## Kenji Matsui

## List of Publications by Year in descending order

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1 Green leaf volatiles: hydroperoxide lyase pathway of oxylipin metabolism. Current Opinion in PlantChanging green leaf volatile biosynthesis in plants: An approach for improving plant resistance3 against both herbivores and pathogens. Proceedings of the National Academy of Sciences of thecinerea in Arabidopsis thaliana. Plant and Cell Physiology, 2005, 46, 1093-1102.
Volatile 1-octen-3-ol induces a defensive response in Arabidopsis thaliana. Journal of General Plant

| 7 | Differential Metabolisms of Green Leaf Volatiles in Injured and Intact Parts of a Wounded Leaf Meet Distinct Ecophysiological Requirements. PLoS ONE, 2012, 7, e36433. | 2.5 | 135 |
| :---: | :---: | :---: | :---: |
| 8 | The NADPH:Quinone Oxidoreductase P1-Îף-crystallin in Arabidopsis Catalyzes the $\hat{I}_{ \pm}, \hat{I}^{2}$-Hydrogenation of 2-Alkenals: Detoxication of the Lipid Peroxide-Derived Reactive Aldehydes. Plant and Cell Physiology, 2002, 43, 1445-1455. | 3.1 | 134 |
| 9 | Volatile Clycosylation in Tea Plants: Sequential Clycosylations for the Biosynthesis of Aroma <i> $\hat{1}^{2}$ < ii>-Primeverosides Are Catalyzed by Two <i>Camellia sinensis<\|i> Clycosyltransferases. Plant Physiology, 2015, 168, 464-477. | 4.8 | 133 |

10 Bell pepper fruit fatty acid hydroperoxide lyase is a cytochrome P450 (CYP74B). FEBS Letters, 1996, 394, 21-24.
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| 11 | Direct fungicidal activities of C6-aldehydes are important constituents for defense responses in Arabidopsis against Botrytis cinerea. Phytochemistry, 2008, 69, 2127-2132. | 2.9 | 105 |
| :---: | :---: | :---: | :---: |
| 12 | Fatty acid 9- and 13-hydroperoxide lyases from cucumberl. FEBS Letters, 2000, 481, 183-188. | 2.8 | 104 |
| 13 | Plasma membrane potential depolarization and cytosolic calcium flux are early events involved in tomato (Solanum lycopersicon) plant-to-plant communication. Plant Science, 2012, 196, 93-100. | 3.6 | 104 |

Maintenance of Chloroplast Structure and Function by Overexpression of the Rice
14 <i>MONOGALACTOSYLDIACYLGLYCEROL SYNTHASE</i> Gene Leads to Enhanced Salt Tolerance in
4.8

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Tobacco Â. Plant Physiology, 2014, 165, 1144-1155.
15 Analysis of defensive responses activated by volatile allo-ocimene treatment in Arabidopsis thaliana.
Phytochemistry, 2006, 67, 1520-1529.
$2.9 \quad 76$

Biosynthesis of fatty acid derived aldehydes is induced upon mechanical wounding and its products show fungicidal activities in cucumber. Phytochemistry, 2006, 67, 649-657.

