Mats Hamberg

List of Publications by Year
in descending order

99	5,206	87843 38	91828 69
papers	citations	h-index	g-index

100	100	100	4171
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Evaluation of the Antimicrobial Activities of Plant Oxylipins Supports Their Involvement in Defense against Pathogens. Plant Physiology, 2005, 139, 1902-1913.	2.3	359
2	On the Metabolism of Prostaglandins E1 and E2 in Man. Journal of Biological Chemistry, 1971, 246, 6713-6721.	1.6	358
3	Steric analysis of hydroperoxides formed by lipoxygenase oxygenation of linoleic acid. Analytical Biochemistry, 1971, 43, 515-526.	1.1	246
4	Diversity of the Enzymatic Activity in the Lipoxygenase Gene Family of Arabidopsis thaliana. Lipids, 2009, 44, 85-95.	0.7	203
5	Ligand-receptor co-evolution shaped the jasmonate pathway in land plants. Nature Chemical Biology, 2018, 14, 480-488.	3.9	194
6	An OPR3-independent pathway uses 4,5-didehydrojasmonate for jasmonate synthesis. Nature Chemical Biology, 2018, 14, 171-178.	3.9	183
7	Decomposition of unsaturated fatty acid hydroperoxides by hemoglobin: Structures of major products of 13L-hydroperoxy-9,11-octadecadienoic acid. Lipids, 1975, 10, 87-92.	0.7	175
8	Prostaglandin Endoperoxides IX. Characterization of Rabbit Aorta Contracting Substance (RCS) from Guinea Pig Lung and Human Platelets. Acta Physiologica Scandinavica, 1975, 94, 222-228.	2.3	172
9	Emerging Complexity in Reactive Oxygen Species Production and Signaling during the Response of Plants to Pathogens. Plant Physiology, 2010, 154, 444-448.	2.3	155
10	Î±-Oxidation of Fatty Acids in Higher Plants. Journal of Biological Chemistry, 1999, 274, 24503-24513.	1.6	134
11	Predator lipids induce paralytic shellfish toxins in bloom-forming algae. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6395-6400.	3.3	125
12	Allene oxide cyclase: A new enzyme in plant lipid metabolism. Archives of Biochemistry and Biophysics, 1990, 276, 518-526.	1.4	120
13	A new reaction of unsaturated fatty acid hydroperoxides: Formation of 11-hydroxy-12,13-epoxy-9-octadecenoic acid from 13-hydroperoxy-9,11-octadecadienoic acid. Lipids, 1973, 8, 737-744.	0.7	119
14	Enzymatic, but not nonâ€enzymatic, ¹O₂â€mediated peroxidation of polyunsaturated fatty acids forms part of the EXECUTER1â€dependent stress response program in the flu mutant of Arabidopsis thaliana. Plant Journal, 2008, 54, 236-248.	2.8	115
15	An epoxy alcohol synthase pathway in higher plants: Biosynthesis of antifungal trihydroxy oxylipins in leaves of potato. Lipids, 1999, 34, 1131-1142.	0.7	105
16	Activation of the Fatty Acid Î±-Dioxygenase Pathway during Bacterial Infection of Tobacco Leaves. Journal of Biological Chemistry, 2003, 278, 51796-51805.	1.6	98
17	Prostaglandins in Human Burn Blister Fluid. Acta Physiologica Scandinavica, 1973, 87, 270-276.	2.3	94
18	Hydroperoxide-dependent epoxidation of unsaturated fatty acids in the broad bean (Vicia faba L.). Archives of Biochemistry and Biophysics, 1990, 283, 409-416.	1.4	88

