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PUBLICATIONS BY THE STAFF OF THE GRADUATE SCHOOL OF VETERINARY MEDICINE

Laboratory of Anatomy

Original articles

- 1) Chihara, M., Otsuka, S., Ichii, O. and Kon, Y. 2013. Vitamin A deprivation affects the progression of the spermatogenic wave and initial formation of the blood-testis barrier, resulting in irreversible testicular degeneration in mice. *J. Reprod. Dev.*, **59**: 525-535.
- 2) Kosenda, K., Ichii, O., Otsuka, S., Hashimoto, Y. and Kon, Y. 2013. BXSB/MpJ-Yaa mice develop autoimmune dacryoadenitis with the appearance of inflammatory cell marker messenger RNAs in the lacrimal fluid. *Clin. Experiment. Ophthalmol.*, **41**: 788-797.
- 3) Onouchi, S., Ichii, O., Otsuka, S., Hashimoto, Y. and Kon, Y. 2013. Analysis of duodenojejunal flexure formation in mice: implications for understanding the genetic basis for gastrointestinal morphology in mammals. *J. Anat.*, **223**: 385-398.
- 4) Chihara, M., Ikebuchi, R., Otsuka, S., Ichii, O., Hashimoto, Y., Suzuki, A., Saga, Y. and Kon, Y. 2013. Mice stage-specific claudin 3 expression regulates progression of meiosis in early stage spermatocytes. *Biol. Reprod.*, **89**: 3.
- 5) Kimura, J., Ichii, O., Otsuka, S., Sasaki, H., Hashimoto, Y. and Kon, Y. 2013. Close relations between podocyte injuries and membranous proliferative glomerulonephritis in autoimmune murine models. *Am. J. Nephrol.*, **38**: 27-38.
- 6) Nakamura, T., Otsuka, S., Ichii, O., Sakata, Y., Nagasaki, K., Hashimoto, Y. and Kon, Y. 2013. Relationship between numerous mast cells and early follicular development in neonatal MRL/MpJ mouse ovaries. *PLoS One.*, **8**: e77246.

Publications other than original articles

- 1) Ichii O. 2013. Anatomy and Physiology. Chapter I. *Small animal dental, oral and maxillofacial disease*. pp. 9-23 (in japanese).
- 2) Otsuka S. 2013. Anatomy and Physiology. Chapter I. *Small animal dental, oral and maxillofacial disease*. pp. 24-38 (in japanese).
- 3) Kon Y. 2013. Oral Examination. Chapter II. *Small animal dental, oral and maxillofacial disease*. pp. 39-51 (in japanese).
- 4) Ichii, O. 2013. Analysis of microRNAs in the kidney diseases. Chapter II Basic nephrology, C Molecular biology-2. *Annual Review Kidney*. pp.80-87.

Laboratory of Physiology

Original articles

- 1) Ponmanickam, P., Archunan, G., Achiraman, S., Sankar, R., Saito, T. and Habara, Y. 2013. Preputial gland activates olfactory receptor neurons in rat: Ca imaging study using laser scanning confocal microscopy. *Indian. J. Biochem. Biophys.*, **50**: 242-246.
- 2) Sakamoto, K. Q., Takahashi, A., Iwata, T., Yamamoto, T., Yamamoto, M. and Trathan, P. N. 2013. Heart rate and estimated energy expenditure of flapping and gliding in black-browed albatrosses. *J. Exp. Biol.*, **216**: 3175-3182.

Laboratory of Biochemistry

Original articles

- 1) Tanno, S., Terao, A., Okamatsu-Ogura, Y. and Kimura, K. 2013. Hypothalamic prepro-rexin mRNA level is inversely correlated to the non-rapid eye movement sleep level in high-fat diet-induced obese mice. *Obes. Res. Clin. Pract.*, **7**: e251-e257. (<http://dx.doi.org/10.1016/j.orcp.2013.01.005>)
- 2) Tsukiyama-Kohara, K., Katsume, A., Kimura, K., Saito, M. and Kohara, M. 2013. 4E-BP1 regulates the differentiation of white adipose tissue. *Genes Cells*, **18**: 602-607. (doi: 10.1111/gtc.12059).
- 3) Okamatsu-Ogura, Y., Fukano, K., Tsubota, A., Uozumi, A., Terao, A., Kimura, K. and Saito, M. 2013. Thermogenic ability of uncoupling protein 1 in beige adipocytes in mice. *PLoS One*, **8**: e84229. (doi: 10.1371/journal.pone.0084229).
- 4) Toda, C., Shiuchi, T., Kageyama, H., Okamoto, S., Coutinho, E. A., Sato, T., Okamatsu-Ogura, Y., Yokota, S., Takagi, K., Tang, L., Saito, K., Shioda, S. and Minokoshi, Y. 2013. Extracellular signal-regulated kinase in the ventromedial hypothalamus mediates leptin-induced glucose uptake in red-type skeletal muscle. *Diabetes*, **62**: 2295-2307. (doi: 10.2337/db12-1629).
- 5) Wang, T., Kusudo, T., Takeuchi, T., Yamashita, Y., Kontani, Y., Okamatsu, Y., Saito, M., Mori, N. and Yamashita, H. 2013. Evodiamine inhibits insulin-stimulated mTOR-S6K activation and IRS1 serine phosphorylation in adipocytes and improves glucose tolerance in obese/diabetic mice. *PLoS One*, **8**: e83264. (doi: 10.1371/journal.pone.0083264).
- 6) Sasaki, T., Shimpuku, M., Kitazumi, T., Hiraga, H., Nakagawa, Y., Shibata, H., Okamatsu-Ogura, Y., Kikuchi, O., Kim, H. J., Fujita, Y., Maruyama, J., Susanti, V. Y., Yokota-Hashimoto, H., Kobayashi, M., Saito, M. and Kitamura, T. 2013. Miglitol prevents diet-induced obesity by stimulating brown adipose tissue and energy expenditure independent of preventing the digestion of carbohydrates. *Endocr. J.*, **60**: 1117-1129. (<http://dx.doi.org/10.1507/endocrj.EJ13-0333>).
- 7) Pavlik, A., Slama, P., Knoll, A., Dufek, A., Kimura, K. and Subrt, J. 2013. Effect of missense mutation of leptin gene on serum leptin concentration and some blood metabolic parameters in Czech pied bulls. *Bulgarian Journal of Agricultural Science*, **19**: 1425-1430.

