

代表的な発表論文（アンダーラインはセンター関連教職員）

1. Ishii H, Ishikawa A, Yumoto E, Kurokura T, Asahina M, Shimada Y, Nakamura A (2023) Propiconazole-induced brassinosteroid deficiency reduces female fertility by inhibiting female gametophyte development in woodland strawberry. *Plant Cell Rep* (2023). <https://doi.org/10.1007/s00299-023-02981-3>
2. Inagaki H, Hayashi K, Takaoka Y, Ito H, Fukumoto Y, Yajima-Nakagawa A, Chen X, Shimosato-Nonaka M, Hassett E, Hatakeyama K, Hirakuri Y, Ishitsuka M, Yumoto E, Sakazawa T, Asahina M, Uchida K, Okada K, Yamane H, Ueda M, Miyamoto K (2022) Genome Editing Reveals both the Crucial Role of OsCOI2 in Jasmonate Signaling, and the Functional Diversity of COI1 Homologs in Rice. *Plant and Cell Physiology*, pcac166, <https://doi.org/10.1093/pcp/pcac166>
3. Tanaka H, Hashimoto N, Kawai S, Yumoto E, Shibata K, Tameshige T, Yamamoto Y, Sugimoto K, Asahina M, Ikeuchi M (2022) Auxin-induced WUSCHEL-RELATED HOMEODOMAIN13 Mediates Asymmetric Activity of Callus Formation upon Cutting. *Plant and Cell Physiology*, pcac146, <https://doi.org/10.1093/pcp/pcac146>
3. 朝比奈雅志、松岡啓太、佐藤忍（2022）ANAC 転写因子を介した植物切断組織の再生、植物の生長調節、Vol.57 (1)、p50-56
4. Yanagihara N and Katoh T (2022) Mineralization of poly(tetrafluoroethylene) and other fluoropolymers by molten sodium hydroxide. *Green Chem.* 2022, 24, 6255-6263.
5. Abdelrahman Elamin, Hirofumi Enomoto, Maiko Watanabe, Shohei Sakuda. The mechanism of ochratoxin contamination of licorice root. *Toxins*, 15(3), 219, 2023.
6. Tomohiro Furukawa, Masayo Kushiro, Hiroyuki Nakagawa, Hirofumi Enomoto, Shohei Sakuda. Low-dose ethanol increases aflatoxin production due to the adh1-dependent incorporation of ethanol into aflatoxin biosynthesis. *iScience*, 26(2), 106051, 2023.
7. Hirofumi Enomoto, Nobuhiro Zaima. Desorption electrospray ionization-mass spectrometry imaging of carnitine and imidazole dipeptides in pork chop tissues. *Journal of Chromatography B*, 1216, 123601, 2023.
8. Hirona Kugo, Hirofumi Enomoto, Kenichi Yanagimoto, Hiroki Tanaka, Tatsuya Moriyama, Nobuhiro Zaima. Eicosapentaenoic acid is associated with the attenuation of dysfunctions of mesenchymal stem cells in the abdominal aortic aneurysm wall. *Food & Function*, 13(14), 7540-7547. 2022.

