

Faculty of Applied Biological Sciences
Gifu University

Annual Report of Research Activities 2014

Vol. 11

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I Research Achievement

1) Academic Paper

【Course of Applied Life Science】

- [1] Aboonajmi M, Setarehdan S.K, Akram A, **Nishizu T**, Kondo N.
“Prediction of poultry egg freshness using ultrasound”
International journal of food properties, Vol.17(9), pp.1889-1899, 2014
- [2] Afruza R, Islam LN, Banerjee S, Hassan MM, **Suzuki F**, Nabi AN.
“Renin Gene Polymorphisms in Bangladeshi Hypertensive Population”
J Genomics., Vol.2, pp.45-53, 2014
- [3] **Ando H**.
“Synthetic approach toward complexity of sialic acid-containing glycans.”
Biosci. Biotech. Biochem., pp.1-4, 2014/12/11
- [4] Cabanos C, Kato N, Amari Y, Fujiwara K, Ohno T, Shimizu K, Goto T, **Shimada M**, Kuroda M, Masuda T, Takaiwa F, Utsumi S, **Nagaoka S**, Maruyama N.
“Development of a novel transgenic rice with hypocholesterolemic activity via high-level accumulation of the α' subunit of soybean β -conglycinin.”
Transgenic Res., Vol.23(4), pp.609-620, 2014/08
- [5] Chang C, **Teramoto Y**, Nishio Y.
“High performance films of cellulose butyral derivative having a necklace-like annular structure in the side chains”
Polymer, Vol.55(16), pp.3944-3950, 2014/08/05
- [6] Chang J, Oikawa S, **Iwahashi H**, Kitagawa E, Takeuchi I, Yuda M, Aoki C, Yamada Y, Ichihara G, Kato M, Ichihara S.
“Expression of proteins associated with adipocyte lipolysis was significantly changed in the adipose tissues of the obese spontaneously hypertensive/NDmcr-cp rat.”
Diabetology & Metabolic Syndrome, Vol.6, pp.8, 2014/01/27
- [7] Fahmy K, **Nakano K**.
“Optimal design of modified atmosphere packaging for alleviating chilling injury in cucumber fruit.”
Environmental Control in Biology, Vol.52(4), pp.233-240, 2014/12
- [8] Fahmy K, **Nakano K**.
“The individual and combined influences of low oxygen and high carbon dioxide on chilling-injury alleviation in cucumber fruit.”
Environmental Control in Biology, Vol.52(3), pp.149-153, 2014
- [9] Fujita K, Fukuda M, Fukui H, Horie M, Endoh S, Uchida K, Morimoto Y, Ogami A, Tanaka I, Shichiri M, **Iwahashi H**.
“Intratracheal instillation of single-wall carbon nanotubes in the rat lung induces time-dependent changes in gene expression.”
Nanotoxicology., Vol.9, pp.1-12, 2014/06
- [10] Fukui H, Endoh S, Shichiri M, Ishida N, Hagihara Y, Yoshida Y, **Iwahashi H**, Horie M.
“The induction of lipid peroxidation during the acute oxidative stress response induced by intratracheal instillation of fine crystalline silica particles in rats.”
Toxicology and Industrial Health, pp. pii: 0748233714564415, 2014/12/31
- [11] Gang Ma, Lancui Zhang, Chandra Kurnia Setiawan, Kazuki Yamawaki, Tatsuo Asai, Fumie Nishikawa, **Shigenori Maezawa**, Hiroshi Sato, Nobuhisa Kamemitsu, Masaya Kato.
“Effect of red and blue LED irradiation on ascorbate content and expression of genes related to ascorbate metabolism in postharvest broccoli.”
Postharvest Biology and Technology, Vol.94, pp.97-103, 2014/08

- [12] Hariya N, Mochizuki K, Inoue S, Morioka K, **Shimada M**, Okuda T, Goda T.
 “Insulin Resistance in SHR/NDmc-cp Rats Correlates with Enlarged Perivascular Adipocytes and Endothelial Cell Dysfunction in Skeletal Muscle.”
Journal of Nutritional Science and Vitaminology, Vol.60(1), pp.52-59, 2014
- [13] Hashiwaki H, **Teramoto Y**, Nishio Y.
 “Fabrication of thermoplastic ductile films of chitin butyrate/poly(ϵ -caprolactone) blends and their cytocompatibility”
Carbohydrate Polymers, Vol.114, pp.330-338, 2014
- [14] Horie M, **Iwahashi H**.
 “The impact of the physiochemical properties of manufactured nanoparticles on in vitro and in vivo evaluation of particle toxicity.”
J Phys Chem Biophys, Vol.4(2), pp.139, 2014
- [15] Horie M, Kato H, Endoh S, Fujita K, Komaba LK, Nishio K, Nakamura A, Miyauchi A, Yamamoto K, Kinugasa S, Hagihara Y, Yoshida Y, **Iwahashi H**.
 “Cellular effects of industrial metal nanoparticles and hydrophilic carbon black dispersion.”
J Toxicol Sci., Vol.39(6), pp.897-907, 2014
- [16] Horie M, Nishio K, Kato H, Endoh S, Fujita K, Nakamura A, Hagihara Y, Yoshida Y, **Iwahashi H**.
 “Evaluation of cellular effects of silicon dioxide nanoparticles.”
Toxicol Mech Methods, Vol.24(3), pp.196-203, 2014/03
- [17] Horie M, Nishio K, Kato H, Endoh S, Fujita K, Nakamura A, Kinugasa S, Hagihara Y, Yoshida Y, **Iwahashi H**.
 “Evaluation of cellular influences caused by calcium carbonate nanoparticles.”
Chemico-Biological Interactions, Vol.210, pp.64-76, 2014/03
- [18] **Imamura A**.
 “What Is the Source of Stereoselectivity in Cyclic Silyl-Protected Glycosyl Donor System?”
Trends in Glycoscience and Glycotechnology, Vol.26(151), pp.141-143, 2014
- [19] Inagaki M, Muranishi H, Yamada K, Kakehi K, Uchida K, Suzuki T, **Yabe T**, Nakagomi T, Nakagomi O, Kanamaru Y.
 “Bovine κ -casein inhibits human rotavirus (HRV) infection via direct binding of glycans to HRV.”
J Dairy Sci., Vol.97(5), pp.2653-2661, 2014/05
- [20] Kamiya H, **Yanase E**, Nakatsuka S.
 “Novel Oxidation Products of Cyanidin 3-O-Glucoside with 2,2'-Azobis-(2, 4-dimethyl)valeronitrile and Evaluation of Anthocyanin Content and its Oxidation in Black Rice.”
Food Chem., Vol.155, pp.221-226, 2014/07/15
- [21] Kashima Y, Kanematsu S, Asai S, Kusada M, Watanabe S, Kawashima T, Nakamura T, **Shimada M**, Goto T, **Nagaoka S**.
 “Identification of a novel hypocholesterolemic protein, major royal jelly protein 1, derived from royal jelly.”
PLoS One, Vol.9(8), pp.e105073, 2014/08/21
- [22] Kazal B. Biswas, A.H.M. N. Nabi, **Akio Ebihara**, **Tsutomu Nakagawa**, Arunasiri Iddamalgoda, **Fumiaki Suzuki**.
 “Renin angiotensin system-dependent and -independent functions of (pro)renin receptor and the roles of its blockers.”
Reviews in Agricultural Science, Vol.2, pp.37-47, 2014
- [23] Kitamura Y, **Ueno Y**, Kitade Y.
 “Synthesis of acetylene-substituted probes with benzene-phosphate backbones for RNA labeling.”
Current protocols in nucleic acid chemistry, Vol.57, pp.1-15, 2014/06/24