Publications other than original articles

- 1) Okamatsu-Ogura, Y. and Kimura, K. 2013. Developmental mechanism and physiological role of brown and beige adipocytes. *Bioindustry*, **30**: 4-10. (in Japanese).
- 2) Okamatsu-Ogura, Y. 2013. Comparative biology of Uncoupling Protein 1. *The Lipid*, **25**: 29-35. (in Japanese).
- 3) Okamatsu-Ogura, Y. 2013. Roles of Uncoupling protein 1 in mammals. In: Moeru Kassuyokushibou no hushigi, pp.80-95, Saito, M. eds., NAP Ltd., Tokyo. (in Japanese).

Laboratory of Pharmacology

Original articles

- 1) Iwasaki, T., Otsuguro, K., Kobayashi, T., Ohta, T. and Ito, S. 2013. Endogenously released 5-HT inhibits A and C fiber-evoked synaptic transmission in the rat spinal cord

- by the facilitation of GABA/glycine and 5-HT release via 5-HT_{2A} and 5-HT₃ receptors. *Eur. J. Pharmacol.*, **702**: 149–157.
- 2) Adachi, N., Yoshida, T., Nin, F., Ogata, G., Yamaguchi, S., Suzuki, T., Komune, S., Hisa,

Y., Hibino, H. and Kurachi, Y. 2013. The mechanism underlying maintenance of the endocochlear potential by the K⁺-transport system in the fibrocytes of the inner ear. *J. Physiol.*, **591**: 4459–4472.

Laboratory of Microbiology

Original articles

- 1) Yamamoto, N., Soda, K., Sakoda, Y., Okamatsu, M. and Kida, H. 2013. Proteins of duck influenza virus responsible for acquisition of pathogenicity in chickens. *Virus Res.*, **173**: 294–298.
- 2) Yamamoto, N., Sakoda, Y., Okamatsu, M. and Kida, H. 2013. Polymerase complex with lysine at position 627 of the PB2 of influenza virus A/Hong Kong/483/97 (H5N1) efficiently transcribes and replicates virus genes in mouse cells. *Virus Res.*, **178**: 404–410.
- 3) Watanabe, T., Kiso, M., Fukuyama, S., Nakajima, N., Imai, M., Yamada, S., Murakami, S., Yamayoshi, S., Iwatsuki-Horimoto, K., Sakoda, Y., Takashita, E., McBride, R., Noda, T., Hatta, M., Imai, H., Zhao, D., Kishida, N., Shirakura, M., de Vries, R. P., Shichinohe, S., Okamatsu, M., Tamura, T., Tomita, Y., Fujimoto, N., Goto, K., Katsura, H., Kawakami, E., Ishikawa, I., Watanabe, S., Ito, M., Sakai-Tagawa, Y., Sugita, Y., Uraki, R., Yamaji, R., Einfeld, A. J., Zhong, G., Fan, S., Ping, J., Maher, E. A., Hanson, A., Uchida, Y., Saito, T., Ozawa, M., Neumann, G., Kida, H., Odagiri, T., Paulson, J. C., Hasegawa, H., Tashiro, M. and Kawaoka, Y. 2013. Characterization of H7N9 influenza A viruses isolated from humans. *Nature*, **501**: 551–555.
- 4) Shimizu, M., Yanase, S., Myint, C., Okamatsu, M., Sakoda, Y., Kida, H. and Takaku, H. 2013. Influenza virus-like particles containing HA, NA, and M1 induced protection in chickens against a lethal challenge with the highly pathogenic H5N1 avian influenza virus. *J. Vaccines Vaccin.*, **4**: 201.
- 5) Shichinohe, S., Okamatsu, M., Yamamoto, N., Noda, Y., Nomoto, Y., Honda, T., Takikawa, N., Sakoda, Y. and Kida, H. 2013. Potency of an inactivated influenza vaccine prepared from a non-pathogenic H5N1 virus against a challenge with antigenically drifted highly pathogenic avian influenza viruses in chickens. *Vet. Microbiol.*, **164**: 39–45.
- 6) Shichinohe, S., Okamatsu, M., Sakoda, Y. and Kida, H. 2013. Selection of H3 avian influenza viruses with SAalpha2,6Gal receptor specificity in pigs. *Virology*, **444**: 404–408.
- 7) Sakurai, A., Takayama, K., Nomura, N., Munakata, T., Yamamoto, N., Tamura, T., Yamada, J., Hashimoto, M., Kuwahara, K., Sakoda, Y., Suda, Y., Kobayashi, Y., Sakaguchi, N., Kida, H., Kohara, M. and Shibasaki, F. 2013. Broad-spectrum detection of H5 subtype influenza A viruses with a new fluorescent immunochromatography system. *PLoS One*, **8**: e76753.
- 8) Pham, V. L., Nakayama, M., Itoh, Y., Ishigaki, H., Kitano, M., Arikata, M., Ishida, H., Kitagawa, N., Shichinohe, S., Okamatsu, M., Sakoda, Y., Tsuchiya, H., Nakamura, S., Kida, H. and Ogasawara, K. 2013. Pathogenicity of pandemic H1N1 influenza A virus in immunocompromised cynomolgus macaques. *PLoS One*, **8**: e75910.
- 9) Okamatsu, M., Sakoda, Y., Hiono, T., Yamamoto, N. and Kida, H. 2013. Potency of a vaccine prepared from A/swine/Hokkaido/2/1981 (H1N1) against A/Narita/1/2009 (H1N1) pandemic influenza virus strain. *Virology*, **444**: 4459–4472.

