Mats Hamberg

List of Publications by Year
in descending order

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99 papers	5,206 citations	100601 38 h-index	104191 69 g-index
100 all docs	100 docs citations	100 times ranked	4605 citing authors

#	Article	IF	Citations
1	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
2	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
3	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
4	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
5	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
6	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
7	Biosynthesis of Jasmonates from Linoleic Acid by the Fungus <i>Fusarium oxysporum</i>. Evidence for a Novel Allene Oxide Cyclase. Lipids, 2019, 54, 543-556.	0.7	16
8	Arabidopsis <i>nonresponding to oxylipins</i> locus <i>NOXY7</i> encodes a yeast GCN1 homolog that mediates noncanonical translation regulation and stress adaptation. Plant, Cell and Environment, 2018, 41, 1438-1452.	2.8	40
9	Ligand-receptor co-evolution shaped the jasmonate pathway in land plants. Nature Chemical Biology, 2018, 14, 480-488.	3.9	194
10	An OPR3-independent pathway uses 4,5-didehydrojasmonate for jasmonate synthesis. Nature Chemical Biology, 2018, 14, 171-178.	3.9	183
11	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
12	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
13	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
14	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
15	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
16	Screen Identifying Arabidopsis Transcription Factors Involved in the Response to 9-Lipoxygenase-Derived Oxylipins. PLoS ONE, 2016, 11, e0153216.	1.1	10
17	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
18	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

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19	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
20	Kinetic investigation of human 5-lipoxygenase with arachidonic acid. Bioorganic and Medicinal Chemistry Letters, 2016, 26, 3547-3551.	1.0	10
21	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
22	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
23	Oxylipins in moss development and defense. Frontiers in Plant Science, 2015, 6, 483.	1.7	42
24	The Physcomitrella patens unique alpha-dioxygenase participates in both developmental processes and defense responses. BMC Plant Biology, 2015, 15, 45.	1.6	21
25	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
26	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
27	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
28	Rational design of a ligand-based antagonist of jasmonate perception. Nature Chemical Biology, 2014, 10, 671-676.	3.9	74
29	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
30	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
31	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
32	Applications of Stereospecificallyâ€Labeled Fatty Acids in Oxygenase and Desaturase Biochemistry. Lipids, 2012, 47, 101-116.	0.7	13
33	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
34	Stereochemistry of Hydrogen Removal During Oxygenation of Linoleic Acid by Singlet Oxygen and Synthesis of 11(<i>S</i>)â€Deuteriumâ€Labeled Linoleic Acid. Lipids, 2011, 46, 201-206.	0.7	15
35	Efficient and Specific Conversion of 9â€Lipoxygenase Hydroperoxides in the Beetroot. Formation of Pinellic Acid. Lipids, 2011, 46, 873-878.	0.7	17
36	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

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37	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
38	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
39	Diversity of the Enzymatic Activity in the Lipoxygenase Gene Family of <i>Arabidopsis thaliana</i>. Lipids, 2009, 44, 85-95.	0.7	203
40	A lipoxygenase-divinyl ether synthase pathway in flax (Linum usitatissimum L.) leaves. Phytochemistry, 2008, 69, 2008-2015.	1.4	19
41	Enzymatic, but not nonâ€enzymatic, ¹O₂â€mediated peroxidation of polyunsaturated fatty acids forms part of the EXECUTER1â€dependent stress response program in the <i>flu</i> mutant of <i>Arabidopsis thaliana</i>. Plant Journal, 2008, 54, 236-248.	2.8	115
42	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
43	Characterization of anacardic acids by micellar electrokinetic chromatography and mass spectrometry. Journal of Chromatography A, 2006, 1115, 253-259.	1.8	22
44	Synthesis of 3-oxalinolenic acid and Î²-oxidation-resistant 3-oxa-oxylipins. Lipids, 2006, 41, 499-506.	0.7	14
45	Thermal conversions of trimethylsilyl peroxides of linoleic and linolenic acids. Chemistry and Physics of Lipids, 2005, 138, 93-101.	1.5	14
46	Hidden stereospecificity in the biosynthesis of divinyl ether fatty acids. FEBS Journal, 2005, 272, 736-743.	2.2	19
47	Evaluation of the Antimicrobial Activities of Plant Oxylipins Supports Their Involvement in Defense against Pathogens. Plant Physiology, 2005, 139, 1902-1913.	2.3	359
48	Î±-Dioxygenases. Biochemical and Biophysical Research Communications, 2005, 338, 169-174.	1.0	76
49	Isolation and structures of two divinyl ether fatty acids from Clematis vitalba. Lipids, 2004, 39, 565-569.	0.7	21
50	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
51	Separation of conjugated trienoic fatty acid isomers by capillary electrophoresis. Journal of Chromatography A, 2003, 985, 471-478.	1.8	23
52	Screening of oxylipins for control of oilseed rape (Brassica napus) fungal pathogens. Phytochemistry, 2003, 63, 89-95.	1.4	42
53	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
54	Fatty acid Î±-dioxygenases. Prostaglandins and Other Lipid Mediators, 2002, 68-69, 363-374.	1.0	38