| 19 | Role of the Lipoxygenasellyase Pathway of Host-food Plants in the Host Searching Behavior of Two Parasitoid Species, Cotesia glomerata and Cotesia plutellae. Journal of Chemical Ecology, 2006, 32, 969-979. | 1.8 | 69 |
| :---: | :---: | :---: | :---: |
| 20 | Characterization of melanin and optimal conditions for pigment production by an endophytic fungus, Spissiomyces endophytica SDBR-CMU319. PLoS ONE, 2019, 14, e0222187. | 2.5 | 64 |
| 21 | Arabidopsis lipoxygenase 2 is essential for formation of green leaf volatiles and fiveâ€carbon volatiles. FEBS Letters, 2016, 590, 1017-1027. | 2.8 | 63 |
| 22 | Transcriptional regulators involved in responses to volatile organic compounds in plants. Journal of Biological Chemistry, 2019, 294, 2256-2266. | 3.4 | 56 |
| 23 | Catalytic Properties of Rice $1 \pm \pm$-Oxygenase. Journal of Biological Chemistry, 2002, 277, 22648-22655. | 3.4 | 51 |
| 24 | Biochemical characterization of allene oxide synthases from the liverwort Marchantia polymorpha and green microalgae Klebsormidium flaccidum provides insight into the evolutionary divergence of the plant CYP74 family. Planta, 2015, 242, 1175-1186. | 3.2 | 51 |
| 25 | A portion of plant airborne communication is endorsed by uptake and metabolism of volatile organic compounds. Current Opinion in Plant Biology, 2016, 32, 24-30. | 7.1 | 51 |
| 26 | Fatty Acid Hydroperoxide Lyase in Tomato Fruits: Cloning and Properties of a Recombinant Enzyme Expressed inEscherichia coli. Bioscience, Biotechnology and Biochemistry, 2000, 64, 1189-1196. | 1.3 | 49 |
| 27 | Hydroperoxy-arachidonic acid mediated n-hexanal and (Z)-3- and (E)-2-nonenal formation in Laminaria angustata. Phytochemistry, 2003, 63, 669-678. | 2.9 | 49 |
| 28 | Linoleic Acid 10-Hydroperoxide as an Intermediate during Formation of 1-Octen-3-ol from Linoleic Acid inLentinus decadetes. Bioscience, Biotechnology and Biochemistry, 2003, 67, 2280-2282. | 1.3 | 46 |
| 29 | Rice fatty acid -dioxygenase is induced by pathogen attack and heavy metal stress: activation through jasmonate signaling. Journal of Plant Physiology, 2005, 162, 912-920. | 3.5 | 46 |
| 30 | E-2-hexenal promotes susceptibility to Pseudomonas syringae by activating jasmonic acid pathways in Arabidopsis. Frontiers in Plant Science, 2013, 4, 74. | 3.6 | 45 |
| 31 | Identification of a Hexenal Reductase That Modulates the Composition of Green Leaf Volatiles. Plant Physiology, 2018, 178, 552-564. | 4.8 | 45 |

Role of Volatiles from the Endophytic Fungus Trichoderma asperelloides PSU-P1 in Biocontrol
Potential and in Promoting the Plant Growth of Arabidopsis thaliana. Journal of Fungi (Basel,) Tj ETQq0 00 rgBT /Oæe5lock 1041550217

33 Cucumber Cotyledon Lipoxygenase during Postgerminative Growth. Its Expression and Action on Lipid
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Bodies. Plant Physiology, 1999, 119, 1279-1288.

Intermittent exposure to traces of green leaf volatiles triggers a plant response. Scientific Reports, 2012, 2, 378.

The Biogeneration of Green Odour by Green Leaves and It's Physiological Functions -Past, Present and
Future. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1995, 50, 467-472.
1.4

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41

Effect of Overexpression of Fatty Acid 9-Hydroperoxide Lyase in Tomatoes (Lycopersicon) Tj ETQq1 10.784314 rgBT/2Overloçk 10 Tf

Evaluation of <i>Muscodor suthepensis</i> strain <scp>CMU</scp>â€Cib462 as a postharvest
42 biofumigant for tangerine fruit rot caused by <i>Penicillium digitatum</i>. Journal of the Science of Food and Agriculture, 2016, 96, 339-345.

| 1-Octen-3-ol Is Formed from Its Clycoside during Processing of Soybean [<i> Clycine max</i〉 (L.) Merr.] | 5.2 | 34 |
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44 Changes of Lipoxygenase and Fatty Acid Hydroperoxide Lyase Activities in Bell Pepper Fruits during
Maturation. Bioscience, Biotechnology and Biochemistry, 1997, 61, 199-201.

| 45 | Conversion of volatile alcohols into their glucosides in Arabidopsis. Communicative and Integrative Biology, 2015, 8, e992731. | 1.4 | 29 |
| :---: | :---: | :---: | :---: |
| 46 | Inactivation of tea leaf hydroperoxide lyase by fatty acid hydroperoxide. Journal of Agricultural and Food Chemistry, 1992, 40, 175-178. | 5.2 | 28 |
| 47 | Evaluation of antagonistic activity and mechanisms of endophytic yeasts against pathogenic fungi causing economic crop diseases. Folia Microbiologica, 2020, 65, 573-590. | 2.3 | 28 |
| 48 | Notes: Separation of 13-and 9-Hydroperoxide Lyase Activities in Cotyledons of Cucumber Seedlings. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1989, 44, 883-885. | 1.4 | 27 |
| 49 | Stereochemical Correlation between 10-Hydroperoxyoctadecadienoic Acid and 1-Octen-3-ol inLentinula edodesandTricholoma matsutakeMushrooms. Bioscience, Biotechnology and Biochemistry, 2005, 69, 1539-1544. | 1.3 | 25 |