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19	Antagonistic role of 9â€lipoxygenaseâ€derived oxylipins and ethylene in the control of oxidative stress, lipid peroxidation and plant defence. Plant Journal, 2011, 67, 447-458.	2.8	84
20	Î±-Dioxygenases. Biochemical and Biophysical Research Communications, 2005, 338, 169-174.	1.0	76
21	Rational design of a ligand-based antagonist of jasmonate perception. Nature Chemical Biology, 2014, 10, 671-676.	3.9	74
22	Analysis of Oil Composition in Cultivars and Wild Species of Oat (Avena sp.). Journal of Agricultural and Food Chemistry, 2008, 56, 7983-7991.	2.4	69
23	The â€œheterolytic hydroperoxide lyaseâ€•is an isomerase producing a short-lived fatty acid hemiacetal. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2004, 1636, 47-58.	1.2	63
24	New cyclopentenone fatty acids formed from linoleic and linolenic acids in potato. Lipids, 2000, 35, 353-363.	0.7	61
25	On the specificity of allene oxide cyclase. Lipids, 1999, 34, 1005-1015.	0.7	57
26	On the mechanism of biosynthesis of leukotrienes and related compounds. FEBS Letters, 1982, 150, 511-513.	1.3	55
27	9-Lipoxygenase-derived oxylipins activate brassinosteroid signaling to promote cell wall-based defense and limit pathogen infection. Plant Physiology, 2015, 169, pp.00992.2015.	2.3	53
28	Regio- and stereochemical analysis of trihydroxyoctadecenoic acids derived from linoleic acid 9- and 13-hydroperoxides. Lipids, 1991, 26, 407-415.	0.7	51
29	Fatty acid allene oxides. III. Albumin-induced cyclization of 12,13(S)-epoxy-9(Z),11-octadecadienoic acid. Lipids, 1988, 23, 469-475.	0.7	50
30	A pathway for biosynthesis of divinyl ether fatty acids in green leaves. Lipids, 1998, 33, 1061-1071.	0.7	48
31	Stereochemistry of Oxygenation of Linoleic Acid Catalyzed by Prostaglandinâ€“Endoperoxide H Synthase-2. Archives of Biochemistry and Biophysics, 1998, 349, 376-380.	1.4	48
32	Structural and functional basis of phospholipid oxygenase activity of bacterial lipoxygenase from Pseudomonas aeruginosa. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 1681-1692.	1.2	46
33	Absolute configuration of 12-Oxo-10,15(Z)-phytodienoic acid. Lipids, 1988, 23, 521-524.	0.7	43
34	Screening of oxylipins for control of oilseed rape (Brassica napus) fungal pathogens. Phytochemistry, 2003, 63, 89-95.	1.4	42
35	Biochemical Characterization of the Oxygenation of Unsaturated Fatty Acids by the Dioxygenase and Hydroperoxide Isomerase of Pseudomonas aeruginosa 42A2. Journal of Biological Chemistry, 2010, 285, 9339-9345.	1.6	42
36	Oxylipins in moss development and defense. Frontiers in Plant Science, 2015, 6, 483.	1.7	42

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37	Arabidopsis nonresponding to oxylipins locus NOXY7 encodes a yeast GCN1 homolog that mediates noncanonical translation regulation and stress adaptation. Plant, Cell and Environment, 2018, 41, 1438-1452.	2.8	40
38	On the Mechanism of Biosynthesis of Divinyl Ether Oxylipins by Enzyme from Garlic Bulbs. FEBS Journal, 1997, 245, 137-142.	0.2	39
39	Fatty acid Î±-dioxygenases. Prostaglandins and Other Lipid Mediators, 2002, 68-69, 363-374.	1.0	38
40	Mutation of a Critical Arginine in Microsomal Prostaglandin E Synthase-1 Shifts the Isomerase Activity to a Reductase Activity That Converts Prostaglandin H2 into Prostaglandin F2Î±*. Journal of Biological Chemistry, 2009, 284, 301-305.	1.6	36
41	Vanadium-catalyzed transformation of 13(S)-hydroperoxy-9(Z), 11(E)-octadecadienoic acid: Structural studies on epoxy alcohols and trihydroxy acids. Chemistry and Physics of Lipids, 1987, 43, 55-67.	1.5	34
42	Fatty acid allene oxides. JAOCS, Journal of the American Oil Chemists' Society, 1989, 66, 1445-1449.	0.8	34
43	Isolation and structure of a new galactolipid from oat seeds. Lipids, 1998, 33, 355-363.	0.7	34
44	Protein Profiles of Lipid Droplets during the Hypersensitive Defense Response of Arabidopsis against Pseudomonas Infection. Plant and Cell Physiology, 2020, 61, 1144-1157.	1.5	32
45	Biosynthesis of prostaglandin E1 by human seminal vesicles. Lipids, 1976, 11, 249-250.	0.7	29
46	Fatty acid hydroperoxide isomerase inSaprolegnia parasitica: Structural studies of epoxy alcohols formed from isomeric hydroperoxyoctadecadienoates. Lipids, 1989, 24, 249-255.	0.7	28
47	A dynamic Aspâ€“Arg interaction is essential for catalysis in microsomal prostaglandin E ₂ synthase. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 972-977.	3.3	27
48	15(R)-hydroxylinoleic acid, an oxylipin from oat seeds. Phytochemistry, 1996, 42, 729-732.	1.4	26
49	Biosynthesis of new divinyl ether oxylipins in Ranunculus plants. Lipids, 2002, 37, 427-433.	0.7	26
50	The crystal structure of Pseudomonas aeruginosa lipoxygenase Ala420Gly mutant explains the improved oxygen affinity and the altered reaction specificity. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2017, 1862, 463-473.	1.2	26
51	Trihydroxyoctadecenoic acids in beer: qualitative and quantitative analysis. Journal of Agricultural and Food Chemistry, 1991, 39, 1568-1572.	2.4	25
52	Divinyl ether synthase from garlic (Allium sativum L.) bulbs: sub-cellular localization and substrate regio- and stereospecificity. FEBS Letters, 1996, 388, 112-114.	1.3	25
53	An allene oxide and 12-oxophytodienoic acid are key intermediates in jasmonic acid biosynthesis by Fusarium oxysporum. Journal of Lipid Research, 2017, 58, 1670-1680.	2.0	25
54	Manganese lipoxygenase of F. oxysporum and the structural basis for biosynthesis of distinct 11-hydroperoxy stereoisomers. Journal of Lipid Research, 2015, 56, 1606-1615.	2.0	24