9. 榎元廣文. 食肉科学分野への質量分析イメージングの応用. 食肉の科学, 63 (1), 17-22, 2022.
10. Enomoto Hirofumi. Distribution analysis of jasmonic acid-related compounds in developing *Glycine max* L. (soybean) seeds using mass spectrometry imaging and liquid chromatography-mass spectrometry. *Phytochemical Analysis*, 33(2), 194-203 2022.
11. Samuel Tam, Kenichi Uchida, Hirofumi Enomoto, Senji Takahashi, Koichi Makimura, Shohei Sakuda. A new metabolite, mannogeranylnol, specifically produced at body temperature by *Schizophyllum commune*, a causative fungus of human mycosis. *The Journal of Antibiotics*, 75, 243-246, 2022.
12. Iqbal Md.A, Miyamoto K, Yumoto E, Parveen S, Mutanda I, Inafuku M, Oku H (2022) Plant hormone profile and control over isoprene biosynthesis in a tropical tree *Ficus septica*. *Plant biology*, 24(3):492-501
13. Yumoto E, Yanagihara N, Asahina M (2022) The simple and rapid quantification method for L-3,4-dihydroxyphenylalanine (L-DOPA) from plant sprout using liquid chromatography-mass spectrometry. *Plant Biotechnology*, Article ID 21.1126a
14. Zhang A, Matsuoka K, Kareem A, Robert M, Roszak P, Blob B, Bisht A, De Veylder L, Voiniciuc C, Asahina M, Melnyk CW. (2022) Cell-wall damage activates DOF transcription factors to promote wound healing and tissue regeneration in *Arabidopsis thaliana*. *Curr Biol*. 9;32(9):1883-1894
15. Yamada K, Nakanowatari M, Yumoto E, Satoh S, Asahina M. (2022) Spatiotemporal plant hormone analysis from cryosections using laser microdissection-liquid chromatography-mass spectrometry. *J Plant Res*. 135(2):377-386
16. Hirofumi Enomoto. Unique distribution of ellagitannins in ripe strawberry fruit revealed by mass spectrometry imaging. *Current Research in Food Science*, 4, 821-828, 2021.
17. Hirofumi Enomoto, Koji Miyamoto. Unique localization of jasmonic acid-related compounds in developing *Phaseolus vulgaris* L. (common bean) seeds revealed through desorption electrospray ionization-mass spectrometry imaging. *Phytochemistry* 188 112812 2021.
18. Hirofumi Enomoto, Shiro Takeda. Mass spectrometry imaging of diacyl-, alkylacyl-, and plasmalogen-phosphatidylethanolamines in pork chop tissues. *Journal of Food Measurement and Characterization* 15 5047-4059 2021.
19. Takeda Shiro, Uchiyama Jumpei, Sugita Kazutoshi, Enomoto Hirofumi, Ahhmed Abdulatef M, Kinoshita Yuki, Mizunoya Wataru, Arima Yoshitaka, Sakata Ryoichi.

Functionality of liquid smoke as an antimicrobial in cooked meat products: Liquid smoke suppresses spoilage-related lactic acid bacteria. *Food Science and Technology Research* 27(5) 759-768 2021.

20. Inagaki H, Miyamoto K, Ando N, Murakami K, Sugisawa K, Morita S, Yumoto E, Teruya M, Uchida K, Kato N, Kaji T, Takaoka Y, Hojo Y, Shinya T, Galis I, Nozawa A, Sawasaki T, Nojiri H, Ueda M, Okada K. (2021) Deciphering OPDA Signaling Components in the Momilactone-Producing Moss *Calohypnum plumiforme*. *Front Plant Sci.* 31;12:688565. doi: 10.3389/fpls.2021.688565.
21. Shinya T, Miyamoto K, Uchida K, Hojo Y, Yumoto E, Okada K, Yamane H, Galis I. (2021) Chitooligosaccharide elicitor and oxylipins synergistically elevate phytoalexin production in rice. *Plant Mol Biol.* 25. doi: 10.1007/s11103-021-01217-w.
22. Ohishi N, Hoshika N, Takeda M, Shibata K, Yamane H, Yokota T, Asahina M. Involvement of Auxin Biosynthesis and Transport in the Antheridium and Prothalli Formation in *Lygodium japonicum*. *Plants (Basel)*. 2021 Dec 9;10(12):2709. doi: 10.3390/plants10122709.
23. Tamaki S, Sato R, Koshitsuka Y, Asahina M, Kodama Y, Ishikawa T, Shinomura T. (2021) Suppression of the Lycopene Cyclase Gene Causes Downregulation of Ascorbate Peroxidase Activity and Decreased Glutathione Pool Size, Leading to H₂O₂ Accumulation in *Euglena gracilis*. *Front Plant Sci.* 3;12:786208.
24. Koga J, Yazawa M, Miyamoto K, Yumoto E, Kubota T, Sakazawa, T, Hashimoto S, Sato M and Yamane H. (2021) Sphingadienine-1-phosphate levels are regulated by a novel glycoside hydrolase family glucocerebrosidase widely distributed in seed plants. *J. Biol. Chem.* 297, 101236.
25. Takahashi A, Takeichi Y, Kimura M & Hashimoto K (2021) Low Friction Mechanism Survey of Tungsten Disulfide by Using XRD, XPS, and XAFS' *Tribology Letters* 69 ,Article Number 84, 11pages, <https://doi.org/10.1007/s11249-021-01428-8>
26. Iwase A, Kondo Y, Laohavisit A, Takebayashi A, Ikeuchi M, Matsuoka K, Asahina M, Mitsuda N, Shirasu K, Fukuda H, Sugimoto K. (2021) WIND transcription factors orchestrate wound-induced callus formation, vascular reconnection and defense response in *Arabidopsis*. *New Phytol.* 232(2):734-752.
27. Matsuoka K, Sato R, Matsukura Y, Kawajiri Y, Iino H, Nozawa N, Shibata K, Kondo Y, Satoh S, Asahina M (2021) Wound-inducible ANAC071 and ANAC096 transcription factors promote cambial cell formation in incised *Arabidopsis* flowering stems, *Communications Biology*, <https://doi.org/10.1038/s42003-021-01895-8>