Arachidonic acid-dependent carbon-eight volatile synthesis from wounded liverwort (Marchantia) Tj ETQq0 00 rgBT/. $\mathrm{Zverlock}_{25} 10$ Tf 50
Evaluation of Muscodor cinnamomi as an egg biofumigant for the reduction of microorganisms on51 eggshell surfaces and its effect on egg quality. International Journal of Food Microbiology, 2017, 244,4.7
52-61.25

$55 \quad$| Biosynthetic pathway of indole-3-acetic acid in ectomycorrhizal fungi collected from northern |
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| Thailand. PLoS ONE, 2020, 15, e0227478. |

56 Green Leaf Volatiles in Plant Signaling and Response. Sub-Cellular Biochemistry, 2016, 86, 427-443.
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57 Silkworms suppress the release of green leaf volatiles by mulberry leaves with an enzyme from their
spinnerets. Scientific Reports, 2018, 8, 11942.

Acrolein is formed from trienoic fatty acids in chloroplast: A targeted metabolomics approach. Plant Biotechnology, 2014, 31, 535-543.

Spatial expression of the Arabidopsis <i> hydroperoxide lyase</i> gene is controlled differently from that of the<i>allene oxide synthase</i>gene. Journal of Plant Interactions, 2015, 10, 1-10.

Expression of Lipoxygenase and Hydroperoxide Lyase Activities in Tomato Fruits. Zeitschrift Fur
Naturforschung-Section C Journal of Biosciences, 1992, 47, 369-374.

On the specificity of lipid hydroperoxide fragmentation by fatty acid hydroperoxide lyase from
Arabidopsis thaliana. Journal of Plant Physiology, 2003, 160, 803-809.

Benzenoid biosynthesis in the flowers of Eriobotrya japonica: molecular cloning and functional
characterization of p-methoxybenzoic acid carboxyl methyltransferase. Planta, 2016, 244, 725-736.
<i>n</i>-Hexanal and (<i>Z<|i>)-3-hexenal are generated from arachidonic acid and linolenic acid by a
63 lipoxygenase in <i>Marchantia polymorpha</i> L.. Bioscience, Biotechnology and Biochemistry, 2017, 81,
1148-1155.

Kinetics of barley FA hydroperoxide lyase are modulated by salts and detergents. Lipids, 2003, 38,
1167-1172.

65 Volatile Oxylipins and Related Compounds Formed Under Stress in Plants. , 2009, 580, 17-28.
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Monogalactosyl diacylglycerol is a substrate for lipoxygenase: its implications for oxylipin formation directly from lipids. Journal of Plant Interactions, 2011, 6, 93-97.

The importance of lipoxygenase control in the production of green leaf volatiles by lipase-dependent and independent pathways. Plant Biotechnology, 2014, 31, 445-452.

Biogeneration of Volatile Compounds via Oxylipins in Edible Seaweeds. ACS Symposium Series, 1996, , 146-166.

Developmental changes of lipoxygenase and fatty acid hydroperoxide lyase activities in cultured cells of Marchantia polymorpha. Phytochemistry, 1996, 41, 177-182.

Characterization of an O-methyltransferase specific to guaiacol-type benzenoids from the flowers of loquat (Eriobotrya japonica). Journal of Bioscience and Bioengineering, 2016, 122, 679-684.
2.2

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CYP74B24 is the 13-hydroperoxide lyase involved in biosynthesis of green leaf volatiles in tea (Camellia) Tj ETQq1 $1_{5.8} \mathrm{O}_{8} 843144_{4} \mathrm{ggBT} / \mathrm{O}$

Bioprocessing of Agricultural Residues as Substrates and Optimal Conditions for Phytase Production of Chestnut Mushroom, Pholiota adiposa, in Solid State Fermentation. Journal of Fungi (Basel,) Tj ETQq0 00 rgBT /3.5serlock 1atf 5057

Characterization of Volatile Compounds in <i>Astraeus</i>spp.. Bioscience, Biotechnology and
Biochemistry, 2009, 73, 2742-2745.

Engineering the biosynthesis of low molecular weight metabolites for quality traits (essential) Tj ETQq0 00 rgBT /Overlock 10 Tf 50702

Characterization of two fungal lipoxygenases expressed in Aspergillus oryzae. Journal of Bioscience and Bioengineering, 2018, 126, 436-444.

