Thomas W Gardner

List of Publications by Citations

142 papers	10,569 citations	46 h-index	102 g-index
151 ext. papers	12,131 ext. citations	7.2 avg, IF	6.35 L-index

#	Paper	IF	Citations
142	Diabetic retinopathy. *New England Journal of Medicine*, **2012**, 366, 1227-39	59.2	1085
141	Retinopathy in diabetes. *Diabetes Care*, **2004**, 27 Suppl 1, S84-7	14.6	641
140	Diabetic retinopathy: seeing beyond glucose-induced microvascular disease. *Diabetes*, **2006**, 55, 2401-11	10.9	578
139	Retinal angiogenesis in development and disease. *Nature*, **2005**, 438, 960-6	50.4	518
138	Vascular endothelial growth factor induces rapid phosphorylation of tight junction proteins occludin and zonula occluden 1. A potential mechanism for vascular permeability in diabetic retinopathy and tumors. *Journal of Biological Chemistry*, **1999**, 274, 23463-7	5.4	466
137	Diabetic retinopathy: more than meets the eye. *Survey of Ophthalmology*, **2002**, 47 Suppl 2, S253-62	6.1	421
136	Minocycline reduces proinflammatory cytokine expression, microglial activation, and caspase-3 activation in a rodent model of diabetic retinopathy. *Diabetes*, **2005**, 54, 1559-65	0.9	419
135	The Ins2Akita mouse as a model of early retinal complications in diabetes. *Investigative Ophthalmology and Visual Science*, **2005**, 46, 2210-8		390
134	Diabetic Retinopathy: A Position Statement by the American Diabetes Association. *Diabetes Care*, **2017**, 40, 412-418	14.6	357
133	The significance of vascular and neural apoptosis to the pathology of diabetic retinopathy **2011**, 52, 1156-63		301
132	Retinal neurodegeneration: early pathology in diabetes. *Clinical and Experimental Ophthalmology*, **2000**, 28, 3-8	2.4	243
131	Insulin rescues retinal neurons from apoptosis by a phosphatidylinositol 3-kinase/Akt-mediated mechanism that reduces the activation of caspase-3. *Journal of Biological Chemistry*, **2001**, 276, 32814-21	5.4	230
130	Diabetic retinopathy. *Diabetes Care*, **2003**, 26, 226-9	14.6	223
129	Neurodegeneration in diabetic retinopathy: does it really matter?. *Diabetologia*, **2018**, 61, 1902-1912	10.3	201
128	VEGF activation of protein kinase C stimulates occludin phosphorylation and contributes to endothelial permeability. *Investigative Ophthalmology and Visual Science*, **2006**, 47, 5106-15		186
127	Molecular mechanisms of vascular permeability in diabetic retinopathy. *Seminars in Ophthalmology*, **1999**, 14, 240-8	2.4	176
126	Five-Year Outcomes of Panretinal Photocoagulation vs Intravitreous Ranibizumab for Proliferative Diabetic Retinopathy: A Randomized Clinical Trial. *JAMA Ophthalmology*, **2018**, 136, 1138-1148	3.9	165

125	Diabetes reduces basal retinal insulin receptor signaling: reversal with systemic and local insulin. *Diabetes*, **2006**, 55, 1148-56	0.9	146
124	Diabetic retinopathy: loss of neuroretinal adaptation to the diabetic metabolic environment. *Annals of the New York Academy of Sciences*, **2014**, 1311, 174-90	6.5	142
123	Excessive hexosamines block the neuroprotective effect of insulin and induce apoptosis in retinal neurons. *Journal of Biological Chemistry*, **2001**, 276, 43748-55	5.4	136
122	Tissue-specific metabolic reprogramming drives nutrient flux in diabetic complications. *JCI Insight*, **2016**, 1, e86976	9.9	132
121	Neurodegeneration in the pathogenesis of diabetic retinopathy: molecular mechanisms and therapeutic implications. *Current Medicinal Chemistry*, **2013**, 20, 3241-50	4.3	116
120	Effect of vascular endothelial growth factor on cultured endothelial cell monolayer transport properties. *Microvascular Research*, **2000**, 59, 265-77	3.7	108
