proceedings Series, 1991, , 405-411.	0.0	3
138	Polymorphism of Cone Pigments among Color Normals: Evidence from Color Matching. Documenta Ophthalmologica Proceedings Series, 1989, , 27-34.	0.0	3
139	The Genetics and Evolution of Primate Visual Pigments. , 2006, , 73-97.		2
140	Duplicity Theory of Vision: From Newton to the Present, edited by B. Stabell and U. Stabell. 2009. Cambridge, Cambridge University Press.. Visual Neuroscience, 2010, 27, 75-76.	1.0	2
141	Evolution of Color Vision. , 2016, , 317-354.		2
142	The Biology of Variations in Mammalian Color Vision. Research and Perspectives in Neurosciences, 2009, , 53-68.	0.4	1
143	Relationship between cone pigments and genes in deuteranomalous subjects. Documenta Ophthalmologica Proceedings Series, 1991, , 397-403.	0.0	1
144	Spectral sensitivity of the short wavelength mechanism in the squirrel monkey visual system. Vision Research, 1974, 14, 1271-1273.	1.4	0

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145	Spectral sensitivity of macaque monkeys measured with ERG flicker photometry. Visual Neuroscience, 1999, 16, 981-981.	1.0	0
146	Rhodopsins and Phototransduction Novartis Foundation Symposium 224; Wiley, Chichester, 1999, 316 pages, ISBN: 0-471-98827-8, f75.00. Ophthalmic and Physiological Optics, 2001, 21, 424-425.	2.0	0
147	Early afferent signaling in the outer plexiform layer regulates development of horizontal cell morphology. Journal of Comparative Neurology, 2008, 506, spc1-spc1.	1.6	0
148	Early afferent signaling in the outer plexiform layer regulates development of horizontal cell morphology. Journal of Comparative Neurology, 2008, 506, spc1-spc1.	1.6	0
149	G-proteins | Color Vision. , 2021, , 407-417.		0
150	Color Vision. , 2002, , 15-29.		0
151	Cone Pigments and Vision in the Mouse. , 2008, , 353-373.		0
152	Evolution of Animal Color Vision. , 2018, , 1-9.		0
153	Photoreceptors. , 2018, , 1-5.		0
154	Evolution of Animal Color Vision. , 2022, , 2478-2486.		0
155	Photoreceptors. , 2022, , 5232-5237.		0