Oxylipin Metabolism in Soybean Seeds Containing Different Sets of Lipoxygenase Isozymes after Homogenization. Bioscience, Biotechnology and Biochemistry, 2006, 70, 2598-2603.

Weeding volatiles reduce leaf and seed damage to field-grown soybeans and increase seed isoflavones.
Scientific Reports, 2017, 7, 41508.

Biosynthesis of volatile terpenes that accumulate in the secretory cavities of young leaves of Japanese
78 pepper (\<i\>Zanthoxylum piperitum\</i\>): Isolation and functional characterization of
$1.0 \quad 12$ monoterpene and sesquiterpene synthase genes. Plant Biotechnology, 2017, 34, 17-28.

79 Comparison of the Substrate Specificities of Lipoxygenases Purified from Soybean Seed, Wheat Seed,
47, 85-89.
80 The Homolytic and Heterolytic Fatty Acid Hydroperoxide Lyase-like Activities of Hematin. Biochemical and Biophysical Research Communications, 2001, 286, 28-32.

Dimethyl Sulfide as a Source of the Seaweed-like Aroma in Cooked Soybeans and Correlation with Its
81 Precursor, <i>S</i>-Methylmethionine (Vitamin U). Journal of Agricultural and Food Chemistry, 2014, 62, 8289-8294.

Glutathionylation and reduction of methacrolein in tomato plants account for its absorption from the vapor phase. Plant Physiology, 2015, 169, pp.01045.2015.

> Fungal-Type Terpene Synthases in <i>Marchantia polymorpha</i> Are Involved in Sesquiterpene

Biosynthesis in Oil Body Cells. Plant and Cell Physiology, 2021, 62, 528-537.
Identification of an Allele Attributable to Formation of Cucumber-like Flavor in Wild Tomato Species
84 (Solanum pennellii) That Was Inactivated during Domestication. Journal of Agricultural and Food
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Non-Enzymatic Isomerization of 12-Hydroxy-(3Z)-dodecenal to the (2JE)-Isomer after Enzymatic Cleavage
85 of 13-Hydroperoxylinoleyl Alcohol in Tea Chloroplasts. Zeitschrift Fur Naturforschung - Section C
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Substrate Specificity of Tea Leaf Hydroperoxide Lyase. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1992, 47, 677-679.

