

Faculty of Applied Biological Sciences  
Gifu University

Annual Report of Research Activities 2012

Vol. 9

# CONTENTS

## Research Achievement

1 . Academic Paper .....	1
2 . Book .....	12

## Lectures, Conference Presentation, etc.

1 . Conference Presentation .....	14
2 . Academic lecture .....	17

## Research Achievement

### 1) Academic Paper

#### 【Course of Applied Life Science】

- [ 1 ] Azuma N, Chiba S, **Nakagawa T** and Sonoda T.  
“Development and usage of microsatellite markers for population analysis of *Corbicula japonica* in Japan.”  
*Plankton Benthos Res*, Vol.7, pp.151-157, 2012/10
- [ 2 ] Batubara, I., Kotsuka, S., Yamauchi, K., Kuspradini, H., **Mitsunaga, T.** and Darusman, L.K.,  
“TNF- $\alpha$ Production Inhibitory Activity, Phenolic, Flavonoid and Tannin Contents of Selected Indonesian Medicinal Plants, Research Journal of Medicinal Plant”  
*Research Journal of Medicinal Plant*, Vol.6, pp.406-415, 2012
- [ 3 ] Bhowmik, A., Ishimura, K., **Nakamura, K.**, and **Takamizawa, K.**  
“Degradation activity of *Clostridium* species DC-1 in the cis-1,2-dichloroethylene contaminated site in the presence of indigenous microorganisms and *Escherichia coli*.”  
*J. Material Cycle Waste Manag*, Vol.14, pp.212-219, 2012.
- [ 4 ] Cabanos, C., Ekyo, A., Amari, Y., Kato, N., Kuroda, M., **Nagaoka, S.**, Takaiwa, F., Utsumi, S. and Maruyama, N.  
“High-level production of Lactostatin, a hypocholesterolemic peptide, in transgenic rice using soybean A1aB1b as carrier.”  
*Transgenic Research*, Vol.22(3), pp.621-629, 2012/11
- [ 5 ] Chang J, Oikawa S, Ichihara G, Nanpei Y, Hotta Y, Yamada Y, Tada-Oikawa S, **Iwahashi H**, Kitagawa E, Takeuchi I, Yuda M, Ichihara S.  
“Altered gene and protein expression in liver of the obese spontaneously hypertensive/NDmcr-cp rat.”  
*Nutrition&Metabolism*, Vol.9(1), p.87, 2012/09/21
- [ 6 ] Darsman, H.S., Rahniwati, M., Sadiyah, S., Batubara, I., Darsman, I. and **Mitsunaga, T.**  
“Indonesian Kepel Fruit (*Stelechocarpus burahol*) as Oral Deodorant”  
*Research Journal of Medicinal Plant*, Vol.6, pp.180-188, 2012
- [ 7 ] Darusman LK, Batubara I., **Mitsunaga T.**, M Rahminiwati, E Djauhari, Yamauchi K.  
“Tyrosinase Kinetic Inhibition of Active Compounds from *Intsia palembanica*.”  
*Research Journal of Medicinal Plants*, Vol.6(8), pp.615-620, 2012
- [ 8 ] **Ebihara A**, **Nakagawa T**, Nakane C, Nabi NA, **Suzuki F**  
“Towards three-dimensional structural analysis of (pro)renin receptor.”  
*Front Biosci (Elite Ed)*, Vol. 4, pp.1150-1156, 2012/01
- [ 9 ] Fukui, H., Horie, M., Endoh, S., Kato, H., Fujita, K., Nishio, K., Komaba, L. K., Maru, J., Miyauchi, A., Nakamura, A., Kinugasa, S., Yoshida, Y., Hagihara, Y., **Iwahashi, H.**  
“Association of zinc ion release and oxidative stress induced by intratracheal instillation of ZnO nanoparticles to rat lung”  
*Chemico-Biological Interactions*, Vol.198(1-3), pp.29-37, 2012/05/26
- [ 10 ] Furukawa, K., Hattori, M., Ohki, T., Kitamura, Y., Kitade, Y. and **Ueno, Y.**  
“Nucleic acid probe containing fluorescent tricyclic base-linked acyclonucleoside for detection of single nucleotide polymorphisms”  
*Bioorg. Med. Chem*, Vol.20, pp.16-24, 2012.
- [ 11 ] Goto, T., Horita M., Nagai, H., Nagatomo, A., Nishida, N., Matsuura, Y. and **Nagaoka, S.**  
“Tiliroside, a glycosidic favonoid, inhibits carbohydrate digestion and glucose absorption in the gastrointestinal tract.”  
*Mol. Nutr. Food Res*, Vol.56, pp.435-445, 2012

- [ 12 ] Goto, T., Saito, Y., Morikawa, K., **Kanamaru, Y.** and **Nagaoka, S.**  
 “Epigallocatechin gallate changes mRNA expression level of genes involved in cholesterol metabolism in hepatocytes.”  
*Br.J.Nutr.*, Vol.197, pp.769-773, 2012
- [ 13 ] Haraguchi, T., Nakano, H., Tagawa, T., Ohki, T., **Ueno, Y.**, Yoshida, T. and Iba, H.  
 “A potent 2'-O-methylated RNA based microRNA inhibitor with unique secondary structures”  
*Nucleic Acids Res*, Vol.40, pp.1-13, 2012.
- [ 14 ] Harlinda Kuspradini, Ritmaleni, Dwi Susanto and **Tohru Mitsunaga**,  
 “Phytochemical and comparative study of anti microbial activity of *Lepisanthes amoena* leaves extract”  
*Journal of Biology, Agriculture and Healthcare*, Vol.2(11), pp.80-86, 2012
- [ 15 ] Hattori, M., Ohki, T., Yanase, E. and **Ueno, Y.**  
 “Fluorescence detection of single nucleotide polymorphisms using nucleic acid probe containing tricyclic base-linked acyclonucleoside”  
*Bioorg. Med. Chem. Lett.*, Vol.22, pp. 253-257, 2012.
- [ 16 ] Hirata, Y., Furuta, K., Suzuki, M., Oh-hashii, K., **Ueno, Y.** and Kiuchi, K.  
 “Neuroprotective cyclopentenone prostaglandins up-regulate neurotrophic factors in C6 glioma cells”  
*Brain Res*, Vol.1482, pp.91-100, 2012/10
- [ 17 ] Horie, M., Fukui, H., Fujita, K., Kato, H., Endoh, S., Nishio, K., Komada, K.L., Nakamura, A., Miyauchi, A., Shichiri, M., Ishida, N., Kinugasa, S., Niki, E., Yoshida, Y., **Iwahashi, H.**  
 “Association of the physical and chemical properties and the cytotoxicity of metal oxide nanoparticles: metal ion release, adsorption ability and specific surface area.”  
*Metallomics*, Vol.4(4), pp.350–360, 2012/06/15
- [ 18 ] Horie, M., Kato, H., Fujita, K., Endoh, S., **Iwahashi, H.**  
 “In Vitro Evaluation of Cellular Response Induced by Manufactured Nanoparticles.”  
*Chemical Research in Toxicology*, Vol.25, pp.605–619, 2012
- [ 19 ] Horie, M., Komada, K.L., Kato, H., Miyauchi, A., Nakamura, A., Yamamoto, K., Endoh, Fujita, K., S., Kinugasa, S, Mizuno, K., Hagiwara, Y., Yoshida, Y, **Iwahashi, H.**  
 “Evaluation of cellular influences induced by stable nanodiamond dispersion; the cellular influences of nanodiamond are small.”  
*Diamond&Related Materials*, Vol.24, pp.15-24, 2012/04
- [ 20 ] Takahashi, J., Waki, S., Matsumoto, R., Odake J., Miyaji, T., Tottori, J., Iwanaga T., and Iwahashi, H.  
 “Oligonucleotide Microarray Analysis of Dietary-Induced Hyperlipidemia Gene Expression Profiles in Miniature Pigs”  
*PLOS One*, Vol.7(5), p.1, 2012/01
- [ 21 ] Kadowaki Akio, **Iwamoto Satoshi, Yamauchi Ryo**  
 “Reaction products of [60]fullerene during the autoxidation of methyl linoleate in bulk phase”  
*Chem. Phys. Lipids*, Vol.165(2), pp.178-185, 2012/02
- [ 22 ] Kadowaki Akio, **Iwamoto Satoshi, Yamauchi Ryo**  
 “The antioxidative effect of fullerenes during the peroxidation of methyl linoleate in toluene”  
*Biosci.Biotechnol. Biochem.*, Vol.76(1), pp.212-214, 2012/01
- [ 23 ] Kasai T, Nakane D, **Ishida H, Ando H, Kiso M**, Miyata M.  
 “Role of binding in *Mycoplasma mobile* and *Mycoplasma pneumoniae* gliding analyzed through inhibition by synthesized sialylated compounds.”  
*J Bacteriol.*, Vol.195(3), pp.429-435, 2012/11/02
- [ 24 ] Kato T, **Suzuki F**, Park EY  
 “Display of the human (pro)renin receptor on *Bombyx mori* nucleopolyhedrovirus(BmNPV) particles using Bm cells.”  
*J Biosci Bioeng*, Vol.114(5), pp.564-569, 2012/11