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55	The lipoxygenase pathway in tulip (Tulipa gesneriana): detection of the ketol route. Biochemical Journal, 2000, 352, 501-509.	1.7	24
56	Specificity of two lipoxygenases from rice: Unusual regiospecificity of a lipoxygenase isoenzyme. Lipids, 1996, 31, 803-809.	0.7	23
57	Separation of conjugated trienoic fatty acid isomers by capillary electrophoresis. Journal of Chromatography A, 2003, 985, 471-478.	1.8	23
58	Characterization of anacardic acids by micellar electrokinetic chromatography and mass spectrometry. Journal of Chromatography A, 2006, 1115, 253-259.	1.8	22
59	Isolation and structures of two divinyl ether fatty acids from Clematis vitalba. Lipids, 2004, 39, 565-569.	0.7	21
60	Catalytic Convergence of Manganese and Iron Lipoxygenases by Replacement of a Single Amino Acid. Journal of Biological Chemistry, 2012, 287, 31757-31765.	1.6	21
61	The Physcomitrella patens unique alpha-dioxygenase participates in both developmental processes and defense responses. BMC Plant Biology, 2015, 15, 45.	1.6	21
62	Monohydroxyeicosatetraenoic acid and leukotriene production by the inflammatory cells ofXenopus laevis. The Journal of Experimental Zoology, 1987, 243, 211-215.	1.4	20
63	Formation of cyclopentenones from all-(E) hydroperoxides of linoleic acid via allene oxides. New insight into the mechanism of cyclization. FEBS Letters, 2000, 466, 63-66.	1.3	20
64	The activity of HYDROPEROXIDE LYASE 1 regulates accumulation of galactolipids containing 12-oxo-phytodienoic acid in Arabidopsis. Journal of Experimental Botany, 2016, 67, 5133-5144.	2.4	20
65	Oxidation of octadecatrienoic acids in the red alga Lithothamnion corallioides: structural and stereochemical studies of conjugated tetraene fatty acids and bis allylic hydroxy acids. Journal of the Chemical Society Perkin Transactions 1, 1993, , 3065.	0.9	19
66	Hidden stereospecificity in the biosynthesis of divinyl ether fatty acids. FEBS Journal, 2005, 272, 736-743.	2.2	19
67	A lipoxygenase-divinyl ether synthase pathway in flax (Linum usitatissimum L.) leaves. Phytochemistry, 2008, 69, 2008-2015.	1.4	19
68	Efficient and Specific Conversion of 9â€Lipoxygenase Hydroperoxides in the Beetroot. Formation of Pinellic Acid. Lipids, 2011, 46, 873-878.	0.7	17
69	A method for determination of the absolute stereochemistry of Î±,Î²-epoxy alcohols derived from fatty acid hydroperoxides. Lipids, 1992, 27, 1042-1046.	0.7	16
70	Formation of a Novel Enzymatic Metabolite of Leukotriene A4 in Tissues of Xenopus laevis. FEBS Journal, 1996, 238, 599-605.	0.2	16
71	Highly efficient separation of isomeric epoxy fatty acids by micellar electrokinetic chromatography. Electrophoresis, 1999, 20, 132-137.	1.3	16
72	Identification of CYP443D1 (CYP74 clan) of Nematostella vectensis as a first cnidarian epoxyalcohol synthase and insights into its catalytic mechanism. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2017, 1862, 1099-1109.	1.2	16

