Johannes von Lintig

List of Publications by Citations

115 papers	6,662 citations	50 h-index	80 g-index
125 ext. papers	7,540 ext. citations	5.5 avg, IF	5.85 L-index

#	Paper	IF	Citations
115	Filling the gap in vitamin A research. Molecular identification of an enzyme cleaving beta-carotene to retinal. *Journal of Biological Chemistry*, **2000**, 275, 11915-20	5.4	360
114	Identification and characterization of a mammalian enzyme catalyzing the asymmetric oxidative cleavage of provitamin A. *Journal of Biological Chemistry*, **2001**, 276, 14110-6	5.4	336
113	Transgenic rice (Oryza sativa) endosperm expressing daffodil (Narcissus pseudonarcissus) phytoene synthase accumulates phytoene, a key intermediate of provitamin A biosynthesis. *Plant Journal*, **1997**, 11, 1071-8	6.9	274
112	A mitochondrial enzyme degrades carotenoids and protects against oxidative stress. *FASEB Journal* , **2011**, 25, 948-59	0.9	223
111	A class B scavenger receptor mediates the cellular uptake of carotenoids in Drosophila. *Proceedings of the National Academy of Sciences of the United States of America*, **2002**, 99, 10581-6	11.5	200
110	Carotenoid oxygenases: cleave it or leave it. *Trends in Plant Science*, **2003**, 8, 145-9	13.1	197
109	CMO1 deficiency abolishes vitamin A production from beta-carotene and alters lipid metabolism in mice. *Journal of Biological Chemistry*, **2007**, 282, 33553-33561	5.4	193
108	Colors with functions: elucidating the biochemical and molecular basis of carotenoid metabolism. *Annual Review of Nutrition*, **2010**, 30, 35-56	9.9	185
107	Light-dependent regulation of carotenoid biosynthesis occurs at the level of phytoene synthase expression and is mediated by phytochrome in Sinapis alba and Arabidopsis thaliana seedlings. *Plant Journal*, **1997**, 12, 625-634	6.9	174
106	ISX is a retinoic acid-sensitive gatekeeper that controls intestinal beta,beta-carotene absorption and vitamin A production. *FASEB Journal*, **2010**, 24, 1656-66	0.9	171
105	Regulation and activation of phytoene synthase, a key enzyme in carotenoid biosynthesis, during photomorphogenesis. *Planta*, **2000**, 211, 846-54	4.7	154
104	RBP4 disrupts vitamin A uptake homeostasis in a STRA6-deficient animal model for Matthew-Wood syndrome. *Cell Metabolism*, **2008**, 7, 258-68	24.6	138
103	Light-dependent regulation of carotenoid biosynthesis occurs at the level of phytoene synthase expression and is mediated by phytochrome in Sinapis alba and Arabidopsis thaliana seedlings. *Plant Journal*, **1997**, 12, 625-34	6.9	121
102	Provitamin A conversion to retinal via the beta,beta-carotene-15,15Soxygenase (bcox) is essential for pattern formation and differentiation during zebrafish embryogenesis. *Development (Cambridge)*, **2003**, 130, 2173-86	6.6	117
101	Related enzymes solve evolutionarily recurrent problems in the metabolism of carotenoids. *Trends in Plant Science*, **2005**, 10, 178-86	13.1	116
100	Beta-carotene reduces body adiposity of mice via BCMO1. *PLoS ONE*, **2011**, 6, e20644	3.7	111
99	Two carotenoid oxygenases contribute to mammalian provitamin A metabolism. *Journal of Biological Chemistry*, **2013**, 288, 34081-34096	5.4	110