- 10:** 47.
- 10) Okamoto, M., Nishi, T., Nomura, N., Yamamoto, N., Sakoda, Y., Sakurai, K., Chu, H. D., Thanh, L. P., Van Nguyen, L., Van Hoang, N., Tien, T. N., Yoshida, R., Takada, A. and Kida, H. 2013. The genetic and antigenic diversity of avian influenza viruses isolated from domestic ducks, muscovy ducks, and chickens in northern and southern Vietnam, 2010–2012. *Virus Genes*, **47**: 317–329.
 - 11) Okamoto, M., Feng, F., Ohyanagi, T., Nagahori, N., Someya, K., Sakoda, Y., Miura, N., Nishimura, S. and Kida, H. 2013. Fluorescence polarization-based assay using N-glycan-conjugated quantum dots for screening in hemagglutinin blockers for influenza A viruses. *J. Virol. Methods*, **187**: 390–394.
 - 12) Nishi, T., Okamoto, M., Sakurai, K., Chu, H. D., Thanh, L. P., Nguyen, L. V., Hoang, N. V., Thi, D. N., Sakoda, Y. and Kida, H. 2013. Genetic analysis of an H5N2 highly pathogenic avian influenza virus isolated from a chicken in a live bird market in Northern Vietnam in 2012. *J. Vet. Med. Sci.*, **76**: 85–87.
 - 13) Nakayama, M., Shichinohe, S., Itoh, Y., Ishigaki, H., Kitano, M., Arikata, M., Pham, V. L., Ishida, H., Kitagawa, N., Okamoto, M., Sakoda, Y., Ichikawa, T., Tsuchiya, H., Nakamura, S., Le, Q. M., Ito, M., Kawaoka, Y., Kida, H. and Ogasawara, K. 2013. Protection against H5N1 highly pathogenic avian and pandemic (H1N1) 2009 influenza virus infection in Cynomolgus monkeys by an inactivated H5N1 whole particle vaccine. *PLoS One*, **8**: e82740.
 - 14) Motohashi, Y., Igarashi, M., Okamoto, M., Noshi, T., Sakoda, Y., Yamamoto, N., Ito, K., Yoshida, R. and Kida, H. 2013. Antiviral activity of stachyflin on influenza A viruses of different hemagglutinin subtypes. *Virol. J.*, **10**: 118.
 - 15) Maruyama, J., Okamoto, M., Soda, K., Sakoda, Y. and Kida, H. 2013. Factors responsible for pathogenicity in chickens of a low-pathogenic H7N7 avian influenza virus isolated from a feral duck. *Arch. Virol.*, **158**: 2473–2478.
 - 16) Kuribayashi, S., Sakoda, Y., Kawasaki, T., Tanaka, T., Yamamoto, N., Okamoto, M., Isoda, N., Tsuda, Y., Sunden, Y., Umemura, T., Nakajima, N., Hasegawa, H. and Kida, H. 2013. Excessive cytokine response to rapid proliferation of highly pathogenic avian influenza viruses leads to fatal systemic capillary leakage in chickens. *PLoS One*, **8**: e68375.
 - 17) Kajihara, M., Sakoda, Y., Soda, K., Minari, K., Okamoto, M., Takada, A. and Kida, H. 2013. The PB2, PA, HA, NP, and NS genes of a highly pathogenic avian influenza virus A/whooper swan/Mongolia/3/2005 (H5N1) are responsible for pathogenicity in ducks. *Virol. J.*, **10**: 45.
 - 18) Hattori, T., Arikawa, T., Fujioka, Y., Maruyama, J., Nakayama, Y., Ohba, Y., Niki, T., Miyazaki, T., Hirashima, M. and Kida, H. 2013. Inhibition of influenza A virus infection by Galectin-9. *Jpn. J. Vet. Res.*, **61**: 5–18.
 - 19) Haredy, A. M., Takenaka, N., Yamada, H., Sakoda, Y., Okamoto, M., Yamamoto, N., Omasa, T., Ohtake, H., Mori, Y., Kida, H., Yamanishi, K. and Okamoto, S. 2013. An MDCK cell culture-derived formalin-inactivated influenza virus whole-virion vaccine from an influenza virus library confers cross-protective immunity by intranasal administration in mice. *Clin. Vaccine Immunol.*, **20**: 998–1007.
 - 20) Fujiyuki, T., Yoneda, M., Yasui, F., Kuraishi, T., Hattori, S., Kwon, H. J., Munekata, K., Kiso, Y., Kida, H., Kohara, M. and Kai, C. 2013. Experimental infection of macaques with a wild water bird-derived highly pathogenic avian influenza virus (H5N1). *PLoS One*, **8**: e83551.
 - 21) Fujimoto, Y., Ozaki, K., Maeda, M., Nishijima, K., Takakuwa, H., Otsuki, K., Kida, H. and Ono, E. 2013. Resistance to

- influenza A virus infection in transformed cell lines expressing an anti-PB2 monoclonal antibody. *Vet. J.*, **198**: 487–493.
- 22) Fujikura, D., Chiba, S., Muramatsu, D., Kazumata, M., Nakayama, Y., Kawai, T., Akira, S., Kida, H. and Miyazaki, T. 2013. Type-I interferon is critical for FasL expression on lung cells to determine the severity of influenza. *PLoS One*, **8**: e55321.
- 23) Feng, F., Sakoda, Y., Ohyanagi, T., Nagahori, N., Shibuya, H., Okamatsu, M., Miura, N., Kida, H. and Nishimura, S. 2013. Novel thiosialosides tethered to metal nanoparticles as potent influenza A virus haemagglutinin blockers. *Antivir. Chem. Chemother.*, **23**: 59–65.
- 24) Saino, H., Kawaguchi, K., Usui, A., Ohno, H., Sakoda, Y., and Tajima, M. 2013. Implementations and verification of the effectiveness of a regional control program for bovine viral diarrhoea virus infection in Hokkaido, Japan. *Journal of the Japan Veterinary Medical Association*, **66**: 791–796. (in Japanese).

Publications other than original articles

- 1) Kida, H. 2013. Highly pathogenic avian influenza and pandemic influenza. *Kansensho dojo*, **2**: 30–33. (in Japanese).
- 2) Okamatsu, M. and Kida, H. 2013. Current situations and countermeasures of avian influenza. *Journal of the Japan Veterinary Medical Association*, **66**: 352–354. (in Japanese).
- 3) Kida, H. 2013. Avian influenza and pandemic influenza. *Otsukayakuho*, **688**: 22–25. (in Japanese).
- 4) Kida, H. 2013. About H7N9 and H5N1 avian influenza viruses. *Infection and Antimicrobials*, **16**: 272–277. (in Japanese).
- 5) Kida, H. 2013. Basic countermeasures for avian and pandemic influenza. *Kansensho dojo*, **2**: 59–61. (in Japanese).
- 6) Kida H. 2013. Influenza as a zoonotic disease. *Gekkan Youtonkai*, **48**: 20–24. (in Japanese).
- 7) Kida, H. 2013. Microbiology ABC- Influenza viruses. *Up-to-date Kodomo no kansensho*, **1**: 18–25. (in Japanese).
- 8) Kida, H. 2013. Ecology of influenza viruses. *Japanese Journal of Pediatric Medicine*, **45**: 1927–1934. (in Japanese).
- 9) Kida, H. 2013. Viral infectious disease- Influenza. *The Japanese Journal of Clinical and Experimental Medicine*, **90**: 1666–1673. (in Japanese).
- 10) Kida, H. 2013. Avian influenza. *Kansensho naika*, **1**: 564–572. (in Japanese).