28. Hashimoto K and Jin J (2021) Mechanical Properties of Interface Layers in SiC/TiAl Composite' Material Science Forum Vol.1016 pp 151-155
29. Enomoto H, Takeda S, Hatta H. Spatial analysis of phosphatidylinositol molecular species in pork chop tissues using matrix-assisted laser desorption/ionization-mass spectrometry imaging. Journal of Oleo Science, 70(7), 979-987, 2021.
30. Enomoto H. Adhesive film applications help to prepare strawberry fruit sections for desorption electrospray ionization-mass spectrometry imaging. Bioscience, Biotechnology, and Biochemistry, 2021. (Published online) <https://doi.org/10.1093/bbb/zbab033>
31. Fujishima R, Kugo H, Yanagimoto K, Enomoto H, Moriyama T, Zaima N. Similar distribution of orally administered eicosapentaenoic acid and M2 macrophage marker in the hypoperfusion-induced abdominal aortic aneurysm wall. Food & Function, 2021. (Published online) <https://doi.org/10.1039/D0FO03317K>
32. Yumoto E, Sato M, Kubota T, Enomoto H, Miyamoto K, Yamane H, Koga J (2021) Direct LC–ESI–MS/MS analysis of plant glucosylceramide and ceramide species with 8E and 8Z isomers of the long chain base. Biosci. Biotechnol. Biochem., 31 December 2020 <https://doi.org/10.1093/bbb/zbba032>
33. Notaguchi M, Kurotani K, Sato Y, Tabata R, Kawakatsu Y, Okayasu K, Sawai Y, Okada R, Asahina M, Ichihashi Y, Shirasu K, Suzuki T, Niwa M, Higashiyama T. (2020) Cell-cell adhesion in plant grafting is facilitated by β -1,4-glucanases. Science, 369, 698–702 (2020) DOI: 10.1126/science.abc3710
34. Enomoto H, Kotani M, Ohmura T (2020) Novel Blotting Method for Mass Spectrometry Imaging of Metabolites in Strawberry Fruit by Desorption/Ionization Using Through Hole Alumina Membrane, Foods, 9(4), 408.
35. Enomoto H, Nirasawa T(2020) Localization of Flavan-3-ol Species in Peanut Testa by Mass Spectrometry Imaging. Molecules , 25(10), 2373, 2020.
36. Takeda S, Harauma A, Okamoto M, Enomoto E, Kudo T, Suzuki T, Mizunoya W, Moriguchi T. (2020) Effects of whey protein hydrolysate on growth promotion and immunomodulation in mouse pups in artificial rearing system. Animal Science Journal, 91(1):e13395, 2020.
37. Shinozaki Y, Beauvoit BP, Takahara M, Hao S, Ezura K, Andrieu MH, Nishida K, Mori K, Suzuki Y, Kuhara S, Enomoto H, Kusano M, Fukushima A, Mori T, Kojima M, Kobayashi M, Sakakibara H, Saito K, Ohtani Y, Bénard C, Prodhomme D, Gibon Y, Ezura H, Ariizumi T. Fruit setting rewires central metabolism via gibberellin cascades. Proc Natl Acad Sci U S A. 2020 Sep 22;117(38):23970-23981.