98	Beta,beta-carotene decreases peroxisome proliferator receptor gamma activity and reduces lipid storage capacity of adipocytes in a beta,beta-carotene oxygenase 1-dependent manner. *Journal of Biological Chemistry*, **2010**, 285, 27891-9	5.4	103
97	Structural basis of carotenoid cleavage: from bacteria to mammals. *Archives of Biochemistry and Biophysics*, **2013**, 539, 203-13	4.1	98
96	Provitamin A metabolism and functions in mammalian biology. *American Journal of Clinical Nutrition* , **2012**, 96, 1234S-44S	7	91
95	BCDO2 acts as a carotenoid scavenger and gatekeeper for the mitochondrial apoptotic pathway. *Development (Cambridge)*, **2012**, 139, 2966-77	6.6	90
94	Requirement for an enzymatic visual cycle in Drosophila. *Current Biology*, **2010**, 20, 93-102	6.3	90
93	The biochemical and structural basis for trans-to-cis isomerization of retinoids in the chemistry of vision. *Trends in Biochemical Sciences*, **2010**, 35, 400-10	10.3	89
92	Towards a better understanding of carotenoid metabolism in animals. *Biochimica Et Biophysica Acta - Molecular Basis of Disease*, **2005**, 1740, 122-31	6.9	84
91	Molecular analysis of vitamin A formation: cloning and characterization of beta-carotene 15,15Sdioxygenases. *Archives of Biochemistry and Biophysics*, **2001**, 385, 47-52	4.1	84
90	Mammalian carotenoid-oxygenases: key players for carotenoid function and homeostasis. *Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids*, **2012**, 1821, 78-87	5	81
89	Genetics and diet regulate vitamin A production via the homeobox transcription factor ISX. *Journal of Biological Chemistry*, **2013**, 288, 9017-27	5.4	81
88	A mutation in the silver gene leads to defects in melanosome biogenesis and alterations in the visual system in the zebrafish mutant fading vision. *Developmental Biology*, **2005**, 284, 421-36	3.1	81
87	Metabolic basis of visual cycle inhibition by retinoid and nonretinoid compounds in the vertebrate retina. *Journal of Biological Chemistry*, **2008**, 283, 9543-54	5.4	78
86	Identification of nonvisual photomotor response cells in the vertebrate hindbrain. *Journal of Neuroscience*, **2013**, 33, 3834-43	6.6	77
85	Structural and functional characterization of the phytoene synthase promoter from Arabidopsis thaliana. *Planta*, **2003**, 216, 523-34	4.7	76
84	Chloroplast import of four carotenoid biosynthetic enzymes in vitro reveals differential fates prior to membrane binding and oligomeric assembly. *FEBS Journal*, **1997**, 247, 942-50		75
83	R91W mutation in Rpe65 leads to milder early-onset retinal dystrophy due to the generation of low levels of 11-cis-retinal. *Human Molecular Genetics*, **2008**, 17, 281-92	5.6	75
82	Genetic ablation of the fatty acid-binding protein FABP5 suppresses HER2-induced mammary tumorigenesis. *Cancer Research*, **2013**, 73, 4770-80	10.1	74
81	NinaB combines carotenoid oxygenase and retinoid isomerase activity in a single polypeptide. *Proceedings of the National Academy of Sciences of the United States of America*, **2008**, 105, 19000-5	11.5	72

80	Evidence for compartmentalization of mammalian carotenoid metabolism. *FASEB Journal*, **2014**, 28, 4457-69	6.9	71
79	STRA6 is critical for cellular vitamin A uptake and homeostasis. *Human Molecular Genetics*, **2014**, 23, 5402-17	5.6	67
78	Lecithin:retinol acyltransferase is critical for cellular uptake of vitamin A from serum retinol-binding protein. *Journal of Biological Chemistry*, **2012**, 287, 24216-27	5.4	67
77	The retinal G protein-coupled receptor (RGR) enhances isomerohydrolase activity independent of light. *Journal of Biological Chemistry*, **2005**, 280, 29874-84	5.4	67
76	A genetic dissection of intestinal fat-soluble vitamin and carotenoid absorption. *Human Molecular Genetics*, **2015**, 24, 3206-19	5.6	65
75	The Drosophila class B scavenger receptor NinaD-I is a cell surface receptor mediating carotenoid transport for visual chromophore synthesis. *Biochemistry*, **2006**, 45, 13429-37	3.2	65
74	Vitamin A formation in animals: molecular identification and functional characterization of carotene cleaving enzymes. *Journal of Nutrition*, **2004**, 134, 251S-6S	4.1	59
73	Subfunctionalization of a retinoid-binding protein provides evidence for two parallel visual cycles in the cone-dominant zebrafish retina. *Journal of Neuroscience*, **2008**, 28, 8208-16	6.6	57
72	RPE65 is essential for the function of cone photoreceptors in NRL-deficient mice. *Investigative Ophthalmology and Visual Science*, **2007**, 48, 534-42		57
71	Metabolism of carotenoids and retinoids related to vision. *Journal of Biological Chemistry*, **2012**, 287, 1627-34	5.4	55
70	beta-Carotene conversion into vitamin A in human retinal pigment epithelial cells. *Investigative Ophthalmology and Visual Science*, **2005**, 46, 3562-9		55
69	beta-Carotene conversion products and their effects on adipose tissue. *Genes and Nutrition*, **2009**, 4, 179-87	4.3	54
68	Characterization of the Role of β-Carotene 9,10-Dioxygenase in Macular Pigment Metabolism. *Journal of Biological Chemistry*, **2015**, 290, 24844-57	5.4	53
67	Hepatic stellate cells are an important cellular site for β-carotene conversion to retinoid. *Archives of Biochemistry and Biophysics*, **2010**, 504, 3-10	4.1	52
66	Temperature-sensitive step in Ti plasmid vir-region induction and correlation with cytokinin secretion by Agrobacteria. *Molecular Genetics and Genomics*, **1988**, 213, 1-8		50
65	Evidence for RPE65-independent vision in the cone-dominated zebrafish retina. *European Journal of Neuroscience*, **2007**, 26, 1940-9	3.5	46
64	In conditions of limited chromophore supply rods entrap 11-cis-retinal leading to loss of cone function and cell death. *Human Molecular Genetics*, **2009**, 18, 1266-75	5.6	44
63	Lycopene attenuated hepatic tumorigenesis via differential mechanisms depending on carotenoid cleavage enzyme in mice. *Cancer Prevention Research*, **2014**, 7, 1219-27	3.2	43