Laboratory of Infectious Diseases

Original articles

- 1) Ooshiro, M., Konnai, S., Katagiri, Y., Afuso, M., Arakaki, N., Tsuha, O., Murata, S. and Ohashi, K. 2013. Horizontal transmission of bovine leukemia virus from lymphocytotic cattle, and beneficial effects of insect vector control. *Vet. Rec.*, **173**: 527.
- 2) Gomes, H., Romeiro, N. C., Braz, G. R., de Oliveira, E. A., Rodrigues, C., da Fonseca, R. N., Githaka, N., Isezaki, M., Konnai, S., Ohashi, K., da Silva Vaz, I. Jr., Logullo, C. and Moraes, J. 2013. Identification and structural-functional analysis of cyclin-dependent kinases of the cattle tick *Rhipicephalus (Boophilus) microplus*. *PLoS One*, **8**: e76128.
- 3) Parizi, L. F., Githaka, N. W., Acevedo, C., Benavides, U., Seixas, A., Logullo, C., Konnai, S., Ohashi, K., Masuda, A. and da Silva Vaz, I. Jr. 2013. Sequence characterization and immunogenicity of cystatins from the cattle

- tick *Rhipicephalus (Boophilus) microplus*. *Ticks Tick Borne Dis.*, **4**: 492-499.
- 4) Suzuki, S., Konnai, S., Okagawa, T., Ikebuchi, R., Shirai, T., Sunden, Y., Mingala, C. N., Murata, S. and Ohashi, K. 2013. Expression analysis of Foxp3 in T cells from bovine leukemia virus infected cattle. *Microbiol. Immunol.*, **57**: 600-604.
 - 5) Ikebuchi, R., Konnai, S., Okagawa, T., Yokoyama, K., Nakajima, C., Suzuki, Y., Murata, S. and Ohashi, K. 2013. Blockade of bovine PD-1 increases T cell function and inhibits bovine leukemia virus expression in B cells *in vitro*. *Vet. Res.*, **44**: 59.
 - 6) Githaka, N., Konnai, S., Skilton, R., Kariuki, E., Kanduma, E., Murata, S. and Ohashi, K. 2013. Genotypic variations in field isolates of *Theileria* species infecting giraffes (*Giraffa camelopardalis tippelskirchi* and *Giraffa camelopardalis reticulata*) in Kenya. *Parasitol. Int.*, **62**: 448-453.
 - 7) Imamura, S., Nakamizo, M., Kawanishi, M., Nakajima, N., Yamamoto, K., Uchiyama, M., Hirano, F., Nagai, H., Kijima, M., Ikebuchi, R., Mekata, H., Murata, S., Konnai, S. and Ohashi, K. 2013. Bovine whole-blood culture as a tool for the measurement of endotoxin activities in Gram-negative bacterial vaccines. *Vet. Immunol. Immunopathol.*, **153**: 153-158.
 - 8) Mekata, H., Konnai, S., Mingala, C. N., Abes, N. S., Gutierrez, C. A., Dargantes, A. P., Witola, W. H., Inoue, N., Onuma, M., Murata, S. and Ohashi, K. 2013. Isolation, cloning, and pathologic analysis of *Trypanosoma evansi* field isolates. *Parasitol. Res.*, **112**: 1513-1521.
 - 9) Murata, S., Hashiguchi, T., Hayashi, Y., Yamamoto, Y., Matsuyama-Kato, A., Takasaki, S., Isezaki, M., Onuma, M., Konnai, S. and Ohashi, K. 2013. Characterization of Meq proteins from field isolates of Marek's disease virus in Japan. *Infect. Genet. Evol.*, **16**: 137-143.
 - 10) de Abreu, L. A., Calixto, C., Waltero, C. F., Della Noce, B. P., Githaka, N. W., Seixas, A., Parizi, L. F., Konnai, S., Vaz Ita, S., Ohashi, K. and Logullo, C. 2013. The conserved role of the AKT/GSK3 axis in cell survival and glycogen metabolism in *Rhipicephalus (Boophilus) microplus* embryo tick cell line BME26. *Biochim. Biophys. Acta*, **1830**: 2574-2582.
 - 11) Taylor, K. R., Takano, A., Konnai, S., Shimozuru, M., Kawabata, H. and Tsubota, T. 2013. Differential tick burdens may explain differential *Borrelia afzelii* and *Borrelia garinii* infection rates among four, wild, rodent species in Hokkaido, Japan. *J. Vet. Med. Sci.*, **75**: 785-790.
 - 12) Taylor, K. R., Takano, A., Konnai, S., Shimozuru, M., Kawabata, H. and Tsubota, T. 2013. *Borrelia miyamotoi* infections among wild rodents show age and month independence and correlation with *Ixodes persulcatus* larval attachment in Hokkaido, Japan. *Vector Borne Zoonotic Dis.*, **13**: 92-97.
 - 13) Konnai, S., Suzuki, S., Shirai, T., Ikebuchi, R., Okagawa, T., Sunden, Y., Mingala, C. N., Onuma, M., Murata, S. and Ohashi, K. 2013. Enhanced expression of LAG-3 on lymphocyte subpopulations from persistently lymphocytotic cattle infected with bovine leukemia virus. *Comp. Immunol. Microbiol. Infect. Dis.*, **36**: 63-69.

Publications other than original articles

- 1) Konnai, S., Murata, S. and Ohashi, K. 2013. Control strategies of bovine leukemia. *Dairyman*, **63**: 42-43. (in Japanese).
- 2) Nishimori, A., Konnai, S., Ikebuchi, R., Okagawa, T., Murata, S. and Ohashi, K. 2013. Immune functions of PD-L1 and PD-L2 and its clinical applications. *The Japanese Society for Animal Vaccine and Biomedical Research News Letter*, **8**: 18-19. (in Japanese).
- 3) Konnai, S. 2013. Recent findings in bovine infection immunity. *Journal of the Japan Veterinary Medical Association*, **66**: 171-179.

- (in Japanese).
- 4) Asakawa, M., Nakade, T., Murata, S., Ohashi, K., Osa, Y. and Taniyama, H. 2013. Recent viral disease of Japanese Anatid with a fatal case of Marek's disease in an

endangered species, white-fronted goose (*Anser albifrons*). In: *Ducks: Habitat, Behavior, and Diseases*, pp. 37-47, Hambrick, J. and Gammon, L. T. eds., Nova Science Publishers, New York.