119	New insights into the mechanisms of diabetic complications: role of lipids and lipid metabolism. *Diabetologia*, **2019**, 62, 1539-1549	10.3	107
118	Shear stress regulates occludin content and phosphorylation. *American Journal of Physiology - Heart and Circulatory Physiology*, **2001**, 281, H105-13	5.2	92
117	Characterization of insulin signaling in rat retina in vivo and ex vivo. *American Journal of Physiology - Endocrinology and Metabolism*, **2003**, 285, E763-74	6	89
116	The neurovascular unit and the pathophysiologic basis of diabetic retinopathy. *Graefes Archive for Clinical and Experimental Ophthalmology*, **2017**, 255, 1-6	3.8	88
115	Inner retinal visual dysfunction is a sensitive marker of non-proliferative diabetic retinopathy. *British Journal of Ophthalmology*, **2012**, 96, 699-703	5.5	87
114	Whole genome assessment of the retinal response to diabetes reveals a progressive neurovascular inflammatory response. *BMC Medical Genomics*, **2008**, 1, 26	3.7	86
113	Functions of insulin and insulin receptor signaling in retina: possible implications for diabetic retinopathy. *Progress in Retinal and Eye Research*, **2003**, 22, 545-62	20.5	84
112	Histamine reduces ZO-1 tight-junction protein expression in cultured retinal microvascular endothelial cells. *Biochemical Journal*, **1996**, 320 (Pt 3), 717-21	3.8	81
111	Incidence and Risk Factors for Developing Diabetic Retinopathy among Youths with Type 1 or Type 2 Diabetes throughout the United States. *Ophthalmology*, **2017**, 124, 424-430	7.3	79
110	Diabetes alters sphingolipid metabolism in the retina: a potential mechanism of cell death in diabetic retinopathy. *Diabetes*, **2006**, 55, 3573-80	0.9	76
109	Analysis of glucose metabolism in diabetic rat retinas. *American Journal of Physiology - Endocrinology and Metabolism*, **2006**, 290, E1057-67	6	74
108	Subconjunctivally implantable hydrogels with degradable and thermoresponsive properties for sustained release of insulin to the retina. *Biomaterials*, **2009**, 30, 6541-7	15.6	71

107	An integrated approach to diabetic retinopathy research. *JAMA Ophthalmology*, **2011**, 129, 230-5		70
106	Predicting development of proliferative diabetic retinopathy. *Diabetes Care*, **2013**, 36, 1562-8	14.6	68
105	The retinal proteome in experimental diabetic retinopathy: up-regulation of crystallins and reversal by systemic and periocular insulin. *Molecular and Cellular Proteomics*, **2009**, 8, 767-79	7.6	67
104	Insulin promotes rat retinal neuronal cell survival in a p70S6K-dependent manner. *Journal of Biological Chemistry*, **2004**, 279, 9167-75	5.4	67
103	Risk Factors for Retinopathy in Type 1 Diabetes: The DCCT/EDIC Study. *Diabetes Care*, **2019**, 42, 875-882	14.6	63
102	The molecular structure and function of the inner blood-retinal barrier. Penn State Retina Research Group. *Documenta Ophthalmologica*, **1999**, 97, 229-37	2.2	58
101	Nonobese, insulin-deficient Ins2Akita mice develop type 2 diabetes phenotypes including insulin resistance and cardiac remodeling. *American Journal of Physiology - Endocrinology and Metabolism*, **2007**, 293, E1687-96	6	53
100	Differential roles of hyperglycemia and hypoinsulinemia in diabetes induced retinal cell death: evidence for retinal insulin resistance. *PLoS ONE*, **2011**, 6, e26498	3.7	53
99	Diabetic Retinopathy and Diabetic Macular Edema. *Developments in Ophthalmology*, **2016**, 55, 137-46		51
98	Proteomic Analysis of Early Diabetic Retinopathy Reveals Mediators of Neurodegenerative Brain Diseases **2018**, 59, 2264-2274		49