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73	Biosynthesis of Jasmonates from Linoleic Acid by the Fungus Fusarium oxysporum. Evidence for a Novel Allene Oxide Cyclase. Lipids, 2019, 54, 543-556.	0.7	16
74	Separation of conjugated linoleic acid isomers and parinaric fatty acid isomers by capillary electrophoresis. Journal of Separation Science, 2002, 25, 499-506.	1.3	15
75	Stereochemistry of Hydrogen Removal During Oxygenation of Linoleic Acid by Singlet Oxygen and Synthesis of 11(S)â€Deuteriumâ€Labeled Linoleic Acid. Lipids, 2011, 46, 201-206.	0.7	15
76	Transformation of fatty acid hydroperoxides by alkali and characterization of products. Lipids, 1993, 28, 487-495.	0.7	14
77	Thermal conversions of trimethylsilyl peroxides of linoleic and linolenic acids. Chemistry and Physics of Lipids, 2005, 138, 93-101.	1.5	14
78	Synthesis of 3-oxalinolenic acid and Î²-oxidation-resistant 3-oxa-oxylipins. Lipids, 2006, 41, 499-506.	0.7	14
79	Diversity of Î”12 Fatty Acid Desaturases in Santalaceae and Their Role in Production of Seed Oil Acetylenic Fatty Acids. Journal of Biological Chemistry, 2013, 288, 32405-32413.	1.6	14
80	Mechanism of linoleic acid hydroperoxide reaction with alkali. Lipids, 1996, 31, 1023-1028.	0.7	13
81	Applications of Stereospecificallyâ€Labeled Fatty Acids in Oxygenase and Desaturase Biochemistry. Lipids, 2012, 47, 101-116.	0.7	13
82	Plant hydroperoxide-cleaving enzymes (CYP74 family) function as hemiacetal synthases: Structural proof of hemiacetals by NMR spectroscopy. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2018, 1863, 1316-1322.	1.2	13
83	Novel insights into cyclooxygenases, linoleate diol synthases, and lipoxygenases from deuterium kinetic isotope effects and oxidation of substrate analogs. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2012, 1821, 1508-1517.	1.2	12
84	Separation of divinyl ether fatty acid isomers by micellar electrokinetic chromatography. Electrophoresis, 2001, 22, 1163-1169.	1.3	11
85	Stereospecific biosynthesis of (9S,13S)-10-oxo-phytoenoic acid in young maize roots. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2015, 1851, 1262-1270.	1.2	11
86	Screen Identifying Arabidopsis Transcription Factors Involved in the Response to 9-Lipoxygenase-Derived Oxylipins. PLoS ONE, 2016, 11, e0153216.	1.1	10
87	Kinetic investigation of human 5-lipoxygenase with arachidonic acid. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 3547-3551.	1.0	10
88	Eosinophils synthesize trihydroxyoctadecenoic acids (TriHOMEs) via a 15-lipoxygenase dependent process. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2020, 1865, 158611.	1.2	10
89	Replacement of two amino acids of 9 R -dioxygenase-allene oxide synthase of Aspergillus niger inverts the chirality of the hydroperoxide and the allene oxide. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2016, 1861, 108-118.	1.2	9
90	14,15-Dihydroxy-5,8,10,12-eicosatetraenoic. Enzymatic formation from 14,15-leukotriene A4. FEBS Journal, 1988, 173, 531-536.	0.2	8

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91	A gas-liquid chromatographic method for steric analysis of 2-hydroxy, 3-hydroxy, and 2,3-dihydroxy acids. Chemistry and Physics of Lipids, 1994, 74, 151-161.	1.5	8
92	Prominent release of lipoxygenase generated mediators in a murine house dust mite-induced asthma model. Prostaglandins and Other Lipid Mediators, 2018, 137, 20-29.	1.0	7
93	Selective inhibition of prostaglandin D₂ biosynthesis in human mast cells to overcome need for multiple receptor antagonists: Biochemical consequences. Clinical and Experimental Allergy, 2021, 51, 594-603.	1.4	7
94	Evidence for the mitochondrial biosynthesis of 3R-hydroxy-5Z,8Z,11Z,14Z-eicosatetraenoic acid in the yeast Dipodascopsis uninucleata. Lipids, 2000, 35, 1205-1214.	0.7	5
95	Charge migration fragmentation in the negative ion mode of cyclopentenone and cyclopentanone intermediates in the biosynthesis of jasmonates. Rapid Communications in Mass Spectrometry, 2020, 34, e8665.	0.7	3
96	COX-1 dependent biosynthesis of 15-hydroxyeicosatetraenoic acid in human mast cells. Biochimica Et Biophysica Acta - Molecular and Cell Biology of Lipids, 2021, 1866, 158886.	1.2	2
97	Avenoleic Acid: A New Oxylipin from Oat Seeds. Advances in Experimental Medicine and Biology, 1997, 433, 69-72.	0.8	2
98	On the pH-dependent degradation of 15(S)-15-methyl-prostaglandin F2Î± (Carboprost). European Journal of Pharmaceutical Sciences, 1995, 3, 27-38.	1.9	1
99	A Facile and Efficient Method for the Synthesis of Labeled and Unlabeled Very Long Chain Polyunsaturated Fatty Acids. JAOCS, Journal of the American Oil Chemists' Society, 2021, 98, 489-494.	0.8	1