62	Mutations in the Spliceosome Component CWC27 Cause Retinal Degeneration with or without Additional Developmental Anomalies. *American Journal of Human Genetics*, **2017**, 100, 592-604	11	42
61	Utilization of Dioxygen by Carotenoid Cleavage Oxygenases. *Journal of Biological Chemistry*, **2015**, 290, 30212-23	5.4	41
60	Loss of carotene-9,10-monooxygenase expression increases serum and tissue lycopene concentrations in lycopene-fed mice. *Journal of Nutrition*, **2010**, 140, 2134-8	4.1	41
59	Tomato Powder Inhibits Hepatic Steatosis and Inflammation Potentially Through Restoring SIRT1 Activity and Adiponectin Function Independent of Carotenoid Cleavage Enzymes in Mice. *Molecular Nutrition and Food Research*, **2018**, 62, e1700738	5.9	39
58	The Drosophila visual cycle and de novo chromophore synthesis depends on rdhB. *Journal of Neuroscience*, **2012**, 32, 3485-91	6.6	39
57	Lycopene and apo-10-lycopenoic acid have differential mechanisms of protection against hepatic steatosis in β-carotene-9,10-oxygenase knockout male mice. *Journal of Nutrition*, **2015**, 145, 268-76	4.1	35
56	Increased adiposity in the retinol saturase-knockout mouse. *FASEB Journal*, **2010**, 24, 1261-70	0.9	35
55	NinaB is essential for Drosophila vision but induces retinal degeneration in opsin-deficient photoreceptors. *Journal of Biological Chemistry*, **2010**, 285, 2130-9	5.4	34
54	Activation of retinoic acid receptors by dihydroretinoids. *Molecular Pharmacology*, **2009**, 76, 1228-37	4.3	34
53	Retinylamine Benefits Early Diabetic Retinopathy in Mice. *Journal of Biological Chemistry*, **2015**, 290, 21568-79	5.4	33
52	The Biochemical Basis of Vitamin A Production from the Asymmetric Carotenoid β-Cryptoxanthin. *ACS Chemical Biology*, **2018**, 13, 2121-2129	4.9	32
51	Sequestration of retinyl esters is essential for retinoid signaling in the zebrafish embryo. *Journal of Biological Chemistry*, **2007**, 282, 1144-51	5.4	31
50	Dietary 9-cis-β-carotene fails to rescue vision in mouse models of leber congenital amaurosis. *Molecular Pharmacology*, **2011**, 80, 943-52	4.3	28
49	Analysis of carotenoid isomerase activity in a prototypical carotenoid cleavage enzyme, apocarotenoid oxygenase (ACO). *Journal of Biological Chemistry*, **2014**, 289, 12286-99	5.4	27
48	Interaction of the retinoic acid signaling pathway with spicule formation in the marine sponge Suberites domuncula through activation of bone morphogenetic protein-1. *Biochimica Et Biophysica Acta - General Subjects*, **2011**, 1810, 1178-94	4	26
47	Carotenoid metabolism at the intestinal barrier. *Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids*, **2020**, 1865, 158580	5	25
46	Transport of vitamin A across blood-tissue barriers is facilitated by STRA6. *FASEB Journal*, **2016**, 30, 2985-95	3.9	25
45	Lack of β-carotene-9,10-oxygenase 2 leads to hepatic mitochondrial dysfunction and cellular oxidative stress in mice. *Molecular Nutrition and Food Research*, **2017**, 61, 1600576	5.9	24