- [ 25 ] Ko, H.J, Kim, K.Y., Min, Y.B., **Nishizu, T.**, Yun, Y.C. and Kim, H.T  
 “Effect of light transmission on composition and somatic cell count of raw milk”  
*Journal of Agriculture & Life Science*, Vol.46(1), pp.189-194, 2012
- [ 26 ] Horie, M., Fukui, H., Endoh, S., Maru, J., Miyauchi, A., Shichiri, M., Fujita, K., Niki, E., Yoshida, Y., Morimoto, Y., **Iwahashi, H.**  
 ”Comparison of acute oxidative stress on rat lung induced by nano and fine-scale, soluble and insoluble metal oxide particles: NiO and TiO<sub>2</sub>.”  
*Inhalation toxicology* 24:391-400, 2012
- [ 27 ] Matsuoka, T., Kawashima, T., Nakamura, T., **Kanamaru, Y.**, and **Yabe, T.**  
 “Isolation and characterization of proteases that hydrolyze royal jelly proteins from queen bee larvae of the honeybee, *Apis mellifera*.”  
*Apidologie*, Vol.43(6), pp.685-697, 2012
- [ 28 ] Mochizuki K, Misaki Y, Miyauchi R, Takabe S, Shimada M, Kuriki K, Ichikawa Y, Goda T  
 “A higher rate of eating is associated with higher circulating interleukin-1 $\beta$  concentrations in Japanese men not being treated for metabolic diseases.”  
*Nutrition*, Vol.28(10), pp.978-983, 2012/04/06
- [ 29 ] Nabi AH, Biswas KB, Nasrin Haque KM, Arai Y, **Nakagawa T**, **Ebihara A**, **Ichihara A**, Inagami T, **Suzuki F.**  
 “Acid-activated prorenin binds to (pro)renin receptor in vitro.”  
*Biochem Biophys Res Commun.*, Vol.428(4), pp.506-511, 2012/11/30
- [ 30 ] Nabi AN, Biswas KB, Arai Y, **Nakagawa T**, **Ebihara A**, Islam LN, **Suzuki F.**  
 “(Pro)renin receptor and prorenin: their plausible sites of interaction.”  
*Front Biosci. (Landmark Ed)*, Vol.(17), pp.389-395, 2012/01/01
- [ 31 ] **Nakagawa T**, Mitsui R, Tani A, Sasa K, Tashiro S, **Iwama T**, **Hayakawa T**, Kawai K.  
 “A Catalytic Role of XoxF1 as La<sup>3+</sup>-Dependent Methanol Dehydrogenase in *Methylobacterium extorquens* Strain AM1.”  
*PLoS ONE*, Vol.7(11), e50480, 2012/12
- [ 32 ] Nakashima, S., **Ando, H.**, Saito, R., Tamai, H., **Ishida, H.** and **Kiso, M.**  
 “Efficiently synthesizing lacto-ganglio-series gangliosides by using a glucosyl ceramide cassette approach: the total synthesis of ganglioside X<sub>2</sub>”  
*Chemistry-An Asian J*, Vol.5(7), pp.1041-1051, 2012/02/14
- [ 33 ] Neu, U., Hengel, H., Blaum, B. S., Schowalter, R. M., Macejak, D., Gilbert, M., Wakarchuk, W. W., **Imamura, A.**, **Ando, H.**, **Kiso, M.**, Arnberg, N., Garcea, R. L., Peters, T., Buck, C. B., Stehle, T.  
 “Structures of Merkel cell polyomavirus VP1 complexes define a sialic acid binding site required for infection”  
*PLoS Pathogens*, Vol.8(7), e1002738, 2012/07/26
- [ 34 ] Nohara, T., **Imamura, A.**, Yamaguchi, M., Hidari, K.I.P.J., **Suzuki, T.**, Komori, T., **Ando, H.**, **Ishida, H.** and **Kiso, M.**  
 “Design and synthesis of a novel ganglioside ligand for influenza A viruses”  
*Molecules*, Vol.17, pp.9590-9620, 2012/08/10
- [ 35 ] Rafiq K, Noma T, Fujisawa Y, Ishihara Y, Arai Y, Nabi AH, **Suzuki F**, Nagai Y, Nakano D, Hitomi H, Kitada K, Urushihara M, Kobori H, Kohno M, Nishiyama A.  
 “Renal sympathetic denervation suppresses de novo podocyte injury and albuminuria in rats with aortic regurgitation.”  
*Circulation*, Vol.125(11), pp.1402-1413, 2012/05/01
- [ 36 ] Shibata, A., **Ueno, Y.**, Iwata, M., Wakita, H., Matsuda, A. and Kitade, Y.  
 “Double-stranded oligonucleotides containing 5-aminomethyl-2'-deoxyuridine form thermostable anti-parallel triplexes with single-stranded DNA or RNA, Bioorg.”  
*Med. Chem. Lett*, Vol.22, pp.2681-2683, 2012.

- [ 37 ] Shiokawa, M., **Kanamaru, Y., Yabe, T.**, and Aoki, T.  
 “Effect of lactose crystallization on the change in the viscosity of concentrated skim milk at low temperature.  
*Milchwissenschaft*, Vol.67 (4), pp.351-354, 2012.
- [ 38 ] Shiokawa, M., **Kanamaru, Y., Yabe, T.**, and Aoki, T.  
 “Increase in the viscosity of concentrated artificial casein micelle solution during storage at low temperature”  
*Milk Science*, Vol.61(3), pp.199-204, 2012
- [ 39 ] Takahashi, J., Takatsu, A., Misawa, M., **Iwahashi, H.**  
 “Whole Blood RNA analysis, Aging and Disease”  
*Blood Cell - An Overview of Studies in Hematology*, DOI: 10.5772/48226, 2012/09/21
- [ 40 ] Tako, M., Dobashi, Y., Tamaki, T., Konishi, T., Yamada, M., **Ishida, H.** and **Kiso, M.**  
 “Identification of rare 6-deoxy-D-altrose from an edible mushroom (*Lactarius lividatus*).”  
*Carbohydr. Res.*, Vol.350, pp. 25-30, 2012.
- [ 41 ] Tamai, H., **Ando, H., Ishida, H.** and **Kiso, M.**  
 “First synthesis of a pentasaccharide moiety of ganglioside GAA-7 containing unusually modified sialic acids through the use of N-Troc-sialic acid derivative as a key unit”  
*Organic Lett.*, Vol.14, pp.6342-6345, 2012/11/12
- [ 42 ] Tandishabo, K., **Nakamura, K.**, Umetsu, K. and **Takamizawa, K.**  
 “Distribution and role of *Coprothermobacter* spp. in anaerobic digesters.”  
*Journal of Bioscience and Bioengineering*, Vol.114, pp.518-520, 2012
- [ 43 ] Umma Khair Salma Khanama, Shinya Oba, **Emiko Yanase**, Yoshiya Murakami  
 “Phenolic acids, flavonoids and total antioxidant capacity of selected leafy vegetables”  
*J. funct. Foods*, Vol.4, pp.979-987, 2012/10
- [ 44 ] Watanabe N, Bokuda K, Fujiwara T, **Suzuki T**, Mito A, Morimoto S, Jwa SC, Egawa M, Arai Y, **Suzuki F**, Sago H, Ichihara A.  
 “Soluble (pro)renin receptor and blood pressure during pregnancy: a prospective cohort study.”  
*Hypertension*, Vol.60(5), pp.1250-1256, 2012/11/01
- [ 45 ] Xijier, Mori, Y., Fukuoka, M., Cairangzhoma, Inagaki, M., **Iwamoto, S., Yabe, T.**, and **Kanamaru, Y.**  
 “Comparison of efficacy of the alpha-lactalbumin from equine, bovine, and human milk on cell growth for intestinal IEC-6 cells”  
*Biosci. Biotechnol. Biochem*, Vol.76 (4), pp.843-846, 2012.
- [ 46 ] Yamamoto K, Isa Y, **Nakagawa T**, and **Hayakawa T**.  
 “Folic acid fortification ameliorates hyperhomocysteinemia caused by a vitamin B(6)-deficient diet supplemented with L-methionine. Biosci.”  
*Biotechnol. Biochem*, Vol.76, pp.1861-1865, 2012/10
- [ 47 ] **Yanase, E.**, Nishimoto, K., Kamatari, Y. and Nakatsuka, S.  
 “Isolation of a new xanthylum-related pigment from adzuki beans *Vigna angularis*.”  
*Biosci. Biotechnol. Biochem.*, Vol.76(8), pp.1571-1572, 2012/08
- [ 48 ] Young-Cheol Chang<sup>1</sup>, Ken Sawada, **Kazuhiro Takamizawa** and Shintaro Kikuchi  
 “Biochemical and Molecular Characterization of a PCE-Dechlorinating Microorganism”  
*Enzyme Engineering*, Vol.1(1), 2012/05/21
- [ 49 ] Young-Cheol, **Takamizawa, Kazuhiro**, Cho, Hoon, Kikuchi, Shintaro  
 “Characterizations of dissimilatory Arsenate-reducing bacteria”  
*Korean Society for Biotechnology and Bioengineering Journal*, Vol.27, pp.75-85, 2012
- [ 50 ] Yuhua Bao, **Emiko Yanase**, Shin-ichi Nakatsuka  
 “Efficient isolation of 24-methylenecycloartanyl ferulate, one of the major two components of gamma-oryzanol from rice bran”  
*JJFCS*, Vol.19(3), pp.209-214, 2012