38. 榎元廣文(2020) 農畜産物中の代謝物の分布解析への質量分析イメージングの応用、JMS Mycotoxins, 論文 ID: 70-2-1, 2020.
39. Takeda S, Kaneko S, Sogawa K, Ahhmed AM, Enomoto H, Kawai S, Taira K, Mizunoya W, Minami M, Sakata R (2020) Isolation, Evaluation, and Identification of Angiotensin I-Converting Enzyme Inhibitory Peptides from Game Meat, Foods, 9(9),1168.
40. Enomoto H (2020) Mass Spectrometry Imaging of Flavonols and Ellagic Acid Glycosides in Ripe Strawberry Fruit, Molecules, 25(20), 4600.
41. 榎元廣文 (2020) 質量分析イメージング法を用いたインゲンマメ未熟種子中のアブシシン酸および 12-オキソ-フィトジエン酸の可視化、植物の生長調節, 「特集:質量分析による低分子化合物の可視化」 55(2), pp.77-83.
42. 朝比奈雅志、中野渡幸、山田一貴、湯本絵美、佐藤忍、レーザマイクロダイセクション法を用いた凍結切片からの遺伝子発現解析、Plant Morphology. 2020 32: 39-43
43. Kimura S, Nakajima M, Yumoto E, Miyamoto K, Yamane H, Ong M, Tomita-Yokotani K, Asami T. Cytokinins affect the akinete-germination stage of a terrestrial filamentous cyanobacterium, *Nostoc* sp. HK-01. Plant Growth Regul 92, 273–282 (2020). <https://doi.org/10.1007/s10725-020-00636-x>
44. Enomoto H, Furukawa T, Takeda S, Hatta H, Zaima N. Unique distribution of diacyl-, alkylacyl-, and alkenylacyl-phosphatidylcholine species visualized in pork chop tissues by matrix-assisted laser desorption/ionization–mass spectrometry imaging. Foods, 9(2), 205, 2020.
45. Enomoto H, Takahashi S, Takeda S, Hatta H. Distribution of flavan-3-ol species in ripe strawberry fruit revealed by matrix-assisted laser desorption/ionization-mass spectrometry imaging. Molecules, 25(1), 103, 2019.
46. Enomoto H, Takeda S, Hatta H, Zaima N. Tissue-specific distribution of sphingomyelin species in pork chop revealed by matrix-assisted laser desorption/ionization–imaging mass spectrometry. Journal of Food Science, 84(7), 1758-1763, 2019.
47. Desaki Y, Takahashi S, Sato K, Maeda K, Matsui S, Yoshimi I, Miura T, Jumonji JI, Takeda J, Yashima K, Kohari M, Suenaga T, Terada H, Narisawa T, Shimizu T, Yumoto E, Miyamoto K, Narusaka M, Narusaka Y, Kaku H, Shibuya N. PUB4, aCERK1-Interacting Ubiquitin Ligase, Positively Regulates MAMP-Triggered Immunity in Arabidopsis. Plant Cell Physiol. 2019 Nov 1;60(11):2573-2583. doi:10.1093/pcp/pcz151. PMID: 31368495.
48. Miyamoto K, Matsumoto T, Yumoto E, Sakazawa T, Yokota T, Yamane H, Uchida