- [24] Kitazume S, Imamaki R, Kurimoto A, Ogawa K, Kato M, Yamaguchi Y, Tanaka K, **Ishida H**, **Ando H**, **Kiso M**, Hashii N, Kawasaki N, Taniguchi N.
“Interaction of platelet endothelial cell adhesion molecule (PECAM) with α 2,6-sialylated glycan regulates its cell surface residency and anti-apoptotic role.”
J Biol Chem., Vol.289(40), pp.27604-27613, 2014/10/03
- [25] Matsumiya K, Inoue T, Niida J, Katagiri T, **Nishizu T**, Matsumura Y.
“Evaluation of long-term stability of milk beverages by a novel method for rapid determination of aggregation forces between colloidal particles”
Food Hydrocolloids, Vol.34, pp.177-183, 2014/01
- [26] Menjo M, Tamai H, **Ando H**, **Ishida H**, Koketsu M, **Kiso M**.
“Glycosidation Reactions of Benzyl-Type Selenoglycoside Donors.”
Heterocycles, Vol.88(2), pp.1587-1594, 2014/01/01
- [27] Miyazaki N, Murata I, Takemura G, Okada H, Kanamori H, Matsumoto-Miyazaki J, Yoshida G, Izumi K, Kashi H, Niimi K, Nishiwaki A, Miyazaki T, Ohno M, Ohashi H, **Suzuki F**, Minatoguchi S.
“Expression of prorenin receptor in renal biopsies from patients with IgA nephropathy.”
Int J Clin Exp.athol., Vol.7(11), pp.7485-7496, 2014
- [28] Nakamoto K, **Ueno Y**.
“Diazirine-containing RNA photo-crosslinking probes for capturing microRNA targets.”
J Org Chem., Vol.79(6), pp.2463-2472, 2014/03/21
- [29] **Nakano K**.
“Freshness evaluation method for young soybean based on stachyose detection by thin layer chromatography.”
Proc. of the 7th International Symposium on Machinery and Mechatronics for Agricultural and Biosystems Engineering(ISMAB2104), Vol.1, pp.104-109, 2014
- [30] Nishida M, Kozakai T, Nagami K, Kanamaru Y, **Yabe T**.
“Structural alteration of cell surface heparan sulfate through the stimulation of the signalling pathway for heparan sulfate 6-O-sulfotransferase-1 in mouse fibroblast cells.”
Biosci. Biotechnol. Biochem., Vol.78(5), pp.770-779, 2014
- [31] Nishida M, Murata K, Kanamaru Y, **Yabe T**.
“Pectin of *Prunus domestica* L. alters sulfated structure of cell-surface heparan sulfate in differentiated Caco-2 cells through stimulation of heparan sulfate 6-O-endosulfatase-2.”
Biosci. Biotechnol. Biochem., Vol.78(4), pp.635-643, 2014
- [32] Niwa M, Yoshida S, **Takamizawa K**, **Nagaoka S**, **Kawakubo N**, Takahashi Y, Suzuki Y.
“Facilitation of web-based internet PBL: What is an adequate group size?”
IeJSME, Vol.8(2), pp.4-11, 2014
- [33] Nomura K, **Iwahashi H**.
“Pressure regulated fermentation: A revolutionary app.roach that utilizes hydrostatic pressure”
Reviews in Agricultural Science, Vol.2, pp.1-10, 2014
- [34] Sato J, Morioka N, **Teramoto Y**, Nishio Y.
“Chiroptical properties of cholesteric liquid crystals of chitosan phenylcarbamate in ionic liquids”
Polymer Journal, Vol.46(), pp.559-567, 2014/09
- [35] Sridharan U, **Ebihara A**, Kuramitsu S, Yokoyama S, Kumarevel T, Ponnuraj K.
“Crystal structure and in silico studies of dihydrodipicolinate synthase (DHDPS) from *Aquifex aeolicus*.”
Extremophiles., Vol.18(6), pp.973-985, 2014/11
- [36] Suzuki T, Komura N, **Imamura A**, **Ando H**, **Ishida H**, **Kiso M**.
“A facile method for synthesizing selenoglycosides based on selenium-transfer to glycosyl imidate.”
Tetrahedron Letters, Vol.55(11), pp.1920-1923, 2014/03/12

- [37] Suzuki T, Makyio H, **Ando H**, Komura N, Menjo M, Yamada Y, **Imamura A**, **Ishida H**, Wakatsuki S, Kato R, **Kiso M**.
 “Expanded potential of seleno-carbohydrates as a molecular tool for X-ray structural determination of a carbohydrate-protein complex with single/multi-wavelength anomalous dispersion phasing.”
Bioorg Med Chem., Vol.22(7), pp.2090-2101, 2014/04/01
- [38] Suzuki-Nakagawa C, Nishimura M, Noda M, Iwata H, Hattori M, **Ebihara A**, **Suzuki F**, **Nakagawa T**.
 “Intracellular retention of the extracellular domain of the (pro)renin receptor in mammalian cells.”
Biosci Biotechnol Biochem., Vol.78(7), pp.1187-1190, 2014
- [39] Suzuki-Nakagawa C, Nishimura M, Tsukamoto T, Aoyama S, **Ebihara A**, **Suzuki F**, **Nakagawa T**.
 “Participation of the extracellular domain in (pro)renin receptor dimerization.”
Biochem Biophys Res Commun., Vol.444(4), pp.461-466, 2014/02/21
- [40] Takada N, Mori C, Iida M, Takai R, Takayama T, Watanabe Y, **Nakamura K**, **Takamizawa K**.
 “Development of an indirect competitive ELISA for the detection of ABO blood group antigens.”
Leg Med., Vol.16(3), pp.139-145, 2014/05
- [41] Takahama U, **Yamauchi R**, Hirota S.
 “Reactions of (+)-catechin with salivary nitrite and thiocyanate under conditions simulating the gastric lumen: Production of dinitrosocatechin and its thiocyanate conjugate.”
Free Radic Res., Vol.48(8), pp.956-966, 2014/08
- [42] Tanaka Y, **Shimada M**, **Nagaoka S**.
 “L-Cysteine-induced up-regulation of the low-density lipoprotein receptor is mediated via a transforming growth factor- α signalling pathway.”
Biochem Biophys Res Commun., Vol.444(3), pp.401-405, 2014/02/14
- [43] Tatsumi M, Kimura F, Kimura T, **Teramoto Y**, Nishio Y.
 “Anisotropic Polymer Composites Synthesized by Immobilizing Cellulose Nanocrystal Suspensions Specifically Oriented under Magnetic Fields”
Biomacromolecules, Vol.15(12), pp.4579-4589, 2014
- [44] Thammawong M, Oriksa T, Umehara H, Hewajulige I.G, Kaneta T, Nakamura N, Ito Y, **Nakano K**, Shiina T.
 “Modeling of the respiration rate and gene expression oscillation of cabbage in response to mechanical impact stress using a modified Weibull distribution.”
Postharvest Biology and Technology, Vol.96, pp.118-127, 2014
- [45] Veljovic-Jovanovic S, Morina F, **Yamauchi R**, Hirota S, Takahama U.
 “Interactions between (+)-catechin and quercetin during their oxidation by nitrite under the conditions simulated the stomach.”
J Agric Food Chem., Vol.62(21), pp.4951-4959, 2014/05/28
- [46] Yamauchi K, **Mitsunaga T**, Batubara I.
 “Synthesis of quercetin glycosides and their melanogenesis stimulatory activity in B16 melanoma cells.”
Bioorganic & Medicinal Chemistry, Vol.22(3), pp.937-944, 2014/02/01
- [47] Yamauchi K, **Mitsunaga T**, Inagaki M, Suzuki T.
 “Synthesized quercetin derivatives stimulate melanogenesis in B16 melanoma cells by influencing the expression of melanin biosynthesis proteins MITF and p38 MAPK.”
Bioorganic & Medicinal Chemistry, Vol.22(13), pp.3331-3340, 2014/07/01
- [48] **Yamauchi R**, Watanabe S, Martin A.S, **Iwamoto S**.
 “Effect of α -tocopherol on the hemin-catalyzed decomposition of 1-palmitoyl-2-linoleoyl-3-sn-phosphatidylcholine 13-hydroperoxide in micelles and liposomes.”
Chemistry and Physics of Lipids, Vol.184, pp.61-68, 2014/12