- [ 51 ] Zhang, L., **Nishizu, T.**, Hayakawa, S., Nakashima, R., Goto, K.  
 “Effects of different drying conditions on water absorption and gelatinization properties of pasta”  
*Food Bioprocess Technology*, Springer-Verlag, 2012

**【 Course of Agricultural and Environmental Science 】**

- [ 1 ] Aiello, D., Vitale, A., and **Hyakumachi, M.**, Polizzi, G.  
 “Molecular characterization and pathogeniity of binucleate *Rhizoctonia* AG-F associated to the watermelon vine decline in Italy.”  
*Eur J Plant Pathol*, Vol.134, pp.161-165, 2012 ( doi:10.1007/s10658-012-9973-9. )
- [ 2 ] Amoah A. A., **M. Senge, S. Miyagawa** and **K. Itou**  
 “Effects of Soil Fertility Management on Growth, Yield, and Water-Use Efficiency of Maize (*Zea mays* L.) and Selected Soil Properties.”  
*Communications in Soil Science and Plant Analysis*, Vol.43(6), pp.924-935, 2012/03/27
- [ 3 ] Amoah, A.A., **S. Miyagawa** and **N. Kawakubo**  
 “Effect of Supplementing Inorganic Fertilizer with Organic Fertilizer on Growth and Yield of Rice – Cowpea Mixed Crop”  
*Plant Production Science*, Vol.15, pp.109-117, 2012/01/31
- [ 4 ] Aoki, T., Tanaka, F., Suga, H., **Hyakumachi, M.**, Scandiani, M.M., and O'Donnell, K.  
 “*Fusarium azukicola* sp. nov., an exotic azuki bean root-rot pathogen in Hokkaido, Japan.”  
*Mycologia*, Vol.104, pp.1068-1084, 2012 ( doi:10.3852/11-303. )
- [ 5 ] Chookhongkha, N., **S. Miyagawa**, Y. Jirakiattikul and S. Photchanachai  
 “Chili Growth and seed productivity as affected by chitosan”  
*Proceedings of International Conference on agriculture Technology and Food Science(ICATFS2012)*, pp.146-149, 2012/11/17
- [ 6 ] Hagimori, M., Nagasaka, K., Ojima, K., Abe, J.-i., **Shimazu, T.**, Hamamoto, H., Kamenno, T., Kumakura, H.  
 “Development and Implementation of an Environmentally Conscious System for Producing Cruciferous Vegetables by Small Farms in a Hilly and Mountainous Area of Western Japan”  
*Japan Agricultural Research Quarterly*, Vol.46(1), pp.15-25, 2012
- [ 7 ] Inoue M., Saito, F., **Tsuchida, K.** & Goka, K.  
 “Potential increase in mating frequency of queens in feral colonies *Bombus terrestris* introduced into Japan.”  
*Naturwissenschaften*, Vol.99, pp.853-861, 2012.
- [ 8 ] KonDo, Y., Naka, H. & **Tsuchida, K.**  
 “Pheromones and body coloration affect mate recognition in the Japanese nine-spotted moth *Amata fortunei* (Lepidoptera: Arctiidae).”  
*Journal of Ethology*, Vol.30, pp.301-308, 2012.
- [ 9 ] 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, published online*, Vol.20, 2012/12
- [ 10 ] Li, Y., Liu, H. and **Matsubara, Y.**  
 “Cultivar Identification by RAPD Analysis in *Epidendrum*.”  
*Acta Hort.*, Vol.937, pp.605-608, 2012

- [ 11 ] Maruyama K, Todaka D, Mizoi J, Yoshida T, Kidokoro S, Matsukura S, Takasaki H, Sakurai T, **Yamamoto YY**, Yoshikawa K, Kojima M, Sakakibara H, Shinozaki K, Yamaguchi-Shinozaki K  
 “Identification of cis-acting promoter elements in cold- and dehydration-induced transcriptional pathways in Arabidopsis, rice and soybean”  
*DNA Research*, Vol.19, pp.37-49, 2012/01/01
- [ 12 ] **Matsubara, Y.**, Li, Y., Okada, T. and Maya, M.A.  
 “Factors on induced systemic disease resistance in mycorrhizal strawberry plants.”  
*Acta Hort.*, Vol.926, pp.497-502, 2012
- [ 13 ] **Matsumura S**, Arlinghaus R, Dieckmann U  
 “Standardizing selection strengths to study selection in the wild: a critical comparison and suggestions for the future.”  
*BioScience*, Vol.62, pp.1039-1054, 2012/12/10
- [ 14 ] Maya, M.A, Rabbani, M.G., Mahboob, M.G. and **Matsubara, Y.**  
 “Assessment of genetic relationship among 15 citrus fruits using RAPD.”  
*Asian J. Biotech.*, Vol.4, pp.30-37, 2012
- [ 15 ] Miki Fujita, Yasunari Fujita, Satoshi Iuchi, Kohji Yamada, **Yuriko Kobayashi**, Kaoru Urano, Masatomo Kobayashi, Kazuko Yamaguchi-Shinozaki, and Kazuo Shinozaki  
 “Natural variation in a polyamine transporter determines paraquat tolerance in Arabidopsis. (2012) Proc.”  
*Natl. Acad. Sci. (U. S. A.)*, Vol.109(6), pp.6343-6347, 2012/03/09
- [ 16 ] M. M. Elsharkawy, **M. Shimizu**, H. Takahashi, **M. Hyakumachi**  
 “Induction of systemic resistance against *Cucumber mosaic virus* by *Penicillium simplicissimum* GP17-2 in *Arabidopsis* and tobacco”  
*Plant Pathology*, Vol.61(5), pp.964–976, 2012/10
- [ 17 ] M. M. Elsharkawy, **M Shimizu**, H Takahashi, **M Hyakumachi**  
 “The plant growth-promoting fungus *Fusarium equiseti* and the arbuscular mycorrhizal fungus *Glomus mosseae* induce systemic resistance against *Cucumber mosaic virus* in cucumber plants”  
*Plant and Soil*, Vol.361, pp.397-409, 2012/12
- [ 18 ] Nahiyani, A.S.M. and **Matsubara, Y.**  
 “Tolerance to *Fusarium* root rot and changes in antioxidative ability in mycorrhizal asparagus plants.”  
*HortSci.*, Vol.47, pp.356-360, 2012
- [ 19 ] Okada, T. and **Matsubara, Y.**  
 “Influence of arbuscular mycorrhizal fungi and sodium chloride on tolerance to *Fusarium* root rot and antioxidative abilities in asparagus plants.”  
*J. Japan. Soc. Hort. Sci.*, Vol.81, pp.257-262, 2012
- [ 20 ] Okada, T. and **Matsubara, Y.**  
 “Tolerance to *Fusarium* root rot and the changes in free amino acid contents in mycorrhizal asparagus plants.”  
*HortSci.*, Vol.47, pp.751-754, 2012
- [ 21 ] Okada, T., Yokoyama, M. and **Matsubara, Y.**  
 “Influence of deep sea water on functional constituents and disease tolerance in mycorrhizal asparagus plants.”  
*Acta Hort.*, Vol.936, pp.181-188, 2012
- [ 22 ] **Onishi T.**, K. Nakamura, H. Horino, T. Adachi, T. Mitsuno  
 “Evaluation of denitrification rate of paddy fields”  
*Journal of Hydrology*, Vol.436-437, pp.111-119, 2012/03
- [ 23 ] **Onishi T.**, M. Yoh, H. Shibata and S. Nagao  
 “Improvement of runoff simulation of the Amur River”  
*Global Environmental Research*, pp.173-182, 2012