Laboratory of Parasitology

Original articles

- 1) Alam, M. Z., Yasin, M. G., Kato, H., Sakurai, T. and Katakura, K. 2013. PCR-based detection of *Leishmania donovani* DNA in a stray dog from a visceral leishmaniasis endemic focus in Bangladesh. *J. Vet. Med. Sci.*, **75**: 75-78.
- 2) Ichikawa, M., Kondoh, D., Bawm, S., Maw, N. N., Htun, L. L., Thein, M., Gyi, A., Sunn, K., Katakura, K. and Itagaki, T. 2013. Morphological and molecular characterization of *Explanatum explanatum* from cattle and buffaloes in Myanmar. *J. Vet. Med. Sci.*, **75**: 309-314.
- 3) Kato, H., Calvopiña, M., Criollo, H. and Hashiguchi, Y. 2013. First human cases of *Leishmania (Viannia) naiffi* infection in Ecuador and identification of its suspected vector species. *Acta Trop.*, **128**: 710-713.
- 4) Calvopiña, M., Kato, H. and Hashiguchi, Y. 2013. Leishmaniasis recidiva cutis and its topical treatment in Ecuador. *Trop. Med. Health.*, **41**: 93-94.
- 5) Leelayoova, S., Siripattanapong, S., Hitakarun, A., Kato, H., Tan-ariya, P., Siritasatien, P., Osatakul, S. and Mungthin, M. 2013. Multilocus characterization and phylogenetic analysis of *Leishmania siamensis* isolated from autochthonous visceral leishmaniasis cases, southern Thailand. *BMC Microbiol.*, **13**: 60.
- 6) Yamamoto, K., Cáceres, A. G., Gomez, E. A., Mimori, T., Iwata, H., Korenaga, M., Sakurai, T., Katakura, K., Hashiguchi, Y. and Kato, H. 2013. Genetic diversity of the mitochondrial cytochrome *b* gene in *Lutzomyia* spp., with special reference to *Lutzomyia peruensis*, a main vector of *Leishmania (Viannia) peruviana* in the Peruvian Andes. *Acta Trop.*, **126**: 156-163.
- 7) Guevara, A. G., Atherton, R. D., Wauters, M. A., Vicuña, Y., Nelson, M., Prado, J., Kato, H., Calvopiña, M. H. and Hashiguchi, Y. 2013. Seroepidemiological study of chagas disease in the southern Amazon region of Ecuador. *Trop. Med. Health.*, **41**: 21-25.
- 8) Kato, H., Jochim, R. C., Gomez, E. A., Uezato, H., Mimori, T., Korenaga, M., Sakurai, T., Katakura, K., Valenzuela, J. G. and Hashiguchi, Y. 2013. Analysis of salivary gland transcripts of the sand fly *Lutzomyia ayacuchensis*, a vector of Andean-type cutaneous leishmaniasis. *Infect. Genet. Evol.* **13**: 56-66.

Publications other than original articles

- 1) Katakura, K. 2013. Molecular epidemiology of leishmaniasis, with particular reference to South and Southeast Asia. *Japanese Journal of Veterinary Parasitology*, **11**: 61-70. (in Japanese).
- 2) Katakura, K. 2013. Nematodes and cestodes in diagnosis of protozoa and helminthes. *Clinical Microbiology*, **40**: 347-352. (in Japanese).
- 3) Kato, H. 2013. Leishmaniasis — Field to Lab & Lab to Field —. *Japanese Journal of Veterinary Parasitology*, **12**: 21-31. (in Japanese).

Laboratory Animal Science and Medicine

Original articles

- 1) Yoshii, K., Moritoh, K., Nagata, N., Yokozawa, K., Sasaki, N., Kariwa, H., Agui, T. and Takashima, I. 2013. Susceptibility to flavivirus-specific antiviral response of *Oas1b* affects the neurovirulence of the Far-Eastern subtype of tick-borne encephalitis virus. *Arch. Virol.*, **158**: 1039-1046.
- 2) Sasaki, N., Yamauchi, H., Nishino, T. and Agui, T. 2013. The telocentric tandem repeat at p-arm is not conserved in the *Mus musculus* subspecies. *Gene*, **513**: 214-218.
- 3) Asano, A., Torigoe, D., Sasaki, N. and Agui, T. 2013. Epitope mapping of the nucleocapsid protein of Sendai virus and application of antigenic epitopes for the ELISA-based diagnosis of Sendai virus infection. *J. Vet. Med. Sci.*, **75**: 909-916.

Laboratory of Veterinary Internal Medicine

Original articles

- 1) Suto, A., Yamasaki, M., Takasaki, Y., Fujita, Y., Abe, R., Shimizu, H., Ohta, H. and Takiguchi, M. 2013. LC-MS/MS analysis of canine lipoproteins fractionated using the ultracentrifugation-precipitation method. *J. Vet. Med. Sci.*, **75**: 1471-1477.
- 2) Lim, S. Y., Nakamura, K., Morishita, K., Sasaki, N., Murakami, M., Osuga, T., Ohta, H., Yamasaki, M. and Takiguchi, M. 2013. Qualitative and quantitative contrast enhanced ultrasonography of the pancreas using bolus injection and continuous infusion methods in normal dogs. *J. Vet. Med. Sci.*, **75**: 1601-1607.
- 3) Ohta, H., Takada, K., Torisu, S., Yuki, M., Tamura, Y., Yokoyama, N., Osuga, T., Lim, S. Y., Murakami, M., Sasaki, N., Nakamura, K., Yamasaki, M. and Takiguchi, M. 2013. Expression of CD4+ T cell cytokine genes in the colorectal mucosa of inflammatory colorectal polyps in miniature dachshunds. *Vet. Immunol. Immunopathol.*, **155**: 259-263.
- 4) Tamura, Y., Ohta, H., Torisu, S., Yuki, M., Yokoyama, N., Murakami, M., Lim, S. Y., Osuga, T., Morishita, K., Nakamura, K., Yamasaki, M. and Takiguchi, M. 2013. Markedly increased expression of interleukin-8 in the colorectal mucosa of inflammatory colorectal polyps in miniature dachshunds. *Vet. Immunol. Immunopathol.*, **156**: 32-42.

Publications other than original articles

- 1) Takiguchi, M. 2013. Upskilling for Ultrasonographic interpretation. Adrenal glands. *SA Medicine*, **15**: 18-22. (in Japanese).
- 2) Takiguchi, M. 2013. Diagnostic imaging for feline kidney diseases. *Journal of feline practice*, **4**: 20-25. (in Japanese).
- 3) Takiguchi, M. 2013. Key points in the medical care of gastrointestinal diseases. *Vet i*, **7**: 31-35. (in Japanese).
- 4) Takiguchi, M. 2013. Pitfalls of diagnostic imaging by learning from clinical cases. *MVM*, **22**: 31-36. (in Japanese).
- 5) Takiguchi, M. 2013. The beginning of a new era of mobile ultrasound. *MVM*, **22**: 61-63. (in Japanese).