【Course of Agricultural and Environmental Science】

- [1] Arief Noor Rachmadiyanto, Komariah, Widyatmani Sih Dewi, **Masateru Senge**, Dwi Priyo Ariyanto.
“Crop water productivity (CWP) with the small farm reservoir (SFR) as a supplemental irrigation for cash crop on rainfed area in Karanganyar Regency, Indonesia”
Global Advanced Research Journal of Agricultural Science, Vol.3(6), pp.158-164, 2014/06
- [2] Elsharkawy M.M, Hassan N, Ali M, Mondal S.N, **Hyakumachi M**.
“Effect of zoysiagrass rhizosphere fungal isolates on disease suppression and growth promotion of rice seedlings.”
Acta Agri Scand, Sect B, Vol.64(2), pp.135-140, 2014
- [3] Elsharkawy M.M, Hassan N, Villajuan-Abgona R, **Hyakumachi M**.
“Mechanism of Biological control of Rhizoctonia damping-off of cucumber by a non-pathogenic isolate of binucleate Rhizoctonia.”
Afric J Biotech, Vol.13(5), pp.640-650, 2014/01
- [4] Hassan N, Elsharkawy MM, **Shimizu M, Hyakumachi M**.
“Control of Root Rot and Wilt Diseases of Roselle under Field Conditions.”
Mycobiology., Vol.42(4), pp.376-384, 2014/12
- [5] Hassan N, **Shimizu M, Hyakumachi M**.
“Occurrence of root rot and vascular wilt diseases in roselle (*Hibiscus sabdariffa* L.) in upper Egypt.”
Mycobiology, Vol.42(1), pp.66-72, 2014/03
- [6] Hieno A, Naznin HA, **Hyakumachi M**, Sakurai T, Tokizawa M, **Koyama H**, Sato N, Nishiyama T, Hasebe M, Zimmer AD, Lang D, Reski R, Rensing SA, Obokata J, **Yamamoto YY**.
“pp.db: plant promoter database version 3.0.”
Nucleic Acids Res., Vol.42, pp.D1188-F1192, 2014/01
- [7] Hossain M.M, Sultana F, Miyazawa M, **Hyakumachi M**.
“The plant growth-promoting fungus *Penicillium* spp. GP15-1 enhances growth and confers protection against damping-off and anthracnose in the cucumber.”
J Oleo Sci., Vol.63(4), pp.391-400, 2014
- [8] **Hyakumachi M**, Mondal S.N, Elsharkawy M.M, Hassan N.
“Carbon loss by sclerotia of *Sclerotium rolfsii* under the influence of soil pH, temperature and matric potential and its effect on sclerotial germination and virulence.”
Appl Soil Ecol, Vol.77, pp.34-41, 2014/05
- [9] Ishiguro Y, Otsubo K, Watarai M, Iwashita T, Tomita M, Suematsu M, **Fukui H**, Suga H, Kageyama K.
“Seedling blight of *Glycyrrhiza uralensis* caused by *Pythium myriotylum*, *P. aphanidermatum* and *P. spinosum* and identifying primary inoculum sources using multiplex PCR detection.”
Journal of General Plant Pathology, Vol.80(3), pp.230-236, 2014/01
- [10] Katahata S, Han Q, Naramoto M, Kakubari Y, **Mukai Y**.
“Seasonal changes in temperature response of photosynthesis and its contribution to annual carbon gain in *Daphniphyllum humile*, an evergreen understory shrub.”
Plant Biology, Vol.16(2), pp.345-353, 2014/03
- [11] Kato S, Matsumoto A, Yoshimura K, Katsuki T, Iwamoto K, Kawahara T, **Mukai Y**, Tsuda Y, Ishio S, Nakamura K, Moriwaki K, Shiroishi T, Gojobori T, Yoshimaru H.
“Origins of Japanese flowering cherry (*Prunus* subgenus *Cerasus*) cultivars revealed using nuclear SSR markers.”
Tree Genetics & Genome, Vol.10(3), pp.477-487, 2014/06
- [12] **Kobayashi Y**, Ohshima Y, Kobayashi Y, Ito H, Iuchi S, Fujita M, Zhao CR, Tanveer T, Ganesan M, Kobayashi M, **Koyama H**.
“STOP2 Activates Transcription of Several Genes for Al- and Low pH-Tolerance that Are Regulated by STOP1 in *Arabidopsis*.”
Mol Plant., Vol.7(2), pp.311-322, 2014/02

- [13] **Komiyama A.**
 “Conservation of mangrove ecosystems through the eyes of a production ecologist.”
Reviews in Agricultural Sciences, Vol.2, pp.11-20, 2014
- [14] Kurihara Y, Makita Y, Kawashima M, Hamasaki H, **Yamamoto YY**, Matsui M.
 “Next-generation sequencing of genomic DNA fragments bound to a transcription factor in vitro reveals its regulatory potential.”
Genes, Vol.5(4), pp.1115-1131, 2014/12
- [15] Laugen AT, Engelhard G, Whitlock R, Arlinghaus R, Dankel D, Dunlop E, Eikeset AM, Enberg K, Jørgensen C, **Matsumura S**, Nusslé S, Urbach D, Baulier L, Boukal D, Ernande B, Johnston F, Mollet F, Pardoe H, Therkildsen N, Uusi-Heikkilä S, Vainikka A, Heino M, Rijnsdorp A, Dieckmann U.
 “Evolutionary impact assessment: accounting for evolutionary consequences of fishing in an ecosystem approach to fisheries management.”
Fish and Fisheries, Vol.15(1), pp.65-96, 2014/03
- [16] Liao Y, Suzuki K, Yu W, Zhuang D, Ogasawara R, Shimazu T, **Fukui H.**
 “Night Break Effect of LED Light with Different Wavelengths on Floral Bud Differentiation of *Chrysanthemum morifolium* Ramat 'Jimba' and Iwa no hakusen”
Environmental Control in Biology, Vol.52(1), pp.45-50, 2014
- [17] Liao Y, Suzuki K, Yu W, Zhuang D, Takai Y, Ogasawara R, Shimazu T, **Fukui H.**
 “Night-break Effect of LED Light with Different Wavelengths on Shoot Elongation of *Chrysanthemum morifolium* Ramat 'Jimba' and 'Iwa no hakusen’”
Environmental Control in Biology, Vol.52(1), pp.51-55, 2014
- [18] Matsuda I, Tuuga A, Hashimoto C, Bernard J, Yamagiwa J, Fritz J, Tsubokawa K, **Yayota M**, Murai T, Iwata Y, Clauss M.
 “Faecal particle size in free-ranging primates supports a ‘rumination’ strategy in the proboscis monkey (*Nasalis larvatus*).”
Oecologia, Vol.174(4), pp.1127-1137, 2014/04
- [19] **Matsui T**, Kobayasi K, Nakagawa H, Yoshimoto M, Hasegawa T, Reinke R, Angus J.
 “Lower-Than-Expected Floret Sterility of Rice under Extremely Hot Conditions in a Flood-Irrigated Field in New South Wales, Australia.”
Plant Prod. Sci., Vol.17(3), pp.245-252, 2014
- [20] *¹ **Matsumura S**, Inoshima Y, Ishiguro N.
 “Reconstructing the colonization history of lost wolf lineages by the analysis of the mitochondrial genome.”
Mol Phylogenet Evol., Vol.80, pp.105-112, 2014/11
- [21] Muren, **Kusuda S**, Shibata E, Doi O.
 “Identification of fecal sex steroid metabolites and evaluation of ovarian cycle and pregnancy in Somali wild Ass (*Equus africanus somaliensis*).”
Japanese Journal of Zoo and Wildlife Medicine, Vol.19(2), pp.49-56, 2014
- [22] Naznin H.A, Kiyohara D, Kimura M, Miyazawa M, **Shimizu M**, **Hyakumachi M.**
 “Systemic resistance induced by volatile organic compounds emitted by plant growth-promoting fungi in *Arabidopsis thaliana*.”
PLoS ONE, Vol.9(1), pp.e86882, 2014/01/27
- [23] **Ninomiya S.**
 “Satisfaction of farm animal behavioral needs in behaviorally restricted systems: Reducing stressors and environmental enrichment”
Animal Science Journal, Vol.85(6), pp.634-638, 2014/06
- [24] Oka T, **Tadano R**, Goto T, Shiraiishi J, Osman SAM, Nagasaka N, Bungo T, Maeda T, Nishibori M, Umino T, Tsudzuki M.
 “Time-dependent changes in the genetic diversity and structure of the Onagadori breed of chickens based on microsatellite DNA polymorphisms.”
Journal of Poultry Science, Vol.51(3), pp.262-269, 2014