- [ 24 ] Saldajeno, M.G.B., Ito, M., and **Hyakumachi, M.**  
 “Interaction between the plant growth-promoting fungus *Phoma* sp. GS8-2 and the arbuscular mycorrhizal fungus *Glomus mosseae*: impact on biocontrol of soil-borne diseases, microbial population, and plant growth.”  
*Australasian Plant Pathol*, Vol.41, pp.271-281, 2012 ( doi:10.1007/s13313-011-0101-7. )
- [ 25 ] Shuri K, Saika K, Junko K, Michiharu K, Nagamitsu T, Iwata H, Tsumura Y, **Mukai Y**  
 “Impact of negative frequency-dependent selection on mating pattern and genetic structure: a comparative analysis of the S-locus and nuclear SSR loci in *Prunus lannesiana* var. *speciosa*.”  
*Heredity* 2012, Vol.109(3), p.188, 2012/09
- [ 26 ] S. Pongpan, **A. Komiyama**, T. Sangteian, C. Maknual, P. Patanaponpaiboon, and V. Suchewaboripont  
 “High primary productivity under submerged soil raises the net ecosystem productivity of a secondary mangrove forest in eastern Thailand.”  
*Journal of Tropical Ecology*, Vol.28, pp.303-306, 2012/05
- [ 27 ] **Tadano R**, Nakamura A, Kino K  
 “Analysis of genetic divergence between closely related lines of chickens.”  
*Poultry Science*, Vol.91, pp.327-333
- [ 28 ] Takato H, **Shimidzu M**, Ashizawa Y, Takei H, Suzuki S.  
 “An acyl-CoA-binding protein from grape that is induced through ER stress confers morphological changes and disease resistance in *Arabidopsis*.”  
*J Plant Physiol*. Vol.170(6), pp.591-600, 2012/12
- [ 29 ] Uddin, M. & **Tsuchida, K.**  
 “Colony structure and reproductive sharing among queens in a tropical paper wasp, *Polistes olivaceus*.”  
*Insectes Sociaux*, Vol.59, pp.401-410, 2012
- [ 30 ] Uddin, M. & **Tsuchida, K.**  
 “Genetic population structure of the paper wasp *Polistes olivaceus* (Hymenoptera: Vespidae) in Bangladesh.”  
*Population Ecology*, Vol.54, pp.103-114, 2012
- [ 31 ] Wattanakulpakin, P., S. Photchanachai, K. Ratanakhanokchai, K. L. Kyu, P. Ritthichai and **S. Miyagawa**  
 “Hydropriming effects on carbohydrate metabolism, antioxidant enzyme activity and seed vigor of maize (*Zea mays* L.)”  
*Afr. J. Biotechnol*, Vol.11, pp.3537-3547, 2012/02/28
- [ 32 ] Wattanakulpakin, P., S. Photchanachai, **S. Miyagawa** and K. Ratanakhanokchai  
 “Loss of maize seed vigor as affected by biochemical changes during hydropriming”  
*Crop Science*, Vol.52, pp.2783-2793, 2012/11/30
- [ 33 ] Yoshiharu Sawaki, Tomonori Kihara-Doi, **Yuriko Kobayashi**, Nobuyuki Nishikubo, Yasufumi Kobayashi,, Tetsu Kawazu, **Hiroyuki Koyama**, Shigeru Sato  
 “Characterization of Al-responsive citrate excretion and citrate-transporting MATEs in *Eucalyptus camaldulensis*.”  
*Planta*, Vol.237(4), pp.979-989, 2012/11
- [ 34 ] Yoshioka Y, Ichikawa H, Naznin HA, Kogure A, **Hyakucachi M**  
 “Systemic resistance induced in *Arabidopsis thaliana* by *Trichoderma asperellum* SKT-1, a microbial pesticide of seedborne diseases of rice”  
*Pest Management Science*, Vol.68, pp.60-66, 2012/01/01

**【Joint Department of Veterinary Medicine】**

- [ 1 ] Abdo, W., Kakizoe, Y., Ryono, M., Dover, S., R., **Fukushi, H.**, Okuda, H., Kano, R., Shibahara, T., Okada, E., **Sakai, H.** and **Yanai, T.**  
 “Pulmonary zygomycosis with *Cunninghamella bertholletiae* in a killer whale (*Orcinus orca*).”  
*J. Comp. Pathol.*, Vol.147(1), pp.94-99, 2012/06

- [ 2 ] Abdo, W., Kawachi, T., **Sakai, H., Fukushi, H.**, Kano, R., Shibahara, T., Shirouzu, H., Kakizoe, Y., Tuji, H. and **Yanai, T.**:  
 “Disseminated mycosis in a killer whale (*Orcinus orca*).”  
*J. Vet. Diag. Invest.*, Vol.24, pp.211-218, 2012/01
- [ 3 ] Almadaly, E., El-kon, I., Heleil, B., Fattouh, E., Mukojima, K., Ueda, T., Hoshino, Y., **Takasu, M.** and **Murase, T.**  
 “Methodological factors affecting the results of staining frozen-thawed fertile and subfertile Japanese Black bull spermatozoa for acrosomal status.”  
*Anim. Reprod. Sci.*, Vol.136, pp.23-32, 2012.
- [ 4 ] Asa, S., A., Murai, A., **Murakami, M.**, Hoshino, Y., **Mori, T., Maruo, K.**, Khater, A., El-sawak, E. Abd el-Aziz, **Yanai, T** and **Sakai, H.**  
 “Expression of platelet-derived growth factor and its receptors in spontaneous canine hemangiosarcoma and cutaneous hemangioma.”  
*Histol. Histopathol.*, Vol.27, pp.601-607, 2012.
- [ 5 ] **Atoji Y**, Karim MR.  
 “Expression of the neocortical marker, ROR $\beta$ , in the entopallium and field L2 of adult chicken”  
*Neurosci. Lett.*, Vol.521(2), pp.119-124, 2012/07/19
- [ 6 ] **Atoji Y**, Wild JM.  
 “Afferent and efferent projections of the mesopallium in the pigeon (*Columba livia*).”  
*J. Comp. Neurol.*, Vol.520(4), pp.717-741, 2012/03/01
- [ 7 ] Chiou, Shih-Pin, Yokoyama, N., Igarashi, I., **Kitoh, K.** and **Takashima, Y.**  
 “Serum of *Babesia rodhaini* infected mice down regulates catalase activity of healthy erythrocytes.”  
*Exp. Parasitol.*, Vol.132, pp. 327-333, 2012.
- [ 8 ] Dehara, Y., Hashiguchi, Y., Matsubara, K., **Yanai, T.**, Kubo, M. and Kumazawa, Y.  
 “Characterization of squamate olfactory receptor genes and their transcripts by the high-throughput sequencing approach.”  
*Genome Biol. Evol.*, Vol.4, pp.602–616, 2012.
- [ 9 ] El-Dakhly, K., El-Nahass, E., Sudo, A., Uchida, T., Kakogawa, M., Hirata, A., **Sakai, H.** and **Yanai, T.**  
 “Helminth fauna of a Japanese golden eagle, *Aquila Chrysaetos Japanica*.”  
*J. Zoo Wild. Med.*, Vol.43, pp.966-970, 2012/04/01
- [ 10 ] El-Dakhly, K., Inui, K., Urano, N., El-Nahass, E., Kakogawa, M., Hirata, A., Kimura, J., **Sakai, H.** and **Yanai, T.**  
 “Occurrence of the subcutaneous mite, *Hypodectes propus* (Acarina:Hypoderatidae) in the grey heron, *Ardea cinerea* (Aves:ciconiformes) a new host record in Japan.”  
*J. Zoo Wild. Med.*, Vol.43, pp.953-955, 2012/04/01
- [ 11 ] El-Dakhly, K.M., El-Hadid1, S. M. A., El-Askalany1, M. A. and **Yanai, T.**:  
 “An abattoir-based study on helminths of slaughtered sheep in Beni-Suef, Egypt. Beni-Suef University J.”,  
*App. Sci.*, Vol.1, pp.49-60, 2012
- [ 12 ] El-Dakhly, K., Nahass, E., Shimizu, H., Tuji, H., **Sakai, H.** and **Yanai, T.**  
 “Occurrence of *thelazia callipaeda* and *toxocara cati* in an imported European lynx (*Lynx lynx*).”  
*J. Zoo Wild. Med.*, Vol.43, pp.632-635, 2012/04/01
- [ 13 ] El-Dakhly, K., Nahass, E., Uni, S., Tuji, H., **Sakai, H.** and **Yanai, T.**  
 “Levels of infection of gastric nematodes in a flock of great cormorants (*Phalacrocorax carbo*) from Lake Biwa, Japan.”  
*J. Helminthol.*, Vol.86, pp.54-63, 2012/04/01
- [ 14 ] Elhelaly, A.E., **Inoshima, Y.** and **Ishiguro, N.**  
 “Alternation of cell responses to PrP<sup>Sc</sup> in prolonged cell culture and its effect on transmission of PrP<sup>Sc</sup> to neural cells.”  
*Arch. Virol.*, Vol.158(3), pp.651-658, 2012/11/17