- K. Facile preparation of optically active jasmonates and their biological activities in rice. *Biosci Biotechnol Biochem.* 2019 May;83(5):876-881. doi:10.1080/09168451.2019.1569500. Epub 2019 Jan 24. PMID: 30676297.
49. Enomoto H, Sensu T, Yumoto E, Yokota T, Yamane H. Derivatization for detection of abscisic acid and 12-oxo-phytodienoic acid using matrix-assisted laser desorption/ionization imaging mass spectrometry. *Rapid Commun Mass Spectrom.* 2018 Sep 15;32(17):1565-1572. doi: 10.1002/rcm.8200. PMID: 29888502.
 50. Matsuoka K, Yanagi R, Yumoto E, Yokota T, Yamane H, Satoh S, Asahina M. RAP2.6L and jasmonic acid-responsive genes are expressed upon Arabidopsis hypocotyl grafting but are not needed for cell proliferation related to healing. *Plant Mol Biol.* 2018 Apr;96(6):531-542. doi: 10.1007/s11103-018-0702-4. Epub 2018 Jan 17. PMID: 29344830.
 51. Guo L, Qiu J, Ye C, Jin G, Mao L, Zhang H, Yang X, Peng Q, Wang Y, Jia L, Lin Z, Li G, Fu F, Liu C, Chen L, Shen E, Wang W, Chu Q, Wu D, Wu S, Xia C, Zhang Y, Zhou X, Wang L, Wu L, Song W, Wang Y, Shu Q, Aoki D, Yumoto E, Yokota T, Miyamoto K, Okada K, Kim DS, Cai D, Zhang C, Lou Y, Qian Q, Yamaguchi H, Yamane H, Kong CH, Timko MP, Bai L, Fan L. *Echinochloa crus-galli* genome analysis provides insight into its adaptation and invasiveness as a weed. *Nat Commun.* 2017 Oct 18;8(1):1031. doi: 10.1038/s41467-017-01067-5. PMID: 29044108; PMCID:PMC5647321.
 52. Enomoto H, Sato K, Miyamoto K, Ohtsuka A, Yamane H. Distribution analysis of anthocyanins, sugars, and organic acids in strawberry fruits using matrix-assisted laser desorption/ionization-imaging mass spectrometry. *Journal of Agricultural and Food Chemistry*, 66(19), 4958-4965, 2018.
 53. Xu D, Miao J, Yumoto E, Yokota T, Asahina M, Watahiki M. YUCCA9-Mediated Auxin Biosynthesis and Polar Auxin Transport Synergistically Regulate Regeneration of Root Systems Following Root Cutting. *Plant Cell Physiol.* 2017 Oct 1;58(10):1710-1723. doi: 10.1093/pcp/pcx107. PMID: 29016906; PMCID:PMC5921505.
 54. Enomoto H, Sensu T, Sato K, Sato F, Paxton T, Yumoto E, Miyamoto K, Asahina M, Yokota T, Yamane H. Visualisation of abscisic acid and 12-oxo-phytodienoic acid in immature *Phaseolus vulgaris* L. seeds using desorption electrospray ionisation-imaging mass spectrometry. *Sci Rep.* 2017 Feb 17;7:42977. doi:10.1038/srep42977. PMID: 28211480; PMCID: PMC5314351.
 55. Miyamoto K, Enda I, Okada T, Sato Y, Watanabe K, Sakazawa T, Yumoto E, Shibata K, Asahina M, Iino M, Yokota T, Okada K, Yamane H. Jasmonoyl-l-isoleucine is required for the production of a flavonoid phytoalexin but not diterpenoid phytoalexins in ultraviolet-irradiated rice leaves. *Biosci Biotechnol Biochem.* 2016 Oct;80(10):1934-8. doi: 10.1080/09168451.2016.1189319. Epub 2016 May 31. PMID: 27240428.

特許等

1. 作田庄平, 槇村浩一, 内田健一, 高橋宣治, 榎元廣文, 譚承堯. グラニルネロールグリコシドおよびその幾何異性体. 特願 2022-63509
2. 古賀仁一郎, 山根久和, 宮本皓司, 佐藤匡城, 窪田朋義, 湯本絵美, 矢沢誠, 七久保洋貴, グルコシルセラミド含有率が向上した植物変異体, 出願番号 : 特願 2021-078534
3. 柳原尚久, ハロゲン化アルカリ金属の製造法及びハロゲン化合物の製造方法, 国際特許出願番号 : PCT/JP2022/006933 出願日 : 2022 年 2 月 21 日
4. 柳原尚久, 特願 2021-039184, ハロゲン化アルカリ金属の製造方法及びハロゲン化物の製造方法, 2021-03-11。