- [25] Pham T. H. ,**Miyagawa S.**
 “Historical landscape affects present tree density in paddy field.”
International Journal of Biological, Veterinary, Agricultural and Food Engineering, Vol.8(11),
 pp.1131-1136, 2014/12
- [26] R. A. Bustomi Rosadi, **Masateru Senge**, Diding Suhandy, Ahmad Tusi.
 “The Effect of EC Levels of Nutrient Solution on the Growth, Yield, and Quality of Tomatoes (*Solanum Lycopersicum*) under the Hydroponic System”
Journal of Agricultural Engineering and Biotechnology, Vol.2(1), pp.7-12, 2014/02
- [27] Sadhukhan A, Kobayashi Y, **Kobayashi Y**, Tokizawa M, **Yamamoto YY**, Iuchi S, **Koyama H**, Panda SK, Sahoo L.
 “VuDREB2A, a novel DREB2-type transcription factor in the drought-tolerant legume cowpea, mediates DRE-dependent expression of stress-responsive genes and confers enhanced drought resistance in transgenic Arabidopsis.”
Planta, Vol.240(3), pp.645-664, 2014
- [28] Saldajeno M.G.S, Naznin H.A, Elsharkawy M.M, **Shimizu M**, **Hyakumachi M.**
 “Enhanced resistance of plants to disease using *Trichoderma* spp..”
Biotechnology and Biology of Trichoderma, pp.477-493, 2014/01
- [29] Sawaki Y, **Kobayashi Y**, Kihara-Doi T, Nishikubo N, Kawazu T, Kobayashi M, Kobayashi Y, Iuchi S, **Koyama H**, Sato S.
 “Identification of a STOP1-like protein in Eucalyptus that regulates transcription of Al tolerance genes.”
Plant Sci., Vol.223, pp.8-15, 2014/06
- [30] Shamov V.V, **Onishi T**, Kulakov V.V.
 “Dissolved iron runoff in Amur basin rivers in the late XX century”
Water Resources, Vol.41(2), pp.201-209, 2014/03
- [31] Suga H, Kitajima M, Nagumo R, Tsukiboshi T, Uegaki R, Nakajima T, Kushiro M, Nakagawa H, **Shimizu M**, Kageyama K, **Hyakumachi M.**
 “A single nucleotide polymorphism in the translation elongation factor 1 α gene correlates with the ability to produce fumonisin in Japanese *Fusarium fujikuroi*.”
Fungal Biol, Vol.118(4), pp.402-412, 2014/04
- [32] **Tadano R**, Kataoka Y.
 “Genetic diversity in a small chicken population inferred from microsatellite polymorphism”
Journal of Poultry Science, Vol.51, pp.242-247, 2014
- [33] **Tadano R**, Kinoshita K, Mizutani M, Tsudzuki M.
 “Comparison of microsatellite variations between red junglefowl and a commercial chicken gene pool”
Poultry Science, Vol.93(2), pp.318-325, 2014/02
- [34] **Tadano R**, Nunome M, Mizutani M, Kawahara-Miki R, Fujiwara A, Takahashi S, Kawashima T, Nirasawa K, Ono T, Kono T, Matsuda Y.
 “Cost-effective development of highly polymorphic microsatellite in Japanese quail facilitated by next-generation sequencing.”
Animal Genetics, Vol.45(6), pp.881-884, 2014/12
- [35] Takahashi H, Nakaho K, Ishihara T, Ando S, Wada T, Kanayama Y, Asano S, Yoshida S, Tsushima S, **Hyakumachi M.**
 “Transcriptional profile of tomato roots exhibiting *Bacillus thuringiensis*-induced resistance to *Ralstonia solanacearum*.”
Plant Cell Rep, Vol.33(1), pp.99-110, 2014/01
- [36] **Tsuchida K**, Kudô K, Ishiguro N.
 “Genetic structure of an introduced paper wasp, *Polistes chinensis antennalis* (Hymenoptera, Vespidae) in New Zealand.”
Molecular Ecology, Vol.23(16), pp.4018-4034, 2014/08
- [37] Tsueda H, Tsuduki T, **Tsuchida K.**

- “Factors that affect the selection of tomato leaflets by two whiteflies, *Trialeurodes vaporariorum* and *Bemisia tabaci* (Homoptera: Aleyrodidae)”
Applied Entomology and Zoology, Vol.49(4), pp.561-570, 2014/11
- [38] Tsuji H, Yasutaka T, Kawabe Y, **Onishi T**, Komai T.
 “Distribution of dissolved and particulate radiocesium concentrations along rivers and the relations between radiocesium concentration and deposition after the nuclear power plant accident in Fukushima”
Water Resources, Vol.60(1), pp.15-27, 2014/09
- [39] Usami M, Mitsunaga K, Irie T, Miyajima A, **Doi O**.
 “Proteomic analysis of ethanol-induced embryotoxicity in cultured post-implantation rat embryos.”
The Journal of toxicological sciences, Vol.39(2), pp.285-292, 2014
- [40] Usami M, Mitsunaga K, Irie T, Miyajima A, **Doi O**.
 “Simple in vitro migration assay for neural crest cells and the opposite effects of all-trans-retinoic acid on cephalic- and trunk-derived cells.”
Congenital anomalies, Vol.54(3), pp.184-188, 2014/08
- [41] Yamasaki K., **Tsuchida K**.
 “Orphaning does not affect the colony productivity of the primitive eusocial wasp *Polistes snelleni*”
Insectes Sociaux, Vol.61(2), pp.133-140, 2014/05
- [42] Yang Y, **Onishi T**, **Hiramatsu K**.
 “Improving the performance of temperature index snowmelt model of SWAT by using MODIS land surface temperature data”
The Scientific World Journal, Vol.2014, pp.20, 2014
- [43] Yanyan Dai, **Masateru Senge**, **Kengo Ito**, **Takeo Onishi**, Kohei Yoshiyama.
 “Experimental evaluation of irrigation methods for soil desalinization”
Paddy Water Environment, DOI 10.1007/s10333-014-0417-3,2014

※ 1 Also recorded on Joint Department of Veterinary Medicine

【Joint Department of Veterinary Medicine】

- [1] Abdo W, Ghattas S, **Sakai H**, Hirata A, **Yanai T**.
 “Assessment of proliferative activity by proliferative cell nuclear antigen (PCNA) and anti-bromodeoxyuridine (BrdU) immunolabeling in the tissues of Japanese eels (*Anguilla japonica*).”
Turk. J. Fish. Aquat. Sci., Vol.14, pp.413-419, 2014
- [2] Abdo W, Haridy M, Katou Y, Goto M, Mizoguchi T, Sakoda Y, **Sakai H**, **Yanai T**.
 “Pathological and Immunohistochemical Findings of Natural Highly Pathogenic Avian Influenza Infection in Tufted Ducks during 2010-2011 Outbreaks in Japan.”
J Vet Med Sci., Vol.76(9), pp.1285-1290, 2014/09
- [3] Almadaly E, Farrag F, Shukry M, **Murase T**.
 “Plasma membrane integrity and morphology of frozen-thawed bull spermatozoa supplemented with desalted and lyophilized seminal plasma.”
Global Veterinaria, Vol.13, pp.753-766, 2014
- [4] Ando A, Imaeda N, Ohshima S, Miyamoto A, Kaneko N, **Takasu M**, **Shiina T**, Kulski JK, Inoko H, **Kitagawa H**.
 “Characterization of swine leukocyte antigen alleles and haplotypes on a novel miniature pig line, Microminipig.”
Anim Genetics, Vol.45(6), pp.791-798, 2014/12

- [5] Aoki H, Hara A, Oomori Y, **Shimizu Y**, Yamada Y, Kunisada T.
 “Neonatal lethality of neural crest cell-specific Rest knockout mice is associated with gastrointestinal distension caused by aberrations of myenteric plexus.”
Genes Cells., Vol.19(10), pp.723-742, 2014/10
- [6] **Atoji Y**, Karim MR.
 “Homology of the mesopallium in the adult chicken identified by gene expression of the neocortical marker cholecystokinin”
Neurosci Lett., Vol.562, pp.85-89, 2014/03/06
- [7] **Atoji Y**, Karim MR.
 “Glutamatergic thalamopallial projections in the pigeon identified by retrograde labeling and expression of vGluT2 mRNA”
Neurosci. Res., Vol.84, pp.43-46, 2014/07
- [8] **Atoji Y**, Karim MR.
 “Expression of vesicular glutamate transporter 3 mRNA in the brain and retina of the pigeon.”
J Chem Neuroanat., Vol.61-62, pp.124-131, 2014/11
- [9] **Atoji Y**, Wild JM.
 “Efferent and afferent connections of the olfactory bulb and prepiriform cortex in the pigeon (*Columba livia*).”
J Comp Neurol., Vol.522(8), pp.1728-1752, 2014/06/01
- [10] Chiou S-P, **Kitoh K**, Igarashi I, **Takashima Y**.
 “Generation of Monoclonal Autoantibodies from Babesia rodhaini-Infected Mice.”
J Vet Med Sci., Vol.76(9), pp.1281-1284, 2014/09
- [11] Choi SK, Lee JE, Kim YJ, Min MS, Voloshina I, Myslenkov A, Oh JG, Kim TH, Markov N, Seryodkin I, **Ishiguro N**, Yu L, Zhang YP, Lee H, Kim KS.
 “Genetic structure of wild boar (*Sus scrofa*) populations from East Asia based on microsatellite loci analyses.”
BMC Genetics, Vol.15, pp.85, 2014/07/17
- [12] El-Habashi N, El-Nahass E, Haridy M, Nayel M, Abdelaziz AA, **Fukushi H**, Kuroda K, **Sakai H**, **Yanai T**.
 “Pathological findings in equine herpesvirus 9-induced abortion in rats.”
J Comp Pathol., Vol.151(4), pp.400-409, 2014/11
- [13] El-Morsey A, El-Seify M, Desouky AR, Abdel-Aziz MM, **Sakai H**, **Yanai T**.
 “Morphologic identification of a new Sarcocystis sp. in the common moorhen (*Gallinula chloropus*) (Aves: Gruiformes: Rallidae) from Brolos Lake, Egypt.”
Parasitol Res., Vol.113(1), pp.391-397, 2014/01
- [14] El-Nahass E, El-Dakhly KM, El-Habashi N, Anwar SI, **Sakai H**, Hirata A, Okada A, Ab-Sakaya R, **Fukushi H**, **Yanai T**.
 “Susceptibility of BALB/c-nu/nu mice and BALB/c mice to equine herpesvirus 9 infection.”
Vet. Pathol., Vol.51(3), pp.581-590, 2014/05
- [15] El-Seify M, El-Morsey A, Hilali M, Zayed A, El-Dakhly K, Haridy M, **Sakai H**, **Yanai T**.
 “Molecular characterization of Sarcocystis fusiformis and Sarcocystis buffalonis infecting water buffaloes (*Bubalus Bubalis*) from Egypt.”
Am. J. Anim. Vet. Sci., Vol.9(2), pp.95-104, 2014
- [16] Guo X, Izume S, Okada A, **Ohya K**, Kimura T, **Fukushi H**.
 “Full genome sequences of zebra-borne equine herpesvirus type 1 isolated from zebra, onager and Thomson's gazelle.”
J Vet Med Sci., Vol.76(9), pp.1309-1312, 2014/09
- [17] Hamano T, Terasawa F, Tachikawa Y, Murai A, **Mori T**, El-Dakhly K, **Sakai H**, **Yanai T**.
 “Squamous cell carcinoma in a capybara (*Hydrochoerus hydrochaeris*).”
J Vet Med Sci, Vol.76(9), pp.1301-1304, 2014/06/09