97	New insights into the pathophysiology of diabetic retinopathy: potential cell-specific therapeutic targets. *Diabetes Technology and Therapeutics*, **2000**, 2, 601-8	8.1	46
96	Multidimensional Functional and Structural Evaluation Reveals Neuroretinal Impairment in Early Diabetic Retinopathy **2017**, 58, BIO277-BIO290		44
95	Effect of doxycycline vs placebo on retinal function and diabetic retinopathy progression in patients with severe nonproliferative or non-high-risk proliferative diabetic retinopathy: a randomized clinical trial. *JAMA Ophthalmology*, **2014**, 132, 535-43	3.9	44
94	A transmural pressure gradient induces mechanical and biological adaptive responses in endothelial cells. *American Journal of Physiology - Heart and Circulatory Physiology*, **2004**, 286, H731-41	5.2	43
93	Multimodal characterization of proliferative diabetic retinopathy reveals alterations in outer retinal function and structure. *Ophthalmology*, **2015**, 122, 957-67	7.3	42
92	Approach for a Clinically Useful Comprehensive Classification of Vascular and Neural Aspects of Diabetic Retinal Disease **2018**, 59, 519-527		41
91	Nanoliposomal minocycline for ocular drug delivery. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2013**, 9, 130-40	6	39
90	Differential reduction in corneal nerve fiber length in patients with type 1 or type 2 diabetes mellitus. *Journal of Diabetes and Its Complications*, **2014**, 28, 658-61	3.2	36

89	Ablation of 4E-BP1/2 prevents hyperglycemia-mediated induction of VEGF expression in the rodent retina and in Muller cells in culture. *Diabetes*, **2010**, 59, 2107-16	0.9	36
88	Comparison of retinal vasodilator and constrictor responses in type 2 diabetes. *Acta Ophthalmologica*, **2012**, 90, e434-41	3.7	35
87	Impaired retinal vasodilator responses in prediabetes and type 2 diabetes. *Acta Ophthalmologica*, **2013**, 91, e462-9	3.7	34
86	Novel potential mechanisms for diabetic macular edema: leveraging new investigational approaches. *Current Diabetes Reports*, **2008**, 8, 263-9	5.6	34
85	Effect of shear stress on the hydraulic conductivity of cultured bovine retinal microvascular endothelial cell monolayers. *Current Eye Research*, **2000**, 21, 944-51	2.9	33
84	Disorganization of Retinal Inner Layers (DRIL) and Neuroretinal Dysfunction in Early Diabetic Retinopathy **2018**, 59, 5481-5486		33
83	Anti-Vascular Endothelial Growth Factor Therapy for Diabetic Retinopathy: Consequences of Inadvertent Treatment Interruptions. *American Journal of Ophthalmology*, **2019**, 204, 13-18	4.9	32
82	Effect of IL-1beta on survival and energy metabolism of R28 and RGC-5 retinal neurons **2008**, 49, 5581-92		32
81	Increased lipogenesis and impaired Ebxidation predict type 2 diabetic kidney disease progression in American Indians. *JCI Insight*, **2019**, 4,	9.9	32
80	Diabetic macular oedema and visual loss: relationship to location, severity and duration. *Acta Ophthalmologica*, **2009**, 87, 709-13	3.7	31
79	ANTIHISTAMINES REDUCE BLOODRETINAL BARRIER PERMEABILITY IN TYPE I (INSULIN-DEPENDENT) DIABETIC PATIENTS WITH NONPROLIFERATIVE RETINOPATHY. *Retina*, **1995**, 15, 134-140	3.6	29
78	The Effects of Diabetic Retinopathy and Pan-Retinal Photocoagulation on Photoreceptor Cell Function as Assessed by Dark Adaptometry **2016**, 57, 208-17		29
77	Occludin S490 Phosphorylation Regulates Vascular Endothelial Growth Factor-Induced Retinal Neovascularization. *American Journal of Pathology*, **2016**, 186, 2486-99	5.8	28