Laboratory of Veterinary Surgery

Original articles

- 1) Doi, A., Takahashi, H., Syuto, B., Katayama, M., Nagashima, H. and Okumura, M. 2013. Tailor-made plate design and manufacturing system for treating bone fractures in small animals. *Journal of Advanced Computational Intelligence and Intelligent Informatics*, **17**: 588–597.
- 2) Yamazaki, H., Takagi, S., Hoshino, Y., Hosoya, K. and Okumura, M. 2013. Inhibition of survivin influences the biological activities of canine histiocytic sarcoma cell lines. *PLoS One*, **8**: e79810.
- 3) Oh, N., Sunaga, T., Yamazaki, H., Hosoya, K., Takagi, S. and Okumura, M. 2013. Limited inhibitory effects of non-steroidal antiinflammatory drugs on *in vitro* osteogenic differentiation in canine cell. *Jpn. J. Vet. Res.*, **61**: 97–107.

Publications other than original articles

- 1) Okumura, M. 2013. Luxation of superficial flexor tendon in a dog. *InfoVets*, **161**: 30–32. (in Japanese).
- 2) Okumura, M. 2013. Plate fixation of pelvic fracture in a dog. *InfoVets*, **162**: 48–50. (in Japanese).
- 3) Okumura, M. and Aoki, Y. 2013. Management of osteomyelitis in dogs. *InfoVets*, **163**: 50–54. (in Japanese).
- 4) Okumura, M. 2013. Calcification of yellow ligament in cervical vertebrae. *InfoVets*, **164**: 104–107. (in Japanese).
- 5) Okumura, M. 2013. Fracture of radius and ulnar in small animals. *InfoVets*, **166**: 4–5. (in Japanese).
- 6) Hosoya, K., Takagi, S. and Okumura, M. 2013. Iatrogenic tumor seeding after ureteral stenting in a dog with urothelial carcinoma. *J. Am. Anim. Hosp. Assoc.*, **49**: 262–6.

Laboratory of Comparative Pathology

Original articles

- 1) Kobayashi, S., Suzuki, T., Igarashi, M., Orba, Y., Ohtake, N., Nagakawa, K., Niikura, K., Kimura, T., Kasamatsu, H. and Sawa H. 2013. Cysteine residues in the major capsid protein, Vp1, of the JC virus are important for protein stability and oligomer formation. *PLoS One*, **8**: e76668. (doi: 10.1371/journal.pone.0076668).
- 2) Sasaki, M., Ishii, A., Orba, Y., Thomas, Y., Hang'ombe, B. M., Moonga, L., Mweene, A. S., Ogawa, H., Nakamura, I., Kimura, T. and Sawa, H. 2013. Human parainfluenza virus type 3 in wild primates, Zambia. *Emerg. Infect. Dis.*, **19**: 1500–1503.
- 3) Kimura, T., Okumura, M., Kim, E., Sasaki, M., Orba, Y. and Sawa, H. 2013. Characterization of Japanese encephalitis virus infection in an immortalized mesencephalic cell line, CSM14.1. *Microbiol. Immunol.*, **57**: 723–731.
- 4) Muramatsu, M., Yoshida, R., Miyamoto, H., Tomabeche, D., Kajihara, M., Maruyama, J., Kimura, T., Manzoor, R., Ito, K. and Takada, A. 2013. Heterosubtypic antiviral activity of hemagglutinin-specific antibodies induced by intranasal immunization with inactivated influenza viruses in mice. *PLoS One*, **8**: e71534. (doi: 10.1371/journal.pone.0071534).
- 5) Kuribayashi, S., Sakoda, Y., Kawasaki, T., Tanaka, T., Yamamoto, N., Okamoto, M., Isoda, N., Tsuda, Y., Sunden, Y., Umemura, T., Nakajima, N., Hasegawa, H. and Kida, H. 2013. Excessive cytokine response to rapid

- proliferation of highly pathogenic avian influenza viruses leads to fatal systemic capillary leakage in chickens. *PLoS One*, **8**: e68375. (doi: 10.1371/journal.pone.0068375)
- 6) Yamaguchi, H., Kobayashi, S., Ishii, A., Ogawa, H., Nakamura, I., Moonga, L., Hang'ombe, B. M., Mweene, A. S., Thomas, Y., Kimura, T., Sawa, H. and Orba, Y. 2013. Identification of a novel polyomavirus from vervet monkeys in Zambia. *J. Gen. Virol.*, **94**: 1357–1364.
- 7) Iwaki, Y., Sakai, Y., Ochiai, K., Umemura, T. and Sunden, Y. 2013. Enhancement of antibody production against rabies virus by uridine 5'-triphosphate in mice. *Microbes Infect.*, **16**: 196–202. (doi: 10.1016/j.micinf.2013.11.012)
- 8) Yabe, J., Nakayama, S. M. M., Ikenaka, Y., Muzandu, K., Coongo, K., Mainda, G., Kabeta, M., Ishizuka, M. and Umemura, T. 2013. Metal distribution in tissues of free-range chickens near a lead-zinc mine in Kabwe, Zambia. *Environ. Toxicol. Chem.*, **32**: 189–192.

Publications other than original articles

- 1) Kimura, T. 2013. Chapter 7, 4. Chemical mediator and 6. Granulomatous inflammation. In: *General Animal Pathology*, 3rd ed., pp. 129–135 and pp.148–152, Japanese Society of Veterinary Pathology ed., Buneido, Tokyo. (in Japanese).

Laboratory of Theriogenology

Original articles

- 1) Higaki, S., Nagano, M., Katagiri, S. and Takahashi, Y. 2013. Effects of parity and litter size on the energy contents and immunoglobulin G concentrations of Awassi ewe's colostrum. *Turkish Journal of Veterinary and Animal Sciences.*, **37**: 109–112.
- 2) Iori, R., Gunji, Y., Hishinuma, M., Nagano, M., Takada T. and Higaki S. 2013. Reproductive biology of the coypu *Myocastor coypus* (Rodentia: Myocastoridae) in western Japan. *Zoologia*, **30**: 130–134.
- 3) Huang, W., Nagano, M., Kang, S. S., Yanagawa, Y. and Takahashi, Y. 2013. Effects of in vitro growth culture duration and pre-maturation culture on maturational and developmental competences of bovine oocytes derived from early antral follicles. *Theriogenology*, **80**: 793–799.
- 4) Fukui, D., Nagano, M., Nakamura, R., Bando, G., Nakata, S., Kosuge, M., Sakamoto, H., Matsui, M., Yanagawa, Y. and Takahashi, Y. 2013. The effects of frequent electroejaculation on the semen characteristics of a captive Siberian tiger (*Panthera tigris altaica*). *J. Reprod. Dev.*, **59**: 491–495.
- 5) Higaki, S., Fujii, H., Nagano, M., Katagiri, S. and Takahashi, Y. 2013. Cryopreservation of zebrafish (*Danio rerio*) primordial germ cells by vitrification of yolk-intact and yolk-depleted embryos using various cryoprotectant solutions. *Cryobiology*, **67**: 374–382.
- 6) Nagano, M., Kang, S. S., Koyama, K., Huang, W., Yanagawa, Y. and Takahashi, Y. 2013. In vitro maturation system for individual culture of bovine oocytes using micro-volume multi-well plate. *Jpn. J. Vet. Res.*, **61**: 149–154.