- [18] Haridy M, Al-Amgad Z, **Sakai H**, Mohi-Eldin M.
“Ameliorating effects of garlic, calcium, and vitamin C on chronic lead toxicity in albino rats.”
Comp. Clin. Pathol., Vol.23(5), pp.1215-1223, 2014/09
- [19] Haridy M, Fukuta M, Mori Y, Ito H, Kubo M, **Sakai H**, **Yanai T**.
“An outbreak of *Mycobacterium genavense* infection in a flock of captive diamond doves (*Geopelia cuneata*).”
Avian Dis., Vol.58(3), pp.383-390, 2014
- [20] Haridy M, Sadan M, Omar M, **Sakai H**, **Yanai T**.
“*Coenurus cerebralis* cyst in the orbit of a ewe.”
Onderstepoort J. Vet. Res., Vol.81(1), pp.1-4, 2014
- [21] Haridy M, Tachikawa Y, Yoshida S, Tsuyuguchi K, Tomita M, Maeda S, Wada T, Ibi K, **Sakai H**, **Yanai T**.
“*Mycobacterium marinum* Infection in Japanese Forest Green Tree Frogs (*Rhacophorus arboreus*).”
J Compp.athol., Vol.151(2-3), pp.277-289, 2014
- [22] Hayashi T, Unno A, Baba M, Ohno T, **Kitoh K**, **Takashima Y**.
“CD44 mediated Hyaluronan adhesion of *Toxoplasma gondii*-infected leukocytes.”
Parasitol Int., Vol.63(2), pp.479-484, 2014/04
- [23] Hirata A, Miyazaki A, **Sakai H**, Imada N, Kitani R, Nikami H, **Yanai T**.
“Choriocarcinoma-like tumor in a potbellied pig (*Sus scrofa*).”
J Vet Diagn Invest., Vol.26(1), pp.163-166, 2014/01
- [24] Iio A, Motohashi T, Kunisada T, Yasuhira Y, **Kamishina H**, **Maeda S**.
“Preferential gene transcription of T helper 2 cytokines in peripheral CCR4 CD4 lymphocytes in dogs.”
Vet Dermatol., Vol.25(3), pp.199-203, 2014/06
- [25] **Inoshima Y**, **Ishiguro N**.
“On-site visual diagnosis of parapoxvirus infection using a portable cordless incubator.”
Anal Sci., Vol.30(12), pp.1169-1172, 2014
- [26] **Ishiguro N**, Matsui A, Kikuchi H, Quanjia C, Dawei C, Quanchao Z, Chunxue W.
“Mitochondrial DNA analysis of ancient dog bones from the Yanjialiang, Fenglin, and Xicha Sites, China.”
Asian Archaeology, Vol.2, pp.108-114, 2014
- [27] **Ishiguro N**, Murakami T, Elhelaly A.E, **Inoshima Y**.
“Surveillance of amyloid deposition and bacterial contamination in chicken liver from meat market.”
J. Poult. Sci., Vol.51(1), pp.104-107, 2014
- [28] Ito K, Ghattas S, Yanagisawa M, Uchida S, **Sakai H**, **Yanai T**.
“Assessment of flow cytometry in counting blood of whale sharks as a rapid and reliable method.”
Inter. J. Sci. Res., Vol.3, pp.389-397, 2014
- [29] Kamatari Y.O, Ohta S, **Inoshima Y**, Oda M, Maruno T, Kobayashi Y, **Ishiguro N**.
“Identification and characterization of a multispecific monoclonal antibody G2 against chicken prion protein.”
Protein Sci., Vol.23(8), pp.1050-1059, 2014/08
- [30] Karim MR, **Saito S**, **Atoji Y**.
“Distribution of vesicular glutamate transporter 2 in auditory and song control brain regions in the adult zebra finch (*Taeniopygia guttata*).”
J Comp Neurol., Vol.522(9), pp.2129-2151, 2014/06
- [31] Katayama M, Okamura Y, Shimamura S, Katayama R, **Kamishina H**, Uzuka Y.
“Influence of phosphate-buffered sucrose solution on early graft function in feline renal autotransplantation.”
Res Vet Sci., Vol.97(2), pp.409-411, 2014/10
- [32] Kato Y, Funato R, Hirata A, **Murakami M**, **Mori T**, **Maruo K**, **Yanai T**, **Sakai H**.
“Immunocytochemical detection of the class A macrophage scavenger receptor CD204 using air-dried cytologic smears of canine histiocytic sarcoma.”
Vet Clin Pathol., Vol.43(4), pp.589-593, 2014/12

- [33] Kobayashi K, **Asano M**, Yanagawa Y, Haneda S, Matsui M.
 “An attempt to induce antibody production for immunocontraception in the Hokkaido sika deer (*Cervus nippon yesoensis*) by immunization with a porcine zona pellucida synthetic peptide.”
Mammal Study, Vol.39(1), pp.59-64, 2014/03
- [34] Kuroda K, Hibi D, Ishii Y, Takasu S, Kijima A, Matsushita K, Masumura K, Watanabe M, Sugita-Konishi Y, **Sakai H**, **Yanai T**, Nohmi T, Ogawa K, Umemura T.
 “Ochratoxin A induces DNA double-strand breaks and large deletion mutations in the carcinogenic target site of gpt delta rats.”
Mutagenesis., Vol.29(1), pp.27-36, 2014/01
- [35] Masuno K, Fukuda Y, Kubo M, Ikarashi R, Kuraishi T, Hattori S, Kimura J, Kai C, **Yanai T**, Nakai Y.
 “Infectivity of *Cryptosporidium andersoni* and *Cryptosporidium muris* to normal and immunosuppressive cynomolgus monkeys.”
J Vet Med Sci., Vol.76(2), pp.169-172, 2014/03/01
- [36] *¹ Matsumura S, **Inoshima Y**, **Ishiguro N**.
 “Reconstructing the colonization history of lost wolf lineages by the analysis of the mitochondrial genome.”
Mol Phylogenet Evol., Vol.80, pp.105-112, 2014/11
- [37] Matsuo K, Kamai R, Uetsu H, Goto H, **Takashima Y**, Nagamune K.
 “Seroprevalence of *Toxoplasma gondii* infection in cattle, horses, pigs and chickens in Japan.”
Parasitol Int., Vol.63(4), pp.638-639, 2014/08
- [38] Morishita M, Nabeka H, Shimokawa T, Miyawaki K, Doihara T, **Saito S**, Kobayashi N, Matsuda S.
 “Temporal Changes in Prosaposin Expression in the Rat Dentate Gyrus after Birth.”
PLoS One., Vol.9(5), pp.e95883, 2014/05/28
- [39] Murakami T, Ibi K, Kuraishi T, Hattori S, Kai C, **Ishiguro N**, **Yanai T**.
 “Failure of heterogeneous amyloid-enhancing factor in geriatric squirrel monkeys (*Saimiri boliviensis*).”
J Med Primatol., Vol.43(6), pp.488-491, 2014/12
- [40] Murakami T, **Ishiguro N**, Higuchi K.
 “Transmission of systemic AA amyloidosis in animals.”
Vet Pathol., Vol.51(2), pp.363-371, 2014/03
- [41] Nabeka H, Uematsu K, Takechi H, Shimokawa T, Yamamiya K, Li C, Doihara T, **Saito S**, Kobayashi N, Matsuda S.
 “Prosaposin overexpression following kainic acid-induced neurotoxicity.”
PLoS One., Vol.9(12), pp.e110534, 2014/12/02
- [42] **Nishii N**, Takashima S, Iguchi A, Murahata Y, Matsuo A, Hikasa Y, **Kitagawa H**.
 “Effects of sitagliptin on plasma incretin concentrations after glucose administration through an esophagostomy tube or feeding in healthy cats.”
Domest Anim Endocrinol., Vol.49, pp.14-19, 2014/10
- [43] Nishida H, Nakayama M, Tanaka H, **Kamishina H**, Izawa T, Hatoya S, Sugiura K, Suzuki Y, Ide C, Inaba T.
 “Evaluation of serum phosphorylated neurofilament subunit NF-H as a prognostic biomarker in dogs with thoracolumbar intervertebral disc herniation.”
Vet Surg., Vol.43(3), pp.289-293, 2014/03
- [44] Noguchi S, Kumazaki M, Yasui Y, **Mori T**, Yamada N, Akao Y.
 “MicroRNA-203 regulates melanosome transport and tyrosinase expression in melanoma cells by targeting kinesin superfamily protein 5b.”
J Invest Dermatol., Vol.134(2), pp.461-469, 2014/02
- [45] Ohshima S, Mori S, Shigenari A, Miyamoto A, **Takasu M**, Imaeda N, Nunomura S, Okayama Y, Tanaka M, **Kitagawa H**, Kulski J K, Inoko H, Ando A, Kametani Y.
 “Differentiation ability of multipotent hematopoietic stem/progenitor cells detected by a porcine specific anti-CD117 monoclonal antibody.”
BioSci Trends., Vol.8(6), pp.308-315, 2014