76	Ophthalmic Screening Patterns Among Youths With Diabetes Enrolled in a Large US Managed Care Network. *JAMA Ophthalmology*, **2017**, 135, 432-438	3.9	27
75	Neuroprotection for diabetic retinopathy. *Developments in Ophthalmology*, **2009**, 44, 56-68		25
74	Diabetic retinopathy. *Medical Clinics of North America*, **1998**, 82, 847-76	7	25
73	Dynamic intraocular pressure measurements during vitrectomy. *JAMA Ophthalmology*, **2005**, 123, 1514-23		25
72	Intraocular pressure fluctuations during scleral buckling surgery. *Ophthalmology*, **1993**, 100, 1050-4	7.3	25

71	Safety and Feasibility of Quantitative Multiplexed Cytokine Analysis From Office-Based Vitreous Aspiration **2016**, 57, 3017-23		25
70	Effect of doxycycline vs placebo on retinal function and diabetic retinopathy progression in mild to moderate nonproliferative diabetic retinopathy: a randomized proof-of-concept clinical trial. *JAMA Ophthalmology*, **2014**, 132, 1137-42	3.9	24
69	Physiological transport properties of cultured retinal microvascular endothelial cell monolayers. *Current Eye Research*, **1997**, 16, 761-8	2.9	24
68	Diabetic retinopathy: research to clinical practice. *Clinical Diabetes and Endocrinology*, **2017**, 3, 9	4.7	23
67	PDGF- and insulin/IGF-1-specific distinct modes of class IA PI 3-kinase activation in normal rat retinas and RGC-5 retinal ganglion cells **2008**, 49, 3687-98		23
66	An extension of the Early Treatment Diabetic Retinopathy Study (ETDRS) system for grading of diabetic macular edema in the Astemizole Retinopathy Trial. *Current Eye Research*, **2006**, 31, 535-47	2.9	23
65	Bioelectric impact of pathological angiogenesis on vascular function. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 9934-9	11.5	22
64	Rates of Vitrectomy among Enrollees in a United States Managed Care Network, 2001-2012. *Ophthalmology*, **2016**, 123, 590-8	7.3	21
63	Visual Field Changes Over 5 Years in Patients Treated With Panretinal Photocoagulation or Ranibizumab for Proliferative Diabetic Retinopathy. *JAMA Ophthalmology*, **2020**, 138, 285-293	3.9	20
62	Subconjunctivally Implanted Hydrogels for Sustained Insulin Release to Reduce Retinal Cell Apoptosis in Diabetic Rats **2015**, 56, 7839-46		20
61	Shared and distinct lipid-lipid interactions in plasma and affected tissues in a diabetic mouse model. *Journal of Lipid Research*, **2018**, 59, 173-183	6.3	20
60	mTORC1-independent reduction of retinal protein synthesis in type 1 diabetes. *Diabetes*, **2014**, 63, 3077-90	8.9	19
59	Insulin-like growth factor 1 rescues R28 retinal neurons from apoptotic death through ERK-mediated BimEL phosphorylation independent of Akt. *Experimental Eye Research*, **2016**, 151, 82-95	3.7	19
58	Phosphatase control of 4E-BP1 phosphorylation state is central for glycolytic regulation of retinal protein synthesis. *American Journal of Physiology - Endocrinology and Metabolism*, **2015**, 309, E546-56	6	18
57	A proposal for early and personalized treatment of diabetic retinopathy based on clinical pathophysiology and molecular phenotyping. *Vision Research*, **2017**, 139, 153-160	2.1	18
56	Mucinous adenocarcinoma of the eyelid. A case report. *JAMA Ophthalmology*, **1984**, 102, 912		18
55	VEGF increases paracellular transport without altering the solvent-drag reflection coefficient. *Microvascular Research*, **2004**, 68, 295-302	3.7	17
54	Reduction of severe macular edema in eyes with poor vision after panretinal photocoagulation for proliferative diabetic retinopathy. *Graefes Archive for Clinical and Experimental Ophthalmology*, **1991**, 229, 323-8	3.8	17