- [ 15 ] El-Nahass, E., El-Habashi, N., Nayel, M., Kasem, S., **Fukushi, H.**, Hirata, A., **Sakai, H.** and **Yanai, T.**  
 “Kinetics and neuropathogenicity of equine herpesvirus 9 (EHV-9) by oral inoculation in hamsters.”  
*J. Com. Pathol.*, Vol.146, pp.211-222, 2012/04/01
- [ 16 ] Fukuda M., Kuga K., Miyazaki A., **Suzuki T.**, Tasei K., Aita T., Mase M., **Sugiyama M.** and Tsunemitsu, H.  
 “Development and application of one-step multiplex reverse transcription PCR for simultaneous detection of five diarrheal viruses in adult cattle. “  
*Arch. Virol.*, Vol.157(6), pp.1063-1069, 2012.
- [ 17 ] Fukuoka, H., Sasaki, J., **Kamishina, H.**, Sato, R., Yasuda, J., Katayama, M., Tohyama, K., Ohshida, M. and Goryo, M.  
 “Gliomatosis cerebelli in a Saint Bernard dog.”  
*J. Comp. Pathol.*, Vol.47, pp.37-41, 2012.
- [ 18 ] **Fukushi, H.**, Yamaguchi, T. and Yamada, S.  
 “Complete genome sequence of equine herpesvirus type 9.”  
*J. Virol.*, Vol.86(24), p.13822, 2012/12
- [ 19 ] Harada, N., Ochi, K., Yaosaka, N., Teraoka, H., Hiraga, T., Iwanaga, T., **Unno, T.**, Komori, S., Yamada, M., Kitazawa, T.  
 “Immunohistochemical and functional studies for M3 muscarinic receptors and cyclooxygenase-2 expressed in the mouse atrium.”  
*Autonomic and Autacoid Pharmacology*, Vol.32(3), pp.41-52, 2012/10/01
- [ 20 ] Hoshino, Y., **Mori, T.**, **Sakai, H.**, **Murakami, M.**, and **Maruo, K.**  
 “Palliative radiation therapy in a dog with malignant trichoepithelioma.”  
*Aust. Vet. J.*, Vol.90, pp.210-213, 2012/04/01
- [ 21 ] **Ishiguro N.**, **Inoshima Y.**, Sasaki, M., Matsui, A., Hongo, H., Takahashi, R., Prasetyaningtyas, W.E., Djuwita, I., Agungpriyono, S., Supratikno, Kusdiantoro, Labiro, E., Budipitojo, T., Wendo, W.D. Musana, D.K. and Saili, T.  
 “mtDNA variation and human-mediated introgression of indigenous *Sus* populations on several Indonesian islands”  
*Mammal Study*, Vol.37(1), pp.1-10, 2012/03/01
- [ 22 ] Kasanga, C. J., Yamaguchi, T., Munang'andu, H. M., Wambura, P. N., Ohya, K. and **Fukushi, H.**  
 “Genomic sequence of infectious bursal disease virus from Zambia suggests evidence for genome re-assortment in nature.”  
*Onderstepoort J. Vet. Res.*, Vol.79(2), Special section p1, 2012.
- [ 23 ] Katayama, M., Nishijima, N., Okamura, Y., Katayama, R., Yamashita, T., **Kamishina, H.** and Uzuka, Y.  
 “Interaction of clarithromycin with cyclosporine in cats: pharmacokinetic study and case report.”  
*J. Feline Med. Surg.*, Vol.14, pp.257-261, 2012.
- [ 24 ] Kato, Y., Notake, N., Kimura, J., **Murakami, M.**, Hirata, A., **Sakai, H.** and **Yanai, T.**  
 “Orbital embryonal rhabdomyosarcoma with metastasis in a young dog.”  
*J. Comp. Pathol.*, Vol.147, pp.191-194, 2012/04/01
- [ 25 ] Kimura, T., Sekido, M., Chimura, N., Shibata, S., Kondo, N., **Kamishina, H.** and **Maeda, S.**  
 “Production of GM-CSF mediated by cysteine protease of Der f in canine keratinocytes.”  
*J. Vet. Med. Sci.*, Vol.74, pp.1033-1036, 2012.
- [ 26 ] Miyawaki, S., **Washizu, M.**, **Maeda, S.**, **Shibata, S.**, **Watanabe, K.** and **Yamazoe, K.**  
 “Portal vein aneurysm in a dog.”  
*J. Vet. Med. Sci.*, Vol.74(9), pp.1191–1193, 2012.
- [ 27 ] Murai, A., Asa A.S., Kodama, A., Hirata, A., **Yanai, T.** and **Sakai, H.**  
 “Constitutive phosphorylation of the mTORC2/Akt/4E-BP1 pathway in newly derived canine hemangiosarcoma cell line.”  
*BMC Vet Res*, 2012(8), p.128, 2012/04/01

- [ 28 ] Murai, A., Asa, S.A., Kodama, A., **Sakai, H.**, Hirata, A. and **Yanai, T.**  
 “Immunohistochemical analysis of the Akt/mTOR/ 4E-BP1 signalling pathway in canine haemangiomas and haemangiosarcomas.”  
*J. Com. Pathol.*, Vol.147, pp.430-440, 2012/04/01
- [ 29 ] Murai, A., Inoue, M., **Sakai, H.** and **Yanai, T.**  
 “Pathological features of Mycobacterium kansasii infection in black bearded Sakis (Chiropotes Satanas).”  
*J. Comp. Pathol.*, Vol.147, pp.566-569, 2012/04/1
- [ 30 ] Murai, A., **Murakami, M.**, **Sakai, H.**, Shimizu, H., Murata, K. and **Yanai, T.**  
 “Glomerular lipidosis accompanied by renal tubular oxalosis in wild and laboratory-reared Japanese rock ptarmigans (Lagopus mutus japonicus).”  
*Avian Dis.*, Vol.55, pp.709-713, 2012/04/01
- [ 31 ] Murai, A., **Nishii, N.**, Morita, T. and Yuki, M.  
 “GH-producing mammary tumors in two dogs with acromegaly.”  
*J Vet Med Sci.*, Vol.74, pp.771-774, 2012.
- [ 32 ] Murakami T., **Inoshima Y.**, Kobayashi Y., Matsui T., Inokuma H. and **Ishiguro N.**  
 “Atypical AA amyloid deposits in bovine AA amyloidosis”  
*Amyloid*, Vol.19(1), pp.15-20, 2012/03/01
- [ 33 ] Nakagawa K., **Ito N.**, Masatani T., Abe M., Yamaoka S., Ito Y., Okadera K. and **Sugiyama M.**  
 “Generation of a live rabies vaccine strain attenuated by multiple mutations and evaluation of its safety and efficacy.”  
*Vaccine*, Vol.30, pp.3610-3617, 2012.
- [ 34 ] Nakamori C., **Shiina T.**, **Shimizu Y.**  
 “Postnatal changes in vagal control of esophageal muscle contractions in rats.”  
*Life Sci.*, Vol.90, pp.495-501, 2012.
- [ 35 ] Nayel, M., El-Dakhly, K., Aboulaila, M., Elsify, M., Hassan, H., Ibrahim, E., Salama, A. and **Yanai, T.:**  
 “The use of different diagnostic tools for Babesia and Theileria parasites in cattle in Menofia, Egypt.”  
*Parasitol. Res.*, Vol.111, pp.1019-1024, 2012.
- [ 36 ] **Nishii, N.**, **Maeda, H.**, Murahata, Y., Matsuu, A. and Hikasa, Y.  
 “Experimental hyperlipemia induces insulin resistance in cats.”  
*J Vet Med Sci.*, Vol.74(2), pp.267-269, 2012/02
- [ 37 ] Noguchi, S., **Mori, T.**, Hoshino, Y., Yamada, N., Nakagawa, T., Sasaki, N., Akao, Y. and **Maruo, K.**  
 “Comparative study of anti-oncogenic microRNA-145 in canine and human malignant melanoma.”  
*J. Vet. Med. Sci.*, Vol.74(1), pp.1-8, 2012.
- [ 38 ] Noguchi, S., **Mori, T.**, Otsuka, Y., Yamada, N., Yasui, Y., Kumazaki, M., **Maruo, K.** and Akao, Y.  
 “Anti-oncogenic MicroRNA-203 induces senescence by targeting E2F3 in human melanoma cells.”  
*J. Biol. Chem.*, Vol.287, pp.11769-11777, 2012.
- [ 39 ] Ohmori Y., **Atoji Y.**, **Saito S.**, Ueno H., **Inoshima Y.** and **Ishiguro N.**  
 “Differences in extrinsic innervation patterns of the small intestine in the cattle and sheep”  
*Auton. Neurosci.*, Vol.167(1-2), pp.39-44, 2012/04/03
- [ 40 ] Ono T., Yamaguchi Y., Oguma T., Takayama E., **Takashima Y.**, Tadakuma T. and Miyahira Y.  
 “Actively-induced antigen-specific CD8 + T cells by epitope-bearing parasite pre-infection but not prime/boost virus vector vaccination could ameliorate the course of Plasmodium yoelii blood-stage infection.”  
*Vaccine*, Vol.30, pp.6270-6278, 2012.
- [ 41 ] **Sakai, H.**, **Murakami, M.**, Mishima, H., Hoshino, Y., **Mori, T.**, **Maruo, K.**, and **Yanai, T.**  
 “Cytologically atypical anal sac adenocarcinoma in a dog.”  
*Vet. Clin. Pathol.*, Vol.41, pp.291-294, 2012/04/01
- [ 42 ] **Sakai, H.**, **Murakami, M.**, Mishima, H., Hoshino, Y., **Mori, T.**, **Maruo, K.**, and **Yanai, T.**  
 “PubMed16.Palliative radiation therapy in a dog with malignant trichoepithelioma.”  
*Aust Vet J*, Vol.90(6), pp.210-213, 2012