- [46] Okada A, Kodaira A, Hanyu S, Izume S, **Ohya K, Fukushi H**.
 “Intracellular localization of Equine herpesvirus type 1 tegument protein VP22.”
Virus Res., Vol.192, pp.103-113, 2014/11/04
- [47] Rahman M, Azad MT, Nahar L, Rouf SM, **Ohya K**, Chiou SP, Baba M, **Kitoh K, Takashima Y**.
 “Age-specificity of *Toxoplasma gondii* seroprevalence in sheep, goats and cattle on subsistence farms in Bangladesh.”
J Vet Med Sci., Vol.76(9), pp.1257-1259, 2014/09
- [48] **Saito S**, Saito K, Nabeka H, Shimokawa T, Kobayashi N, Marsuda S.
 “Differential expression of the alternatively spliced forms of prosaposin mRNAs in the rat choroid plexus.”
Cell Tissue Res., Vol.356(1), pp.231-242, 2014/04
- [49] Shigemura H, **Ishiguro N, Inoshima Y**.
 “Up-regulation of MUC2 mucin expression by serum amyloid A3 protein in mouse colonic epithelial cells.”
J Vet Med Sci., Vol.76(7), pp.985-991, 2014/07
- [50] Shima T, **Shiina T**, Naitou K, Nakamori H, **Shimizu Y**.
 “Functional roles of capsaicin-sensitive intrinsic neural circuit in the regulation of esophageal peristalsis in rats: in vivo studies using a novel method.”
Am. J. Physiol. Gastrointest. Liver Physiol., Vol.306(9), pp.G811-818, 2014/05
- [51] **Takasu M**, Ishihara N, Tozaki T, Kakoi H, Maeda M, Mukoyama H.
 “Genetic diversity of maternal lineage in the endangered Kiso horse based on polymorphism of the mitochondrial DNA D-loop region.”
J Vet Med Sci., Vol.76(11), pp.1451-1456, 2014/11
- [52] Tanahashi Y, Ichimura Y, Kimura K, **Matsuyama H**, Iino S, Komori S, **Unno T**.
 “Cholinergic neuromuscular transmission mediated by interstitial cells of Cajal in the myenteric layer in mouse ileal longitudinal smooth muscles.”
Naunyn-Schmiedeberg's Arch. Pharmacol., Vol.387(4), pp.377-388, 2014/04
- [53] Wiltzer L, Okada K, Yamaoka S, Larrous F, Kuusisto H V, **Sugiyama M**, Blondel D, Bourhy H, Jans D A, **Ito N**, Moseley G W.
 “Interaction of Rabies Virus PP.protein With STAT Proteins is Critical to Lethal Rabies Disease.”
The Journal of infectious diseases, Vol.209(11), pp.1744-1753, 2014/06/01
- [54] Yang DK, Nakagawa K, **Ito N**, Kim HH, Hyun BH, Nah JJ, **Sugiyama M**. Song JY.
 “A single immunization with recombinant rabies virus (ERAG3G) confers complete protection against rabies in mice.”

※ 1 Also Recorded on Course of Agricultural and Environmental Science

【Field Science Center】

- [1] Nakajima H, **Ishida M**.
 “Decline of *Quercus crispula* in abandoned coppice forests caused by secondary succession and Japanese oak wilt disease: Stand dynamics over twenty years.”
Forest Ecology and Management, Vol.334(10), pp.18-27, 2014/12/15

2) Book

【Course of Applied Life Science】

- [1] Kondo N, **Nishizu T**, Hayashi T, Ogawa Y, Shimizu H, Goto K.
“Physical and Biological Properties of Agricultural Products”
Kyoto University, 2014/02
- [2] Sugimura K, **Teramoto Y**, Nishio Y.
“Cellulose Acetate in "Encyclopedia of Polymeric Nanomaterials"”
Springer, 2014

II Lectures, Conference Presentation, etc.

1) Conference Presentation

【Course of Applied Life Science】

- [1] Famhy K, **Nakano K.**
“Mathematical Model for Optimal Modified Atmosphere Packaging Design to Prevent Chilling Injury in Cucumber Fruits.”
International Conference of Sustainable Agriculture, Food and Energy.(Bali, Indonesia), 2014/09
- [2] Famhy K, **Nakano K.**
“Optimal Design of Modified Atmosphere Packaging for Alleviating Chilling Injury in Cucumber Fruit.”,
2014 JSRAE Annual Conference (Saga) , 2014/09
- [3] Hasegawa K, Kamiya H, Nakatsuka S, **Yanase E.**
“Radical oxidation mechanism of anthocyanins”
The XXVIIth International Conference on Polyphenols&The 8th Tannin Conference(Nagoya),
2014/09/02-06
- [4] Hirose S, **Yanase E.**
“Formation mechanism of oolongtheanins”
The XXVIIth International Conference on Polyphenols&The 8th Tannin Conference(Nagoya),
2014/09/02-06
- [5] Kazuki Nomura, **Hitoshi Iwahashi**, Akinori Iguchi, Toru Shigematsu.
“Arginine contribute to high hydrostatic pressure tolerance”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [6] Khandra Fahmy, **Kohei Nakano.**
“Effect of relative humidity on chilling injury alleviation of cucumber fruit at low-temperature storage”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [7] Kohei Kitamura, Syuhei Mishima, Yudai Okada, **Masaya Shimada**, **Satoshi Nagaoka.**
“Epigallocatechin gallate induces a reduction of PCSK9 accompanying with an up-regulation of LDL receptor in HepG2 cells”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [8] Komura N, Suzuki K, **Ando H**, **Ishida H**, Kusumi A, **Kiso M.**
“Development of bifunctional ganglioside GM3 probes for imaging of raft molecule complex.”
6th iCeMS Retreat(Kyoto), 2014/10/03-04
- [9] Konishi M, Komura N, Suzuki K, **Imamura A**, **Ando H**, **Ishida H**, Kusumi A, **Kiso M.**
“Development of Fluorescent Gangliosides GD3 and GD1b Useful for Live Imaging of Cell Membrane.”
6th iCeMS Retreat(Kyoto), 2014/10/03-04
- [10] Kosei Yamauchi, **Tohru Mitsunaga.**
“Bioactivity of polyphenolic compounds in B16 melanoma cells”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [11] Kosuke Nakamoto, **Yoshihito Ueno.**
“Diazirine-containing RNA photo-cross-linking probes for capturing microRNA targets”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [12] Kurniawati N, Mitsui R, Tani A, Fitriyanto NA, Pertiwiwinigrum A, **Hayakawa T**, **Nakagawa T**, Kawai K.
“Symbiotic nitrogen-fixing soil bacterium has an ability of methanol utilization depending on rare earth elements”
The 16th Asian-Australian Animal Production (AAAP) congress(Yogyakarta, Indonesia), 2014/11/10-14
- [13] Kuroki S, Tachikawa Y, Koizumi K, Soga A, Yoshida M, Nakamura N, Shiina T, **Nakano K.**
“Measurement and Evaluation of Dysfunction of Cell Membranes in Fruit and Vegetables during Oxygen Storage.”
International Conference of Sustainable Agriculture, Food and Energy.(Bali, Indonesia), 2014/09