44	Knockout of the Bcmo1 gene results in an inflammatory response in female lung, which is suppressed by dietary beta-carotene. *Cellular and Molecular Life Sciences*, **2010**, 67, 2039-56	10.3	24
43	Characterization of human carotene-15,15Smonooxygenase (BCMO1) as a soluble monomeric enzyme. *Archives of Biochemistry and Biophysics*, **2013**, 539, 214-22	4.1	23
42	Genetic dissection in a mouse model reveals interactions between carotenoids and lipid metabolism. *Journal of Lipid Research*, **2016**, 57, 1684-95	6.3	22
41	The Biochemical Basis of Vitamin A3 Production in Arthropod Vision. *ACS Chemical Biology*, **2016**, 11, 1049-57	4.9	21
40	Structure and Spectroscopy of Alkene-Cleaving Dioxygenases Containing an Atypically Coordinated Non-Heme Iron Center. *Biochemistry*, **2017**, 56, 2836-2852	3.2	20
39	Transcription factor ISX mediates the cross talk between diet and immunity. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 11530-11535	11.5	19
38	STRA6: role in cellular retinol uptake and efflux. *Hepatobiliary Surgery and Nutrition*, **2015**, 4, 229-42	2.1	16
37	Photoreceptor morphology is severely affected in the beta,beta-carotene-15,15Soxygenase (bcox) zebrafish morphant. *European Journal of Neuroscience*, **2005**, 21, 59-68	3.5	15
36	Structural Insights into the Drosophila melanogaster Retinol Dehydrogenase, a Member of the Short-Chain Dehydrogenase/Reductase Family. *Biochemistry*, **2016**, 55, 6545-6557	3.2	14
35	Carotene during the suckling period is absorbed intact and induces retinoic acid dependent responses similar to preformed vitamin A in intestine and liver, but not adipose tissue of young rats. *Molecular Nutrition and Food Research*, **2014**, 58, 2157-65	5.9	14
34	The human mitochondrial enzyme BCO2 exhibits catalytic activity toward carotenoids and apocarotenoids. *Journal of Biological Chemistry*, **2020**, 295, 15553-15565	5.4	14
33	Protective role of carotenoids in the visual cycle. *FASEB Journal*, **2018**, 32, fj201800467R	0.9	14
32	Downregulation of Fzd6 and Cthrc1 and upregulation of olfactory receptors and protocadherins by dietary beta-carotene in lungs of Bcmo1-/- mice. *Carcinogenesis*, **2010**, 31, 1329-37	4.6	13
31	The role of 11-cis-retinyl esters in vertebrate cone vision. *FASEB Journal*, **2015**, 29, 216-26	0.9	12
30	Astaxanthin-Shifted Gut Microbiota Is Associated with Inflammation and Metabolic Homeostasis in Mice. *Journal of Nutrition*, **2020**, 150, 2687-2698	4.1	12
29	Structural basis for carotenoid cleavage by an archaeal carotenoid dioxygenase. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 19914-19925	11.5	11
28	Molecular components affecting ocular carotenoid and retinoid homeostasis. *Progress in Retinal and Eye Research*, **2021**, 80, 100864	20.5	11
27	Preparation and characterization of metal-substituted carotenoid cleavage oxygenases. *Journal of Biological Inorganic Chemistry*, **2018**, 23, 887-901	3.7	10