Laboratory of Molecular Medicine

Original articles

- 1) Sato, K., Otsu, W., Otsuka, Y. and Inaba, M. 2013. Modulatory roles of NHERF1 and NHERF2 in cell surface expression of the glutamate transporter GLAST. *Biochem. Biophys. Res. Commun.*, **430**: 839–845.
- 2) Otsu, W., Kurooka, T., Otsuka, Y., Sato, K. and Inaba, M. 2013. A new class of endoplasmic reticulum export signal $\Phi X \Phi X \Phi$ for transmembrane proteins and its selective interaction with Sec24C. *J. Biol. Chem.*, **288**: 18521–18532.

Laboratory of Public Health

Original articles

- 1) Yoshii, K., Yanagihara, N., Ishizuka, M., Sakai, M. and Kariwa, H. 2013. N-linked glycan in tick-borne encephalitis virus envelope protein affects viral secretion in mammalian cells, but not in tick cells. *J. Gen. Virol.*, **94**: 2249–2258.
- 2) Kentaro, Y., Yamazaki, S., Mottate, K., Nagata, N., Seto, T., Sanada, T., Sakai, M., Kariwa, H. and Takashima, I. 2013. Genetic and biological characterization of tick-borne encephalitis virus isolated from wild rodents in southern Hokkaido, Japan in 2008. *Vector Borne Zoonotic Dis.*, **13**: 406–414.
- 3) Yoshii, K., Moritoh, K., Nagata, N., Yokozawa, K., Sakai, M., Sasaki, N., Kariwa, H., Agui, T. and Takashima, I. 2013. Susceptibility to flavivirus-specific antiviral response of Oas1b affects the neurovirulence of the Far-Eastern subtype of tick-borne encephalitis virus. *Arch. Virol.*, **158**: 1039–1046.

Publications other than original articles

- 1) Kariwa, H., Yoshii, K. and Takashima, I. 2013. Tick-borne encephalitis. *Nippon Rinsho*, **supple. 26**: 618–621 (in Japanese).
- 2) Kariwa, H., Murata, R., Totani, M., Yoshii, K. and Takashima, I. 2013. Increased Pathogenicity of West Nile Virus (WNV) by Glycosylation of Envelope Protein and Seroprevalence of WNV in Wild Birds in Far Eastern Russia. *Int. J. Environ. Res. Public Health*, **10**: 7144–7164.
- 3) Kariwa, H., Ozaki, Y., Sanada, T., Ikenaka, Y., Ishizuka, M., Tsubota, T., Yoshii, K., Yoshimatsu, K., Arikawa, J. and Takashima, I., 2013. Epizootiological study of Hantavirus infection in rodents in Japan, and Isolation of Hokkaido virus from a grey red-backed vole (*Myodes rufocanus bedfordiae*). *Journal of the Veterinary Medicine*, **66**: 262–264. (in Japanese).

Laboratory of Radiation Biology

Original articles

- 1) Yamamori, T., Meike, S., Nagane, M., Yasui, H. and Inanami, O. 2013. ER stress suppresses DNA double-strand break repair and sensitizes tumor cells to ionizing radiation by stimulating proteasomal degradation of Rad51. *FEBS Lett.*, **587**: 3348–3353.
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- H., Fujii, H. and Inanami, O. 2013. Radiation-induced nitric oxide mitigates tumor hypoxia and radioresistance in a murine SCCVII tumor model. *Biochem. Biophys. Res. Commun.*, **437**: 420–425.
- 3) Yasui, H., Asanuma, T., Kino, J., Yamamori, T., Meike, S., Nagane, M., Kubota, N., Kuwabara, M. and Inanami, O. 2013. The prospective application of a hypoxic radiosensitizer, doranidazole to rat intracranial glioblastoma with blood brain barrier disruption. *BMC Cancer* **13**: 106 (9 pages).
- 4) Matsumoto, S., Saito, K., Yasui, H., Morris, H. D., Munasinghe, J. P., Lizak, M., Merkle, H., Ardenkjaer-Larsen, J. H., Choudhuri, R., Devasahayam, N., Subramanian, S., Koretsky, A. P., Mitchell, J. B. and Krishna, M. C. 2013. EPR oxygen imaging and hyperpolarized ¹³C MRI of pyruvate metabolism as noninvasive biomarkers of tumor treatment response to a glycolysis inhibitor 3-bromopyruvate. *Magn. Reson. Med.* **69**: 1443–1450.
- 5) Jung, S. B., Kim, C. S., Kim, Y. R., Naqvi, A., Yamamori, T., Kumar, S., Kumar, A. and Irani, K. 2013. Redox factor-1 activates endothelial SIRTUIN1 through reduction of conserved cysteine sulfhydryls in its deacetylase domain. *PLoS One* **8**: e65415 (11 pages).