- [14] Liyuan Niu, Kazuki Nomura, Mizuki Kainuma, **Hitoshi Iwahashi**, Hiroyuki Matsuoka, Satoshi Kawachi, Yoshihisa Suzuki, Katsuhiko Tamura.
“Study on growth-inhibitory mechanism of petit-High Pressure Carbon Dioxide (p-HPCD) pasteurization technology to *Saccharomyces cerevisiae*”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [15] **Nagaoka S**, Kitamura K, Mishima S, **Shimada M**.
“Epigallocatechin gallate and quercetin induce a suppression of PCSK9 accompanying with an up-regulation of LDL receptor in HepG2 cells.”
The 27th International Conference on Polyphenols(Nagoya), 2014/08/21-26
- [16] **Nagaoka S**, Kitamura K, Mishima S, **Shimada M**.
“Epigallocatechin gallate and quercetin induce a suppression of PCSK9 accompanying with an up-regulation of LDL receptor in HepG2 cells.”
The XXVIIth International Conference on Polyphenols & The 8th Tannin Conference(Nagoya), 2014/09/02-06
- [17] **Nakagawa T**, Mitsui R, Tani A, Hibino A, Sasa K, Tashiro S, **Iwama T**, **Hayakawa T**, Kawai K.
“Physiological role of methanol dehydrogenase depending on rare earth elements in the methylotrophic bacterium”
The 16th Asian-Australian Animal Production (AAAP) congress(Yogyakarta, Indonesia), 2014/11/10-14
- [18] **Nakamura K**, Shinzato N, Saitoh S, Aoyama H, **Takamizawa K**.
“Analysis on alkane-oxidizing methanogenic community from a production water of an oil seep in Japan”
International Union of Microbiological Societies Congress(Montreal, Canada), 2014/07/27-08/01
- [19] Ohno K, **Nakamura K**, **Takamizawa K**.
“Degradation of tetrachloroethylene by microbiological substance(s) from activated sludge”
International Union of Microbiological Societies Congress(Montreal, Canada), 2014/07/27-08/01
- [20] Oshima A, Hirose S, Nishimoto K, **Yanase E**.
“Isolation and characterization of the red pigments from adzuki beans”
The XXVIIth International Conference on Polyphenols&The 8th Tannin Conference(Nagoya), 2014/09/02-06
- [21] Rita Pal, Naoko Komura, **Akihiro Imamura**, Yu Tokura, Takafumi Ueno, **Hideharu Ishida**, **Hirumune Ando**, **Makoto Kiso**.
“Study on culturing system for pluripotent stem cells utilizing carbohydrate-carbohydrate interactions”
27th International Carbohydrate Symposium (ICS27) (The Indian Institute of Science, Bangalore, India), 2014/01/12-17
- [22] Sana Ben Othman, Nakako Katsuno, **Kohji Kitaguchi**, **Tomio Yabe**.
“Water-soluble extracts from defatted sesame seed flour with anti oxidant activity in vitro protect cells against oxidative stress”
The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [23] Shimabukuro J, Makio H, Suzuki T, **Ando H**, Yamada Y, Wakatsuki S, Kato R, **Ishida H**, **Kiso M**.
“Synthesis of selenium-labeled fucose derivatives and their application for the X-ray structural analysis of fucose-binding protein AOL.”
6th iCeMS Retreat(Kyoto), 2014/10/03-04
- [24] Suzuki T, Pal R, Suzuki K G N, **Ando H**, **Imamura A**, **Ishida H**, Kusumi A, **Kiso M**.
“Synthetic study on fluorescent GPI-anchor for detailing carbohydrate-carbohydrate interaction in lipid raft.”
6th iCeMS Retreat(Kyoto), 2014/10/03-04
- [25] Tamai H, **Ando H**, **Ishida H**, **Kiso M**.
“Total synthesis of ganglioside GAA-7 and evaluation of its neuritegenic activity”
27th International Carbohydrate Symposium (ICS27) (The Indian Institute of Science, Bangalore, India), 2014/01/12-17

- [26] Tamai H, Takeda Y, Mizuno T, **Ando H**, Ueki A, **Imamura A**, **Ishida H**, **Kiso M**.
 “Synthetic study on neuritegenic glycopospholipid CJP-series from comatulida *Comanthus japonica*.”
 Sialoglyco2014(Australia), 2014/09/07-10
- [27] Ueki A, Unga J, Higuchi Y, Kawakami S, **Ando H**, **Ishida H**, Yamashita F, Hashida M, **Kiso M**.
 “Synthesis and Evaluation of Sialyl Lewis X Mimic-coated Liposomes for DDS.”
 6th iCeMS Retreat(Kyoto), 2014/10/03-04
- [28] Ueki A, Unga J, Higuchi Y, Kawakami S, **Ando H**, **Ishida H**, Yamashita F, Hashida M, **Kiso M**.
 “Synthesis of Novel Glycolipid with Sialyl Lewis X Epitope and Evaluation of Glyco-coated Liposomes for DDS”
 27th International Carbohydrate Symposium (ICS27) (The Indian Institute of Science, Bangalore, India),
 2014/01/12-17
- [29] Ueki A, Unga J, Higuchi Y, Kawakami S, **Ando H**, **Ishida H**, Yamashita F, Hashida M, **Kiso M**.
 “Synthesis and Evaluation of Sialyl Lewis X-coated Liposomes for Drug Delivery System”
 Sialoglyco2014(Australia), 2014/09/07-10
- [30] **Yabe T**, Nishida M, Murata K, Oshima K, **Kitaguchi K**, Kanamaru Y.
 “Pectin alters sulfated structure of cell-surface heparan sulfate in differentiated Caco-2 cells thereby inducing proliferation of IEC-6 cells in co-culture”
 Gordon Research Conference 2014 Proteoglycans(Andover, NH, USA), 2014/07/06-11

【Course of Agricultural and Environmental Science】

- [1] Diana Hapsari, **Takeo Onishi**, **Masateru Senge**.
 “Evaluation of soil erosion rate in Japanese cedar forest by using ¹³⁷Cesium radio isotope as a fingerprint tracer”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [2] Doi K, Achiha M, Sakoda S, **Yayota M**.
 “Effects of stocking rate on forage intake and digestibility of goats grazing abandoned fields: the result of first year grazing.”
 The 5th China-Japan-Korea Grassland Conference(Changchun, China), 2014/08/20-24
- [3] **Ninomiya S**.
 “A preliminary assessment of horse’s welfare on breeding and fattening farms in Japan”
 6th International Conference on the Assessment of Animal Welfare at Farm and Group Level(France),
 2014/09/03-05
- [4] Pan Changbin, **Satoshi Kusuda**, **Osama Doi**.
 “Studies on the changes in fecal steroid hormone metabolites in female reproductive cycles to *Cercopithecus* and *Hylobates*”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [5] Pham TH, **Miyagawa S**.
 “Historical landscape affects present tree density in paddy field.”
 XII International Conference on Ecological and Environmental Engineering(London), 2014/11
- [6] Shuto Suzuki, Toshifumi Suzuki, **Koji Tsuchida**.
 “Genetic structure of a Japanese butterfly, *Luehdorfia japonica*, inferred from mtDNA analyses”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [7] Sofa Nur Azizah, **Masateru Senge**, **Kengo Ito**.
 “Environment towards the existence of grey-headed lapwing (*Vanellus cinereus*)”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05