26	Genomic and functional gene studies suggest a key role of beta-carotene oxygenase 1 like (bco1l) gene in salmon flesh color. *Scientific Reports*, **2019**, 9, 20061	4.9	9
25	Ti plasmid-encoded octopine and nopaline catabolism in Agrobacterium: specificities of the LysR-type regulators OccR and NocR, and protein-induced DNA bending. *Molecular Genetics and Genomics*, **1995**, 249, 102-10		7
24	The Structural and Biochemical Basis of Apocarotenoid Processing by Carotene Oxygenase-2. *ACS Chemical Biology*, **2021**, 16, 480-490	4.9	7
23	Overlapping Vitamin A Interventions with Provitamin A Carotenoids and Preformed Vitamin A Cause Excessive Liver Retinol Stores in Male Mongolian Gerbils. *Journal of Nutrition*, **2020**, 150, 2912-2923	4.1	6
22	Differential expression of the demosponge (Suberites domuncula) carotenoid oxygenases in response to light: protection mechanism against the self-produced toxic protein (Suberitine). *Marine Drugs*, **2012**, 10, 177-99	6	6
21	LRAT coordinates the negative-feedback regulation of intestinal retinoid biosynthesis from carotene. *Journal of Lipid Research*, **2021**, 62, 100055	6.3	6
20	Evidence for distinct rate-limiting steps in the cleavage of alkenes by carotenoid cleavage dioxygenases. *Journal of Biological Chemistry*, **2019**, 294, 10596-10606	5.4	5
19	Loss of Extracellular Signal-Regulated Kinase 1/2 in the Retinal Pigment Epithelium Leads to RPE65 Decrease and Retinal Degeneration. *Molecular and Cellular Biology*, **2017**, 37,	4.8	5
18	Carotene conversion to vitamin A delays atherosclerosis progression by decreasing hepatic lipid secretion in mice. *Journal of Lipid Research*, **2020**, 61, 1491-1503	6.3	4
17	Characterization of the novel role of NinaB orthologs from Bombyx mori and Tribolium castaneum. *Insect Biochemistry and Molecular Biology*, **2019**, 109, 106-115	4.5	3
16	Genomic consequences of domestication of the Siamese fighting fish.. *Science Advances*, **2022**, 8, eabm4950	11.5	3
15	Aster proteins mediate carotenoid transport in mammalian cells.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2200068119	11.5	3
14	Eat Your Carrots! Carotene and Cholesterol Homeostasis. *Journal of Nutrition*, **2020**, 150, 2003-2005	4.1	1
13	Nmnat1-Rbp7 Is a Conserved Fusion-Protein That Combines NAD+ Catalysis of Nmnat1 with Subcellular Localization of Rbp7. *PLoS ONE*, **2015**, 10, e0143825	3.7	1
12	Expression and Characterization of Mammalian Carotenoid Cleavage Dioxygenases. *Methods in Molecular Biology*, **2020**, 2083, 75-88	1.4	1
11	Genomic consequences of domestication of the Siamese fighting fish		1
10	Paracardial fat remodeling affects systemic metabolism through alcohol dehydrogenase 1. *Journal of Clinical Investigation*, **2021**, 131,	15.9	1
9	Genetic dissection in mice reveals a dynamic crosstalk between the delivery pathways of vitamin A.. *Journal of Lipid Research*, **2022**, 100215	6.3	1

8	Carotenoid modifying enzymes in metazoans. *Methods in Enzymology*, **2022**,	1.7	0
7	Retinoids and the Visual Cycle **2015**, 401-419		
6	Carotenoid monooxygenase II knock-out mice exhibit phenotypical differences and altered lycopene accumulation pattern compared to C57Bl6 mice. *FASEB Journal*, **2008**, 22, 1105.9	0.9	
5	Dietary Tomato Powder Inhibits Hepatic Steatosis, Inflammation and Tumorigenesis in Beta-carotene-15, 15?-oxygenase (BCO1) and Beta-carotene-9, 10?-oxygenase (BCO2) Double Knockout Mice. *FASEB Journal*, **2016**, 30, 34.1	0.9	
4	Genotype and diet alter carotenoid bioaccumulation and the expression of carotenoid cleavage enzymes in CMO-I KO, CMO-II KO, and wild-type mice. *FASEB Journal*, **2010**, 24, 539.7	0.9	
3	STRA6: A gatekeeper of neuronal vitamin A homeostasis. *FASEB Journal*, **2013**, 27, lb83	0.9	
2	Carotenoids **2020**, 531-549		
1	Expression and biochemical analyses of proteins involved in the transport of carotenoids and retinoids. *Methods in Enzymology*, **2022**,	1.7	