- [ 43 ] Sasaki, T., Tsubakishita, S., Tanaka, Y., Ohtsuka, M., Hongo, I., **Fukata, T.**, Kabeya, H., Maruyama, S. and Hiramatsu, K.  
 “Population genetic structures of *Staphylococcus aureus* isolates from cats and dogs in Japan, J.”  
*Clinical Microbiol.*, Vol.50, pp.2152-2155, 2012.
- [ 44 ] Sato, R., Kobayashi, S., Abe, Y., **Kamishina, H.**, Oda, S., Yasuda, J. and Sasaki, J.  
 “Clinical effects of bovine lactoferrin on two canine cases with familial neutrophil dysfunction.”  
*J. Vet. Med. Sci.*, Vol.74, pp.1177-1183, 2012.
- [ 45 ] **Shiina T.**, Shima T., Suzuki Y., Worl, J., **Shimizu Y.**  
 “Neural regulation of esophageal striated muscle in the house musk shrew (*Suncus murinus*).”  
*Auton. Neurosci.*, Vol.168, pp.25-31, 2012.
- [ 46 ] **Shiina T.**, Shima T., Suzuki Y., Worl, J., **Shimizu Y.**  
 “Neural regulatory mechanisms of esophageal motility and its implication for GERD.”  
*Auton Neurosci*, Vol.168(1-2), pp.25-31, 2012/06/21
- [ 47 ] Suzuki, Y., Umemura, T., Hibi, D., Inoue, T., Jin, M., **Sakai, H.**, Nohmi, T., **Yanai, T.**, Nishikawa, A. and Ogawa, K.  
 “Possible involvement of genotoxic mechanisms in estragole-induced hepatocarcinogenesis in rats.”  
*Arch Toxicol.*, Vol.86, pp.1593-1601, 2012/04/01
- [ 48 ] Suzuki, Y., Umemura, T., Ishii, Y., Hibi, D., Inoue, T., Jin, M., **Sakai, H.**, Kodama, Y., Nohmi, T., **Yanai, T.**, Nishikawa, A. and Ogawa, K.  
 “Possible involvement of sulfotransferase 1A1 in estragole-induced DNA modification and carcinogenesis in the livers of female mice.”  
*Mutat. Res.*, Vol.12, pp.23-28, 2012.
- [ 49 ] Takahashi, R., **Ishiguro, N.**, Matsui, A., Anezaki, T. and Hongo, H.  
 “Morphological and molecular phylogenetic characteristics of dwarf *Sus* specimens from the Noguni shell middens in the Ryukyu Islands.”  
*Anthropological Science*, Vol.120, pp.39-50, 2012.
- [ 50 ] **Takasu, M.**, Hiramatsu, N., Tozaki, T., Kakoi, H., Nakagawa, T., Hasegawa, T., Huricha, Maeda, M., **Murase, T.** and Mukoyama, H.  
 “Genetic characterization of endangered Kiso horse using 31 microsatellite DNAs.”  
*J. Vet. Med. Sci.*, Vol.74, pp.161-166, 2012.
- [ 51 ] **Takasu, M.**, Hiramatsu, N., Tozaki, T., Kakoi, H., Hasegawa, T., Maeda, M., Huricha, **Kusuda, S.**, **Doi, O.**, Murase, T., Mukoyama, H.  
 “Population statistics and biological traits of endangered Kiso horse.”  
*Journal of Equine Science*, Vol.22, pp.67-72, 2011.
- [ 52 ] Tanaka, Y., Sadaike, T., **Inoshima, Y.** and **Ishiguro, N.**  
 “Characterization of PrP<sup>Sc</sup> transmission from immune cells to neuronal cells.”  
*Cell. Immunol.*, Vol.279, pp.145-150, 2012/10
- [ 53 ] Terashita T., **Saito S.**, Nabeka H., Hato N., Wakisaka H., Shimokawa T., Kobayashi N., Gyo K., Matsuda S.  
 “Prosaposin-derived peptide alleviates ischemia-induced hearing loss.”  
*Acta Otolaryngol*, Vol.133(3), pp.462-468, 2012.
- [ 54 ] Tsukui, T., Sakaguchi, M., Kurata, K., **Maeda, S.**, Ohmori, K., Masuda, K., Tsujimoto, H. and Iwabuchi, S.  
 “Measurement for canine IgE using canine recombinant high affinity IgE receptor alpha chain (FcεpsilonRIalpha).”  
*J. Vet. Med. Sci.*, Vol.74, pp.851-856, 2012.
- [ 55 ] **Watanabe, K.**, Miyawaki, S., Kanayama, M., Takagi, M., **Murakami, M.**, Sugikata, Y. and **Yamazoe K.**  
 “First case of salivary mucocele originating from minor salivary gland of the soft palate in a dog.”  
*The Journal of Veterinary Medical Science.*, Vol.74(1), pp.71-74, 2012/01/01

- [ 56 ] Wiltzer L., Larrous F., Oksayan S., **Ito N.**, Marsh G., Wang L. F., Blondel D., Bourhy H., Jans D. and Moseley G. W.  
 “Conservation of a unique mechanism of immune evasion across the lyssavirus genus.”  
*J. Virol.*, Vol.86, pp.10194-10199, 2012.
- [ 57 ] Yamada, N., **Mori, T., Murakami, M.**, Noguchi, S., **Sakai, H.**, Akao, Y., **Maruo, K.**  
 “Fascin-1 expression in canine cutaneous and oral melanocytic tumours.”  
*Vet. Comp. Oncol.*, Vol.10, pp.303-311, 2012/04/01
- [ 58 ] Yamada, T., **Inoshima, Y.**, Matsuda, T. and **Ishiguro N.**  
 “Comparison of methods for isolating exosomes from bovine milk”  
*J. Vet. Med. Sci.*, Vol.74(11), pp.1523-1525, 2012/11/25
- [ 59 ] Yamamoto-Suzuki, Y., Sakura, Y., Fujimura, Y., Matsumoto, M., Hamako, J., Kokubo, T., **Kitagawa, H.**, Kawsar, S. M. A., Fujii, Y., Ozeki, Y., Matsuhita, F. and Matsui, T.  
 “Identification and recombinant analysis of botorocetin-2, a snake venom cofactor for von Willebrand factor-induced platelet agglutination.”  
*Biochemistry*, Vol.51, pp.5329-5338, 2012.
- [ 60 ] Yoshikawa, Y., Horiuchi, M., **Ishiguro, N.**, Kadohira, M., Kai, S., Mizusawa, H., Nagata, C., Onodera, T., Sata, T., Tsutsui, T., Yamada, M. and Yamamoto, S.  
 “Alternative BSE Risk Assessment Methodology for Beef and Beef Offal Imported into Japan.”  
*J. Vet. Med. Sci.*, Vol.74, pp.959-968, 2012.
- [ 61 ] Yu, M. H., Kasem, S., Yoshizaki, N., Pagamjav, O., Yamaguchi, T., Ohya, K. and **Fukushi, H.**  
 “Functional characterization of EUL47 in productive replication, morphogenesis and infectivity of equine herpesvirus 1.”  
*Virus Res.*, Vol.163(1), pp.310-319, 2012/01