- [8] Tomoki Nishioka, Yoko Suzuki, Haruhisa Suga, Issei Kobayashi, Yuhko Kobayashi, **Mitsuro Hyakumachi, Masafumi Shimizu.**
 “Metagenomic analysis of bacterial flora in rhizospheres of Allium plants and suppressive activity of Pseudomonas isolates against Fusarium wilt of cucumber”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [9] Vonny Indah Mutiara, **Arai Satoshi.**
 “Study on Development of Organic Rice Farming System Leading by Local Government and Expert Organic Farmers, A Case Study in West Sumatra,Indonesia”
 The Agricultural Marketing Society of Japan individual presentation(Wakayama), 2014/07/06
- [10] Vonny Indah Mutiara, **Arai Satoshi.**
 “The role of local government and expert organic farmers in developing organic rice farming system in West Sumatra, Indonesia”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [11] Wu Weijun, **Masateru Senge, Kengo Ito.**
 “Comparison of the water temperature in coniferous forest basin and broadleaf forest basin”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [12] Xu W, Taki Y, **Yayota M.**
 “Effects of early experience with low-quality roughage on intake, digestibility and nitrogen metabolism in lambs.”
 The 5th China-Japan-Korea Grassland Conference(Changchun, China), 2014/08/20-24
- [13] Yamamoto S, **Kusuda S**, Hori H, Takahashi Y, Horiguchi M, Murai H, **Doi O.**
 “Changes in gonadal activity associated with rearing condition, egg laying and molting in captive Svalbard rock ptarmigan (Lagopus muta hyperboreus).”
 26th International Ornithological Congress(Tokyo), 2014/08/18-24
- [14] **Yamamoto YY**, Hayami N, Tokizawa M, Hieno A, Zhao C-R, Saito T, Iuchi S, Kobayashi M.
 “Prediction-oriented plant promoter analysis”
 The 38th Naito Conference on “Molecule-based biological systems” (Sapp.oro), 2014/10/07-10
- [15] Yanyan Dai, **Kengo Ito, Masateru Senge**, Kohei Yoshiyama, Pengfei Zhang, Fuping Zhang.
 “Study on irrigation water requirements for the control of Ralstonia solanacearum via soil solarization in managing tomato cultivation”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05
- [16] **Yayota M**, Tani Y, Ohtani S.
 “Allocation of ingestive jaw movements by cattle during daily grazing.”
 The 5th China-Japan-Korea Grassland Conference(Changchun, China), 2014/08/20-24
- [17] Yoshizawa M, Tajima H, Sasaki S, Takamatsu M, Yamamoto F, Narushima E, **Kusuda S**, Tsutsui T, Hori T.
 “A trial of artificial breeding in Amur leopard cats (Prionailurus bengalensis euptilurus).”
 The 22nd SEAZA Conference 2014(Taipei Zoo, Taiwan), 2014/10/25-28
- [18] Zuhud Rozaki, **Masateru Senge, Kengo Ito, Takeo Onishi**, Komariah, Dwi Priyo Ariyanto, Arief Noor Rahmadiyahanto.
 “Economic feasibility and farmer's interest on rainwater harvesting (on-farm reservoir) project in Gondangrejo, Indonesia”
 The 3rd UGSAS-GU Symposium 2014(Gifu), 2014/08/05

【Joint Department of Veterinary Medicine】

- [1] **Atoji Y**, Karim M.R.
 “Localization of vesicular glutamate transporter 3 mRNA in the brain and retina of pigeons”
 The 119nd ANAT ALLRIGHTS RESERVED (Shimotsukeshi) , 2014/03/27-29

- [2] **Ishiguro N**, Asai T, **Yanai T**.
 “Practical Veterinary Education: Training and Advanced Laboratory Experiments in Four Universities and Three National Institutes”
 13th Meeting of Asian Association of Veterinary Schools/ One Health Forum Korea 2014(Seoul), 2014/07
- [3] Kimura J, Rayamahji N, **Yanai T**.
 “Past, present and future of Asian Society of Zoo and Wildlife Medicine.”
 The 1st International Congress and Annual Meeting of Myanmar Veterinary Association (Yangon, Myanmar), 2014/02
- [4] Kimura J, Rayamajhi N, **Yanai T**, Sailasuta A.
 “ “A challenge for one-health education for Asian conservation medicine” by Asian Society of Conservation medicine (ASCM) and FAVA.”
 18th Federation of Asian Veterinary Association Congress(Singapore), 2014/11
- [5] Muhammad N, Murakami T, Ogawa S, **Inoshima Y**, **Ishiguro N**.
 “Long-term study of AA amyloidosis mechanism within and across the animal species”
 XIV International Symposium on Amyloidosis(Indianapolis, USA), 2014/04/27-05/01
- [6] Muhammad N, Murakami T, Ogawa S, **Inoshima Y**, **Ishiguro N**.
 “Long-term study of amyloid transmission within and across the animal species in murine AA amyloidosis model”
 The 157th meeting of the Japanese Society of Veterinary Science (Hokkaido University) , 2014/09/09-12
- [7] Onuma M, Rayamajhi N, Neagari Y, Kimura J, **Yanai T**.
 “New network for Asian conservation medicine.”
 The 63rd Annual meeting of Wildlife Disease Association(Albuquerque, USA), 2014
- [8] Rayamahji N, Sang Yoo H, Kimura J, **Yanai T**.
 “Characterization of cephalosporin resistance in enterobacteriae isolated farm.”
 The 1st International Congress and Annual Meeting of Myanmar Veterinary Association (Yangon, Myanmar), 2014/02
- [9] **Saito S**, **Atoji Y**.
 “NeuN immunoreactivity in the adult brain of *Xenopus laevis*”
 The 119nd ANAT ALLRIGHTS RESERVED (Shimotsukeshi) , 2014/03/27-29
- [10] **Shiina T**, Naitou K, Nakamori H, **Shimizu Y**.
 “INHIBITORY ACTIONS OF HYDROGEN SULFIDE ON CONTRACTIONS OF THE ESOPHAGEAL STRIATED MUSCLE”
 Third International Conference on Hydrogen Sulfide in Biology and Medicine(Kyoto), 2014/06/04-06
- [11] **Yanai T**, El-Habashi N, El-Nahass E, **Fukushi H**, **Sakai H**, Kimura J, Rayamajhi N.
 “Equine herpes virus 9 (EHV-9) as an emerging infectious agent in zoo animals.”
 The 63rd Annual meeting of Wildlife Disease Association(Albuquerque, USA), 2014
- [12] **Yanai T**, Murakami T, Ibi K, Goda M Wael, Kimura J, Rayamahji N, **Sakai H**, **Ishiguro N**.
 “An outbreak of AA amyloidosis in a growing hen farm in Japan.”
 The 1st International Congress and Annual Meeting of Myanmar Veterinary Association (Yangon, Myanmar), 2014/02
- [13] **Yanai T**, Rayamajhi N, Kimura J.
 “ “One health education” from Asian Society of Zoo and Wildlife Medicine (ASZWM).”
 13th Meeting of Asian Association of Veterinary Schools/ One Health Forum Korea 2014(Seoul), 2014/07
- [14] **Yanai T**, **Unno T**, Kimura J, Satou Y, Kondou N.
 “Starting of a civil-participating event “The world veterinary day” in Japan, a memory of 2001 to 2006.”
 18th Federation of Asian Veterinary Association Congress(Singapore), 2014/11

2) Academic lecture

【Course of Applied Life Science】

- [1] **Ando H.**
“Ganglioside Synthesis Makes for Raft Science”
Asia-Canada Glycoscience Meeting(Vancouver, Canada), 2014/05/31-06/01 (Invitation lecture)
- [2] **Ando H, Ishida H, Kiso M.**
“Diverse synthesis of gangliosides for exploring functional molecular complexes in the cell membrane.”
SFG-JSCR Joint Meeting 2014, Satellite I: Chemical Aspects of Glycobiology(Hilton Hawaiian Village Waikiki Beach Resort), 2014/11/16-19 (Invitation lecture)
- [3] **Ishida H.**
“Chemical Synthesis of Sialoglycosphingolipids.”
Frontiers in Chemical Sciences, Indian Institute of Technology Guwahati (India), 2014/12/04-06 (Invitation lecture)
- [4] **Ishida H, Imamura A, Ando H, Kiso M.**
“Chemical synthesis of neuritegenic gangliosides from echinoderms”
Sialoglyco2014(Australia), 2014/09/07-10 (Invitation lecture)
- [5] **Kiso M, Ishida H, Ando H.**
“Synthetic Gangliosides and Glycan Probes for Cell-Material Integration”
27th International Carbohydrate Symposium (ICS27) (The Indian Institute of Science, Bangalore, India), 2014/01/12-17 (Invitation lecture)
- [6] **Nagaoka S.**
“A novel hypocholesterolemic pentapeptide, lactostatin, inhibits cholesterol absorption via the suppression of ABCA1 gene expression in Caco-2 cells.”
105th American Oil Chemist’s Society (AOCS) Annual Meeting and Expo (San Antonio, USA), 2014/05/04-07 (Invitation lecture)
- [7] **Nagaoka S.**
“105th American Oil Chemist’s Society (AOCS) Annual Meeting and Expo”
Frontiers in Chemical Science (FICS) 2014, Indian Institute of Technology(Guwahatti, India), 2014/12/05-06 (Invitation lecture)
- [8] **Nakano K.**
“Sustainability Framework for Post-harvest Technology in Japan.”
30th celebration of Warmadawa University, Indonesia (Bali, Indonesia), 2014 (Invitation lecture)
- [9] **Nakano K.**
“Easy and Low-cost Evaluation Method for the Freshness of Green Beans Based on the Stachyose Detection.”
International Conference of Sustainable Agriculture, Food and Energy. (Bali, Indonesia), 2014 (Invitation lecture)
- [10] Suzuki T, **Ando H**, Makio H, Yamada Y, Kato R, Wakatsuki S, **Ishida H, Kiso M.**
“Synthesis of Selenium-Containing Glycan Probes and Its Application for the X-ray Structural Analysis of Glycan-Protein Complex.”
27th International Carbohydrate Symposium (ICS27) (The Indian Institute of Science, Bangalore, India), 2014/01/12-17 (Invitation lecture)



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