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55	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
56	Biosynthesis of new divinyl ether oxylipins in Ranunculus plants. Lipids, 2002, 37, 427-433.	0.7	26
57	Separation of divinyl ether fatty acid isomers by micellar electrokinetic chromatography. Electrophoresis, 2001, 22, 1163-1169.	1.3	11
58	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
59	New cyclopentenone fatty acids formed from linoleic and linolenic acids in potato. Lipids, 2000, 35, 353-363.	0.7	61
60	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
61	The lipoxygenase pathway in tulip (Tulipa gesneriana): detection of the ketol route. Biochemical Journal, 2000, 352, 501-509.	1.7	24
62	Î±-Oxidation of Fatty Acids in Higher Plants. Journal of Biological Chemistry, 1999, 274, 24503-24513.	1.6	134
63	On the specificity of allene oxide cyclase. Lipids, 1999, 34, 1005-1015.	0.7	57
64	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
65	Highly efficient separation of isomeric epoxy fatty acids by micellar electrokinetic chromatography. Electrophoresis, 1999, 20, 132-137.	1.3	16
66	Isolation and structure of a new galactolipid from oat seeds. Lipids, 1998, 33, 355-363.	0.7	34
67	A pathway for biosynthesis of divinyl ether fatty acids in green leaves. Lipids, 1998, 33, 1061-1071.	0.7	48
68	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
69	On the Mechanism of Biosynthesis of Divinyl Ether Oxylipins by Enzyme from Garlic Bulbs. FEBS Journal, 1997, 245, 137-142.	0.2	39
70	Avenoleic Acid: A New Oxylipin from Oat Seeds. Advances in Experimental Medicine and Biology, 1997, 433, 69-72.	0.8	2
71	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
72	Mechanism of linoleic acid hydroperoxide reaction with alkali. Lipids, 1996, 31, 1023-1028.	0.7	13

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73	Specificity of two lipoxygenases from rice: Unusual regiospecificity of a lipoxygenase isoenzyme. Lipids, 1996, 31, 803-809.	0.7	23
74	Formation of a Novel Enzymatic Metabolite of Leukotriene A4 in Tissues of Xenopus laevis. FEBS Journal, 1996, 238, 599-605.	0.2	16
75	15(R)-hydroxylinoleic acid, an oxylipin from oat seeds. Phytochemistry, 1996, 42, 729-732.	1.4	26
76	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
77	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
78	Transformation of fatty acid hydroperoxides by alkali and characterization of products. Lipids, 1993, 28, 487-495.	0.7	14
79	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
80	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
81	Trihydroxyoctadecenoic acids in beer: qualitative and quantitative analysis. Journal of Agricultural and Food Chemistry, 1991, 39, 1568-1572.	2.4	25
82	Regio- and stereochemical analysis of trihydroxyoctadecenoic acids derived from linoleic acid 9- and 13-hydroperoxides. Lipids, 1991, 26, 407-415.	0.7	51
83	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
84	Allene oxide cyclase: A new enzyme in plant lipid metabolism. Archives of Biochemistry and Biophysics, 1990, 276, 518-526.	1.4	120
85	Fatty acid hydroperoxide isomerase inSaprolegnia parasitica: Structural studies of epoxy alcohols formed from isomeric hydroperoxyoctadecadienoates. Lipids, 1989, 24, 249-255.	0.7	28
86	Fatty acid allene oxides. JAOCS, Journal of the American Oil Chemists' Society, 1989, 66, 1445-1449.	0.8	34
87	14,15-Dihydroxy-5,8,10,12-eicosatetraenoic. Enzymatic formation from 14,15-leukotriene A4. FEBS Journal, 1988, 173, 531-536.	0.2	8
88	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
89	Absolute configuration of 12-Oxo-10,15(Z)-phytodienoic acid. Lipids, 1988, 23, 521-524.	0.7	43
90	Monohydroxyeicosatetraenoic acid and leukotriene production by the inflammatory cells ofXenopus laevis. The Journal of Experimental Zoology, 1987, 243, 211-215.	1.4	20

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91	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
92	On the mechanism of biosynthesis of leukotrienes and related compounds. FEBS Letters, 1982, 150, 511-513.	1.3	55
93	Biosynthesis of prostaglandin E1 by human seminal vesicles. Lipids, 1976, 11, 249-250.	0.7	29
94	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
95	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
96	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
97	Prostaglandins in Human Burn Blister Fluid. Acta Physiologica Scandinavica, 1973, 87, 270-276.	2.3	94
98	Steric analysis of hydroperoxides formed by lipoxygenase oxygenation of linoleic acid. Analytical Biochemistry, 1971, 43, 515-526.	1.1	246
99	On the Metabolism of Prostaglandins E1 and E2 in Man. Journal of Biological Chemistry, 1971, 246, 6713-6721.	1.6	358