## 2 ) Book

### 【 Course of Applied Life Science 】

- [ 1 ] Inagaki, M., Xijier, Nakamura, Y., Takahashi, T., **Yabe, T.**, Nakagomi, T., Nakagomi, O., and **Kanamaru, Y.**  
 “Production and functional properties of dairy products containing lactophorin and lactadherin.”  
*ed. Yehia El-Samragy, Food Additive*, InTech, Croatia, pp.49-64, 2012

### 【 Course of Agricultural and Environmental Science 】

- [ 1 ] **Takeo Onishi**, Humio Mitsudera, and Keisuke Uchimoto  
 “Numerical Simulation of Dissolved Iron Production and Transport in the Amur River and the Sea of Okhotsk”  
*The Dilemma of Boundaries*, pp.87-105, 2012/05
- [ 2 ] **Takeo Onishi**, Makoto Taniguchi, Takayuki Shiraiwa, Takahiro Endo, and Yasunori Hanamatsu  
 “The Dilemma of Boundaries in Environmental Science and Policy: Moving Beyond the Traditional Watershed Concept”  
*The Dilemma of Boundaries*, pp.249-256, 2012/05

### 【 Joint Department of Veterinary Medicine 】

- [ 1 ] **Nishii N.** and **Kitagawa H**  
 “Autoantibodies: Detection, Pathogenicity and Health Implications Chapter 5.”  
*Approaches for Detection and Analysis of Natural Autoantibodies.*, Nova Science Publishes, pp.95-108, 2012

[ 2 ] **SHIINA Takahiko, SHIMIZU Yasutake**

“Neural regulatory mechanisms of esophageal motility and its implication for GERD.”

*Gastroesophageal Reflux Disease ed. Mauro Bortolotti, pp.3-20, 2012*

Lectures, Conference Presentation, etc.

1 ) Conference Presentation

【Course of Applied Life Science】

[ 1 ] **Ando, Hiromune**

“Approaching to Elusive Biological Functions of Carbohydrates from Organic Chemistry.”

The 1st UGSAS-GU Symposium 2012-Recent Topics in Agricultural Science and Biotechnology-. The United Graduate School of Agricultural Science, Bldg. 6th Floor(Gifu University), 2012/07/20

[ 2 ] **Ando, H.**, Suzuki, K., Komura, N., Chadda, R., Tsuboi, H., **Ishida, H.**, Kusumi, A., **Kiso, M.**

“Development of fluorescent ganglioside probes for characterizing raft meso-domains in the plasma membrane using single-molecule tracking”

4th iCeMS Retreat(Osaka), 2012/08/31-09/01

[ 3 ] Iwayama, Y., **Ando, H.**, **Ishida, H.**, **Kiso, M.**

“The First Total Synthesis of Ganglioside HPG-7”

26th International Carbohydrate Symposium (ICS2012)( Madrid, Spain), 2012/07/22-27

[ 4 ] Khandra. F., **K. Nakano**

“Favorable Transportation Conditions Preventing Quality Loss of ‘Jiro’ persimmon for exports”

2nd Asia Pacific Symposium on Postharvest Research, Education, and Extension, 2012/09

[ 5 ] **Kohei Nakamura**, Toshihide Toyama, Yoichi Kamagata, **Kazuhiro Takamizawa**

“How does a thermophilic hydrogenotrophic methanogen predominate in the subsurface environments?: Analysis of ability in H<sub>2</sub> utilization at the cellular level”

The 4th Japan-Korea International Symposium on Microbial Ecology, p161, 2012/09

[ 6 ] Komura, N., **Ando, H.**, Chadda, R., Ikeda, T., Suzuki, K., **Ishida, H.**, Kusumi, A., **Kiso, M.**

“Development of Ganglioside Probes for Live Imaging of Lipid Rafts The 4th Asian Communication for Glycobiology and Glycotechnology (ACGG)”

The 4th Asian Communication for Glycobiology and Glycotechnology (ACGG)( Jeju Island, South Korea), 2012/10/29-31

[ 7 ] Liamnimitr, N., Photchanachai, S. and **Nakano, K**

“Effect of citric acid browning of soybean sprouts during storage.”

outheast Asia Symposium Quality Management in Postharvest Systems, 2012/02

[ 8 ] Inagaki, M., Ohno, S., Yamada, K., Takahashi, T., Nakamura, Y., Matsuda, T., **Yabe, T.**, **Suzuki, T.**, **Sugiyama, M.**, Nakagomi, T., Nakagomi, O., and **Kanamaru, Y.**

“The inhibitory mechanism of bovine lactophorin against human rotavirus gastroenteritis.”

World Congress of Microbes-2012, Guangzhou(China), 2012/07/30

[ 9 ] **Nakagawa T.**, Mitsui R, Tani A, Sasa K, Tashiro S, **Iwama T.**, **Hayakawa T.**, Kawai K

“A catalytic role of XoxF1 as La<sup>3+</sup>-dependent methanol dehydrogenase in *Methylobacterium extorquens* strain AM1”

Gordon Reserch Conference-Molecular Basis of Microbial One-Carbon Metabolism, 2012/08

[ 10 ] **Naknao, K.**

“Freshness Evaluation Method for Spinach Leaves Based on the Lipid Peroxidation Rate”

2nd Asia Pacific Symposium on Postharvest Research, Education, and Extension, 2012/09

[ 11 ] Nishida, M., Nagami, K., **Kanamaru, Y.**, and **Yabe, T.**

“Expression of heparan sulfate 6-O-sulfotransferase-1 is stimulated by adrenaline via Src-ERK signaling pathway in L-M cells”

2012 Annual Meeting of the Society for Glycobiology, San Diego(California, USA), 2012/11/11-14

[ 12 ] **Nishizu, T.**, Nishimura, Y., Suzuki, C., Kato, K., **Goto, K.**

“Thermodynamically-based evaluation method of whipped cream texture.”

WCOS2012 (Sasebo), 2012/10/02.



- [ 13 ] **Nishizu, T.**, Omori, Y., Isaji, E., Kawabata, M., Zhang, L., Nguyen, T.H.L., **Goto, K.**  
 “Changes in ultrasonic phase velocity during milk coagulation process.”  
 2012 CIGR Section VII International Technical Symposium on “Innovating the Food Value Chain” (South Africa), 2012/11/28.
- [ 14 ] Sako, H., **Nishizu, T.**, Tashiro, M., Nguyen, T.H.L., Zhang, L., **Goto, K.**  
 “Evaluation of bread brittleness by plateau in the stress-strain curve.”  
 2012 CIGR Section VII International Technical Symposium on "Innovating the Food Value Chain" (South Africa), 2012/11/27.
- [ 15 ] Suganuma, Y., Matsubara, N., Iwayama, Y., Ueki, A., **Imamura, A., Ando, H.**, Tsubata, T., **Ishida, H.** and **Kiso, M.**  
 “Synthesis and biological evaluation of the mimics of cis ligand for CD22.”  
 The 4th Asian Communication for Glycobiology and Glycotechnology (ACGG), Jeju Island, South Korea, p-38, 2012/10/29-30(Poster).
- [ 16 ] **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.”  
 4th iCeMS Retreat, Hotel Hankyu Expo Park (Osaka), 2012/08/31-09-01 (Poster).
- [ 17 ] **Suzuki, T.**, Hayashi, C., **Ando, H., Ishida, H., Kiso, M.**  
 “Synthetic Study on Selenium-Containing Glycans.”  
 26th International Carbohydrate Symposium (ICS2012) , P384, Madrid, Spain, 2012/07/22-27 (Poster).
- [ 18 ] Tamai, H., **Ando, H., Ishida, H., Kiso, M.**  
 “The Total Synthesis of Neurogenic Ganglioside GAA-7 from Starfish *Asterias amurensis versicolor*”  
 26th International Carbohydrate Symposium (ICS2012)( Madrid, Spain, 2012/07
- [ 19 ] Pal, R., Komura, N., **Imamura, A., Ando, H., Ishida, H., Kiso, M.**  
 “Synthesis of SSEA-1, SSEA-3 and SSEA-4 for developing bio-compatible-nanomaterials, PP-39”  
 The 4th Asian Communication for Glycobiology and Glycotechnology (ACGG), Jeju Island, South Korea, 2012/10/29-31 (Poster).
- [ 20 ] Pal, R., Komura, N., **Imamura, A., Ando, H., Ishida, H.**, Tokura, Y., Ueno, T., Kitagawa, S., Jung, D., Nakatsuji, N., **Kiso, M.**  
 “Synthesis of SSEA-1, SSEA-3 and SSEA-4 for developing bio-compatible-nanomaterials”  
 4th iCeMS Retreat(Osaka), 2012/08/31-09/01
- [ 21 ] Rita Pal, Naoko Komura, **Akihiro Imamura, Hiromune Ando, Hideharu Ishida**, Yu Tokura, Takafumi Ueno, Susumu Kitagawa, Dongju Jung, Norio Nakatsuji, **Makoto Kiso**  
 “Synthesis of SSEA-1, SSEA-3 and SSEA-4 for developing bio-compatible- nanomaterials”  
 The 4th Asian Communication for Glycobiology and Glycotechnology (ACGG)( Jeju Island, South Korea), 2012/10
- [ 22 ] Tamai, H., **Ando, H., Ishida, H., Kiso, M.**  
 “The Total Synthesis of Neurogenic Ganglioside GAA-7 from Starfish *Asterias amurensis versicolor*.”,  
 26th International Carbohydrate Symposium (ICS2012) , P388, (Madrid, Spain), 2012/07/ 22-27 (Poster).
- [ 23 ] Ueki, A., Mino, Y., Un, K., Yoshida, M., Kawakami, S., **Ando, H., Ishida, H.**, Yamashita, F., Hashida, M. and **Kiso, M.**  
 “Synthesis and Evaluation of Glyco-coated Liposomes as DDS Carriers.”  
 Annual Symposium on Nanobiotechnology Kyoto Cell-Material Integration, Shiran Kaikan (Kyoto University), 2012/11/08-09 (Poster).
- [ 24 ] Ueki, A., Mino, Y., Un, K., Yoshida, M., Kawakami, S., **Ando, H., Ishida, H.**, Yamashita, F., Hashida, M., **Kiso, M.**  
 “Synthesis of Novel Glycosylated Cholesterols and Evaluation of Glyco-coated Liposomes for DDS”  
 26th International Carbohydrate Symposium (ICS2012)( Madrid, Spain), 2012/07/22-27