53	The Prevalence and Determinants of Cognitive Deficits and Traditional Diabetic Complications in the Severely Obese. *Diabetes Care*, **2020**, 43, 683-690	14.6	16
52	Optic disk drusen, peripapillary choroidal neovascularization, and POEMS syndrome. *American Journal of Ophthalmology*, **2002**, 133, 275-6	4.9	16
51	An eye on insulin. *Journal of Clinical Investigation*, **2003**, 111, 1817-9	15.9	16
50	Report From the NEI/FDA Diabetic Retinopathy Clinical Trial Design and Endpoints Workshop **2016**, 57, 5127-5142		15
49	Photic maculopathy secondary to short-circuiting of a high-tension electric current. *Ophthalmology*, **1982**, 89, 865-8	7.3	14
48	Impaired Retinal Vasoreactivity: An Early Marker of Stroke Risk in Diabetes. *Journal of Neuroimaging*, **2017**, 27, 78-84	2.8	11
47	Impaired coronary and retinal vasomotor function to hyperoxia in Individuals with Type 2 diabetes. *Microvascular Research*, **2015**, 101, 1-7	3.7	11
46	Retinal Failure in Diabetes: a Feature of Retinal Sensory Neuropathy. *Current Diabetes Reports*, **2015**, 15, 107	5.6	11
45	Burning fat fuels photoreceptors. *Nature Medicine*, **2016**, 22, 342-3	50.5	10
44	Impact of diagnosing diabetic complications on future hemoglobin A1c levels. *Journal of Diabetes and Its Complications*, **2016**, 30, 323-8	3.2	9
43	Current and future management of diabetic retinopathy: a personalized evidence-based approach. *Diabetes Management*, **2013**, 3, 481-494	0	9
42	Ruboxistaurin for diabetic retinopathy. *Ophthalmology*, **2006**, 113, 2135-6	7.3	9
41	Blood Pressure Is Associated with Receiving Intravitreal Anti-Vascular Endothelial Growth Factor Treatment in Patients with Diabetes. *Ophthalmology Retina*, **2019**, 3, 410-416	3.8	8
40	Quantification of fundus autofluorescence to detect disease severity in nonexudative age-related macular degeneration. *JAMA Ophthalmology*, **2013**, 131, 1009-15	3.9	8
39	Insulin signaling in retinal neurons is regulated within cholesterol-enriched membrane microdomains. *American Journal of Physiology - Endocrinology and Metabolism*, **2011**, 300, E600-9	6	8
38	A critical review: Psychophysical assessments of diabetic retinopathy. *Survey of Ophthalmology*, **2021**, 66, 213-230	6.1	8
37	mTORC1 and mTORC2 expression in inner retinal neurons and glial cells. *Experimental Eye Research*, **2020**, 197, 108131	3.7	7
36	Phosphorylation site mapping of endogenous proteins: a combined MS and bioinformatics approach. *Journal of Proteome Research*, **2009**, 8, 798-807	5.6	7

35	Ocular findings in HIV-infected haemophiliacs. *Haemophilia*, **1996**, 2, 63-4	3.3	7
34	A survey of intraocular silicone oil use in the United States. *Ophthalmology*, **1992**, 99, 1174-6	7.3	7
33	Astemizole reduces blood-retinal barrier leakage in experimental diabetes. *Journal of Diabetes and Its Complications*, **1992**, 6, 230-5	3.2	7
32	Diabetes diminishes phosphatidic acid in the retina: a putative mediator for reduced mTOR signaling and increased neuronal cell death **2012**, 53, 7257-67		7
31	THE RESTORE STUDY. *Evidence-Based Ophthalmology*, **2011**, 12, 206-207		5
30	Developmental and light regulation of tumor suppressor protein PP2A in the retina. *Oncotarget*, **2018**, 9, 1505-1523	3.3	5
29	Integrative Biology of Diabetic Retinal Disease: Lessons from Diabetic Kidney Disease. *Journal of Clinical Medicine*, **2021**, 10,	5.1	5
28	Light scatter causes the grayness of detached retinas: implications for vision loss in retinal detachment. *JAMA Ophthalmology*, **2003**, 121, 1002-8		4