Uptake and Conversion of Volatile Compounds in Plantâ \(€\) "Plant Communication. Signaling and Communication in Plants, 2016, , 305-316.
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Green leaf volatile-burst in Arabidopsis is governed by galactolipid oxygenation by a lipoxygenase that
88 is under control of calcium ion. Biochemical and Biophysical Research Communications, 2018, 505, 939-944. glucosyltransferase in petunia flowers. Journal of Plant Physiology, 2020, 252, 153245.
\begin{tabular}{|c|c|c|c|}
\hline 91 & Processing of Airborne Green Leaf Volatiles for Their Glycosylation in the Exposed Plants. Frontiers in Plant Science, 2021, 12, 721572. & 3.6 & 7 \\
\hline 92 & Effects of Anaerobic Processing of Soybean Seeds on the Properties of Tofu. Bioscience, Biotechnology and Biochemistry, 2011, 75, 1174-1176. & 1.3 & 6 \\
\hline 93 & Oxylipin-specific cytochrome P450s (CYP74s) inLotus japonicus: their implications in response to mechanical wounding and nodule formation. Journal of Plant Interactions, 2011, 6, 255-264. & 2.1 & 6 \\
\hline 94 & Intermittent exposure to traces of green leaf volatiles triggers the production of (<i>Z</i>)-3-hexen-1-yl acetate and (<i>Z</i>)-3-hexen-1-ol in exposed plants. Plant Signaling and Behavior, 2013, 8, e27013. & 2.4 & 6 \\
\hline 95 & 5,6-Epoxidation of All-<i>trans<|i>-retinoic Acid with Soybean Lipoxygenase-2 and -3. Bioscience, Biotechnology and Biochemistry, 1994, 58, 140-145. & 1.3 & 5 \\
\hline 96 & Development of a Screening System for the Evaluation of Soybean Volatiles. Bioscience, Biotechnology and Biochemistry, 2009, 73, 1844-1848. & 1.3 & 5 \\
\hline 97 & Preliminary study on bioethanol from fresh water algae, Cladophora glomerata (Sarai Kai) by the fungus, Monascus sp. NP1. Journal of Applied Phycology, 2018, 30, 137-141. & 2.8 & 5 \\
\hline 98 & 11-Hydroperoxide eicosanoid-mediated 2(E),4(E)-decadienal production from arachidonic acid in the brown algae, Saccharina angustata. Journal of Applied Phycology, 2019, 31, 2719-2727. & 2.8 & 5 \\
\hline 99 & Suppressed <i>Methionine \(\hat{3}\)-Lyase</i> Expression Causes Hyperaccumulation of <i>S</i>-Methylmethionine in Soybean Seeds. Plant Physiology, 2020, 183, 943-956. & 4.8 & 5 \\
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Studies on the Substrate Specificity of Soybean Lipoxygenase-1 Using an Entire Series of (Ï\% \(3 \mathrm{Z,Ï} \mathrm{\%} 6 \mathrm{Z}\), \(\mathrm{H} \% 9\) ) Tj ETQq0 \(00 \mathrm{rgBT} / \mathrm{Overlc}\) Biosciences, 1990, 45, 1161-1164.
\begin{tabular}{|c|c|c|c|}
\hline 101 & Effect of Modification of Arginine Residues on the Activity of Soybean Lipoxygenase-1. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1995, 50, 37-44. & 1.4 & 4 \\
\hline 102 & Chemical Structure-Odor Correlation in a Series of Synthetic n-Nonen-1-ols. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1995, 50, 757-765. & 1.4 & 4 \\
\hline 103 & Chemo-Enzymatic Syntheses of Both Enantiomers of Neodictyoprolenol and Neodictyoprolene; Possible Biosynthetic Intermediates of Sex Pheromones in Brown Algae. Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1999, 54, 1027-1032. & 1.4 & 4 \\
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104 Characterization of the promoter sequence of chitinase gene from lima bean plant. Journal of Plant
\(2.1 \quad 4\) Interactions, 2011, 6, 163-164.

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> 105 CytosolicLOXoverexpression inArabidopsisenhances the attractiveness of parasitic wasps in response to herbivory and incidences of parasitism. Journal of Plant Interactions, 2013, 8, 207-215.

Molecular cloning and functional characterization of an O-methyltransferase catalyzing
\(1064 \hat{1} \in^{2}\)-O-methylation of resveratrol in Acorus calamus. Journal of Bioscience and Bioengineering, 2019, 127, 2.24 539-543.

107 Production of raspberry ketone by redirecting the metabolic flux to the phenylpropanoid pathway in tobacco plants. Metabolic Engineering Communications, 2021, 13, e00180.

> Establishment of an efficient screening system to isolate rice mutants deficient in green leaf volatile formation. Journal of Plant Interactions, \(2011,6,185-186\).

110 Aromatic amino acid decarboxylase is involved in volatile phenylacetaldehyde production in loquat (<i>Eriobotrya japonica</i>) flowers. Plant Biotechnology, 2017, 34, 193-198.
Use of Monascus sp. NP1 for bioethanol production from Cladophora glomerata. Journal of Applied Phycology, 2018, 30, 3327-3334.2.8Zeitschrift Fur Naturforschung - Section C Journal of Biosciences, 1996, 51, 841-848.
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Induced defence in lima bean plants exposed to the volatiles from two-spotted spider mite-infested
113 conspecifics is independent of the major protein expression. Journal of Plant Interactions, 2013, 8,
\(2.1 \quad 2\) 219-224.

114 Green Leaf Volatile-Burst in Selaginella moellendorffii. Frontiers in Plant Science, 2021, 12, 731694.

Arabidopsis roots. Biology Letters, 2022, 18, 20210629.
CRISPR/Cas9-mediated disruption of \&|t;i\&gt;ALLENE OXIDE SYNTHASE\&|t;/i\&gt; results in defective
12-oxo-phytodienoic acid accumulation and reduced defense against spider mite (\&lt;i\&gt;Tetranychus) Tj ETQq0 0_0rgBT /Oyerlock 10 39, 191-194.

\section*{117 How Do Plants Emit and Take in Volatile Organic Chemicals?: Simple Diffusion Does not Illustrate the} Mechanisms.. Kagaku To Seibutsu, 2018, 56, 95-103.```