- [ 25 ] Ueki, A., Un, K., Yoshida, M., Kawakami, S., **Ando, H., Ishida, H.**, Yamashita, F., Hashida, M., **Kiso, M**  
 “Synthesis and evaluation of 6-phospho-mannosylated liposomes for positive targeting in DDS. “  
 4th iCeMS Retreat, Hotel Hankyu Expo Park (Osaka), 2012/08/31-09/01 (Poster).
- [ 26 ] Yuki Suganuma, Naoko Matsubara, Yuki Iwayama, Akiharu Ueki, **Akihiro Imamura, Hiromune Ando,**  
**Takeshi Tsubata, Hideharu Ishida and Makoto Kiso**  
 “Synthesis and biological evaluation of the mimics of cis ligand for CD22”  
 The 4th Asian Communication for Glycobiology and Glycotechnology (ACGG)( Jeju Island, South Korea),  
 2012/10
- [ 27 ] Zhang, L., Kishigami, H., Kato, A., **Goto, K., Nishizu, T.**  
 “Observation of Spaghetti Shrinkage during Drying by X-ray  $\mu$ CT”  
 16th IUFOST (Brazil), 2012/08/08.

**【 Course of Agricultural and Environmental Science 】**

- [ 1 ] Adachi I, **Kusuda S**, Mase C, Yoshizaki Y, Nagao E, Matsuyama K, Matsui K, Kotouge T, Akiba Y, **Doi O**  
 “Pregnancy detection and endocrinological regulation of parturition in Tsushima leopard cat (*Prionailurus bengalensis euptilurus*)”  
 Non-invasive Monitoring of Hormones (3rd Annual International Society of Wildlife Endocrinology Meeting), 2012/09/23-26
- [ 2 ] Ayaka Hieno, Naoki Sato, Daniel Lang, Stefan Rensing, Tomoaki Nishiyama, Mitsuyasu Hasebe, Junichi Obokata, **Yoshiharu Yamamoto Y**  
 “ppdb, Plant Promoter Database”  
 1st International Symposium on Plant Environmental Sensing, 2012/03
- [ 3 ] Ayaka Hieno, Naznin Most. Hushna Ara, Yohei Yoshioka, **Mitsuro Hyakumachi**, Satoshi Iuchi, Masatomo Kobayashi, Nobutaka Mitsuda, Masaru Ohme-Takagi, **Yoshiharu Y. Yamamoto**  
 “In silico prediction of transcriptional regulatory elements for stomatal regulation in disease resistance induced by plant growth promoting fungi”  
 77th CSHL Symposium: The Biology of Plants 2012(Cold Spring Harbor Laboratory), 2012/06
- [ 4 ] Hushna Ara Naznin, Yohei Yoshioka, Ayaka Hieno, **Mitsuro Hyakumachi**, and **Yoshiharu Y. Yamamoto**  
 “In silico analysis of transcriptional regulatory elements related with disease resistance”  
 XV International Congress of Molecular Plant-Microbe Interactions, 2012/07
- [ 5 ] **Masanobu Kimura**  
 “Sabo works in urban areas”  
 International workshop on current status and future issues of urban erosion control works(Kangwon National University), 2012/09
- [ 6 ] Maya, M.A., Ito, M. and **Matsubara, Y.**  
 “Tolerance to high temperature stress and anthracnose in mycorrhizal cyclamen.”  
 International Symposium on Orchid and Ornamental Plants, 2012/01
- [ 7 ] **Miyagawa, S.**  
 “The effects of trees on rice in the rainfed paddy field”  
 Special seminar of Division of System Approach in Agriculture(Khon Kaen University), 2012/08
- [ 8 ] **Tadano R**, Tsudzuki M  
 “Genetic structure of domestic chicken populations”  
 33rd Conference of the International Society for Animal Genetics(Cairns, Australia), 2012/07
- [ 9 ] Yang Yan, **Takeo Onishi, Ken Hiramatsu**  
 “Simulating snow water equivalent and runoff by using SWAT and MODIS land surface temperature data in Russia Fareast area”  
 American Geophysical Union Fall meeting(USA), 2012

- [ 10 ] Yohei Yoshioka, **Mitsuro Hyakucachi**, **Yuriko Kobayashi**, **Hiroyuki Koyama**, Satoshi Iuchi, Masatomo Kobayashi, Yutaka Suzuki, Sumio Sugano, Tetsuya Sakurai, Kazuo Shinozaki, Nobutaka Mitsuda, Masaru Ohme-Takagi, Yasuomi Tada, **Yoshiharu Y. Yamamoto**  
 “Plant promoter analysis in the genomic age”  
 77th CSHL Symposium: The Biology of Plants 2012(Cold Spring Harbor Laboratory), 2012/06
- [ 11 ] Yohei Yoshioka, Naznin Most. Hushna Ara, Ayaka Hieno, **Masafumi Shimizu**, **Mitsuro Hyakumachi**&**Yoshiharu Yamamoto**  
 “Prediction of transcriptional regulatory elements for systemic resistance induced by a plant growth promoting fungus *Penicillium simplicissimum* GP17-2 based on microarray data”  
 国際生物防除学会, 2012/06
- [ 12 ] Yusaku Sakai, Cheng-Ri Zhao, **Yoshiharu Y. Yamamoto**  
 “Large-scale analysis of transcription start sites of *Arabidopsis thaliana* by next generation sequencer”  
 1st International Symposium on Plant Environmental Sensing, 2012/03

**【Joint Department of Veterinary Medicine】**

- [ 1 ] Tomoaki Murakami, **Yasuo Inoshima**, Masakazu Inagaki, Eigo Sakamoto, Syouzou Sakamoto, **Tokuma Yanai**, **Naotaka Ishiguro**  
 “Potential induction of vaccine-associated amyloid A amyloidosis in white young hens”  
 XIII International Symposium on Amyloidosis, pp.109-110, 2012/05

2 ) Academic lecture

**【Course of Applied Life Science】**

- [ 1 ] **Ishida, H**  
 “Chemical synthesis of unique gangliosides and bacterial lipooligosaccharides for the study on Guillain Barré syndrome.”  
 Sialoglyco 2012 International Symposium, Building of Humanities and Social Sciences, Academia Sinica, (Taiwan), 2012/09/9-12 (招待講演).
- [ 2 ] **Kiso, Makoto**  
 “Synthetic gangliosides and analogs: Versatile tools to elucidate the cell functions of sialoglycans”  
 Commemorative Symposium on the 20th Anniversary of the Mizutani Foundation for Glycoscience  
 Glycoscience : diversity and integration ~ 生命多様性の統合的理解に向けた糖質科学 ~ (東京コンファレンスセンター : 品川) , 2012/11/28-29 (招待講演)



# GIFU UNIVERSITY

Faculty of Applied Biological Sciences

Gifu University

Annual Report of Research Activities 2012 Vol.9

---

February 25, 2014

Publisher Faculty of Applied Biological Sciences  
Gifu University  
1-1 Yanagido, Gifu City 501-1193

Edit Chairman : Mukai Y  
Commissioner : Doi O, Tsuchida K, Yabe T, Yanase E, Ito K,  
Kato S, Shimizu M, Sakai H, Ohya K, takeuchi I  
Ishikawa T(the person in charge)

---