27	Complications of retinal laser therapy and their prevention. *Seminars in Ophthalmology*, **1991**, 6, 19-26	2.4	4
26	Future opportunities in diabetic retinopathy research. *Current Opinion in Endocrinology, Diabetes and Obesity*, **2016**, 23, 91-6	4	4
25	Ophthalmology patient knowledge of personal and recommended ABCs of diabetes care. *JAMA Ophthalmology*, **2010**, 128, 1495-6		3
24	Diminished retinal complex lipid synthesis and impaired fatty acid □oxidation associated with human diabetic retinopathy. *JCI Insight*, **2021**, 6,	9.9	3
23	Hydrogels for Ocular Posterior Segment Drug Delivery. *AAPS Advances in the Pharmaceutical Sciences Series*, **2011**, 291-304	0.5	3
22	Patient-Reported Outcomes Reveal Impairments Not Explained by Psychophysical Testing in Patients With Regressed PDR. *Translational Vision Science and Technology*, **2019**, 8, 11	3.3	2
21	A validated analysis pipeline for mass spectrometry-based vitreous proteomics: new insights into proliferative diabetic retinopathy. *Clinical Proteomics*, **2021**, 18, 28	5	2
20	Density-based classification in diabetic retinopathy through thickness of retinal layers from optical coherence tomography. *Scientific Reports*, **2020**, 10, 15937	4.9	2
19	Randomized Safety and Feasibility Trial of Ultra-Rapid Cooling Anesthesia for Intravitreal Injections. *Ophthalmology Retina*, **2020**, 4, 979-986	3.8	2
18	Identification of population characteristics through implementation of the Comprehensive Diabetic Retinopathy Program. *Clinical Diabetes and Endocrinology*, **2019**, 5, 6	4.7	1

17	Visual fields refine understanding of diabetic retinopathy progression. *Diabetes*, **2014**, 63, 2909-10	0.9	1
16	The retinal depression sign in diabetic retinopathy. *Graefe's Archive for Clinical and Experimental Ophthalmology*, **1995**, 233, 617-20	3.8	1
15	Insulin Signaling in Normal and Diabetic Conditions **2010**, 101-118		1
14	A new hypothesis on mechanisms of retinal vascular permeability in diabetes **1998**, 169-179		1
13	Treated PDR Reveals Age-Appropriate Vision Deterioration But Distorted Retinal Organization. *Translational Vision Science and Technology*, **2020**, 9, 3	3.3	1
12	Proteomic Analyses of Vitreous in Proliferative Diabetic Retinopathy: Prior Studies and Future Outlook. *Journal of Clinical Medicine*, **2021**, 10,	5.1	1
11	Insulin-like growth factor-2 regulates basal retinal insulin receptor activity. *Journal of Biological Chemistry*, **2021**, 296, 100712	5.4	1
10	Reading deficits in diabetic patients treated with panretinal photocoagulation and good visual acuity. *Acta Ophthalmologica*, **2019**, 97, e1013-e1018	3.7	0
9	It is time for a moonshot to find "Cures" for diabetic retinal disease.. *Progress in Retinal and Eye Research*, **2022**, 101051	20.5	0
8	Awareness of Diabetic Retinopathy: Insight From the National Health and Nutrition Examination Survey. *American Journal of Preventive Medicine*, **2021**, 61, 900-909	6.1	0
7	Reply. *Ophthalmology*, **2017**, 124, e69-e70	7.3	
6	Diabetic retinopathy and diabetic macular edema **2010**, 133-136		
5	A method for real-time intraocular pressure monitoring during scleral buckling surgery. *Graefe's Archive for Clinical and Experimental Ophthalmology*, **1993**, 231, 671-3	3.8	
4	The molecular structure and function of the inner blood-retinal barrier **2000**, 25-33		
3	Neuroglial Dysfunction in Diabetic Retinopathy **2008**, 283-301		
2	mTORC1 Regulates High Levels of Protein Synthesis in Retinal Ganglion Cells of Adult Mice.. *Journal of Biological Chemistry*, **2022**, 101944	5.4	
1	Diabetic macular edema **2012**, 536-540		