Laboratory of Toxicology

Original articles

- 1) Ibrahim, Z. S., Ahmed, M. M., Shukry, M. M., Mahmoud, S. and Ishizuka, M. 2013. Constitutive androstane receptor dependent and independent modulation of CYP3A2, CYP1A2 by phenobarbital and fibrate in rats' liver. *American Journal of Biochemistry and Biotechnology*, **9**: 272–281.
- 2) Kitamura, H., Kimura, S., Shimamoto, Y., Okabe, J., Ito, M., Miyamoto, T., Naoe, Y., Kikuguchi, C., Meek, B., Toda, C., Okamoto, S., Kanehira, K., Hase, K., Watarai, H., Ishizuka, M., El-Osta, A., Ohara, O. and Miyoshi, I. 2013. Ubiquitin-specific protease 2-69 in macrophages potentially modulates metainflammation. *FASEB J.*, **27**: 4940–4953.
- 3) Watanabe, K. P., Kawai, Y. K., Ikenaka, Y., Kawata, M., Ikushiro, S., Sakaki, T. and Ishizuka, M. 2013. Avian cytochrome P450 (CYP) 1-3 family genes: isoforms, evolutionary relationships, and mRNA expression in chicken liver. *PLoS One*, **8**: e75689.
- 4) Fujisawa, N., Kawai, Y. K., Nakayama, S. M. M., Ikenaka, Y., Yamamoto, H. and Ishizuka, M. 2013. Dioxin sensitivity-related two critical amino acids of arylhydrocarbon receptor may not correlate with the taxonomy or phylogeny in avian species. *J. Vet. Med. Sci.*, **75**: 1577–1583.
- 5) Sasaki, N., Matumoto, T., Ikenaka, Y., Nakayama, S. M. M., Ishizuka, M., Kazusaka, A. and Fujita, S. 2013. Repeated treatment with furazolidone induces multiple cytochrome P450-related activities in chicken liver, but not in rat liver. *J. Vet. Med. Sci.*, **75**: 1497–1502.
- 6) Shimamoto, Y., Kitamura, H., Niimi, K., Yoshikawa, Y., Hoshi, F., Ishizuka, M. and Takahashi, E. 2013. Selection of suitable reference genes for mRNA quantification studies using common marmoset tissues. *Mol. Biol. Rep.*, **40**: 6747–6755.
- 7) Ikenaka, Y., Oguri, M., Saengtienchai, A., Nakayama, S. M. M., Ijiri, S. and Ishizuka, M. 2013. Characterization of Phase-II conjugation reaction of polycyclic aromatic hydrocarbons in fish species: unique pyrene metabolism and species specificity observed in fish species. *Environ. Toxicol. Pharmacol.*, **36**: 567–578.
- 8) Kawai, Y. K., Watanabe, K. P., Ishii, A., Onuma, A., Sawa, H., Ikenaka, Y. and

- Ishizuka, M. 2013. De novo sequence analysis of cytochrome P450 1-3 genes expressed in ostrich liver with highest expression of CYP2G19. *Comp. Biochem. Physiol. Part D Genomics Proteomics*, **8**: 201-208.
- 9) Yohannes, Y. B., Ikenaka, Y., Saengtienchai, A., Watanabe, K. P., Nakamyama, S. M. M. and Ishizuka, M. 2013. Occurrence, distribution, and ecological risk assessment of DDTs and heavy metals in surface sediments from Lake Awassa — Ethiopian Rift Valley Lake. *Environ. Sci. Pollut. Res. Int.*, **20**: 8663-8671.
- 10) Fujisawa, N., Darwish, W. S., Ikenaka, Y., Kim, E., Lee, J., Iwata, H., Nakayama, S. M. M. and Ishizuka, M. 2013. Molecular evaluation of a new highly sensitive aryl hydrocarbon receptor in ostriches. *Poult. Sci.*, **92**: 1921-1929.
- 11) Yared, B. Y., Ikenaka, Y., Nakayama, S. M. M., Saengtienchai, A., Watanabe, K. and Ishizuka, M. 2013. Organochlorine pesticides and heavy metals in fish from Lake Awassa; Ethiopia: Insights from stable isotope analysis. *Chemosphere*, **91**: 857-863.
- 12) Nakayama, S. M. M., Ikenaka, Y., Hamada, K., Muzandu, K., Choongo, K., Yabe, J., Umemura, T. and Ishizuka, M. 2013. Accumulation and biological effects of metals in wild rats in mining areas of Zambia. *Environ. Monit. Assess.*, **185**: 4907-4918.
- 13) Tanaka, K. D., Kawai, Y. K., Ikenaka, Y., Harunari, T., Tanikawa, T., Fujita, S. and Ishizuka, M. A. 2013. A novel mutation in VKORC1 and its effect on enzymatic activity in Japanese warfarin-resistant rats. *J. Vet. Med. Sci.* **75**: 135-139.
- 14) Yabe, J., Nakayama, S. M. M., Ikenaka, Y., Muzandu, K., Choongo, K., Mainda, G., Kabeta, N., Ishizuka, M. and Umemura, T. 2013. Metal distribution in tissues of free-range chickens near a lead-zinc mine in Kabwe, Zambia. *Environ. Toxicol. Chem.*, **32**: 189-192.
- 15) Nakayama, S. M. M., Ikenaka, Y., Muzandu, K., Choongo, K., Yabe, J., Muroya, T., Ijiri, S., Minagawa, M., Umemura, T. and Ishizuka, M. 2013. Geographic information system-based source estimation of copper pollution in Lake Itzhi-tezhi and metal-accumulation profiles in *Oreochromis spp.* from both field and laboratory studies. *Arch. Environ. Contam. Toxicol.*, **64**: 119-129.
- 16) Ikenaka, Y., Sakamoto, M., Nagata, T., Takahashi, H., Miyabara, Y., Hanazato, T., Ishizuka, M., Isobe, T., Kim, J. W. and Chang, K. H. 2013. Effects of polycyclic aromatic hydrocarbons (PAHs) on an aquatic ecosystem: acute toxicity and community-level toxic impact tests of benzo[a]pyrene using lake zooplankton community. *J. Toxicol. Sci.*, **38**: 131-136.

Laboratory of Wildlife Biology and Medicine

Original articles

- 1) Taylor, K. R., Takano, A., Konnai, S., Shimozuru, M., Kawabata, H. and Tsubota, T. 2013. *Borrelia miyamotoi* infection among wild rodents show age and month independence and correlation with *Ixodes persulcatus* larval attachment in Hokkaido, Japan. *Vector Borne Zoonotic Dis.*, **13**: 92-97.
- 2) Murase, Y., Konnai, S., Githaka, N., Hidano, A., Taylor, K., Ito, T., Takano, A., Ando, S., Kawabata, H., Tsubota, T., Murata, S. and Ohashi, K. 2013. Prevalence of Lyme borrelia in *Ixodes persulcatus* ticks from an area with a confirmed case of Lyme disease. *J. Vet. Med. Sci.*, **75**: 215-218.
- 3) Sasaki, M., Amano, Y., Hayakawa, D., Tsubota, T., Ishikawa, H., Mogoe, T., Ohsumi, S., Tetsuka, M., Miyamoto, A., Fukui, Y., Budipitojo, T. and Kitamura, N. 2013.

- Structure and steroidogenesis of the placenta in the Antarctic Minke whale (*Balaenoptera bonaerensis*). *J. Reprod. Dev.*, **59**: 159–167.
- 4) Shimozuru, M., Iibuchi, R., Yoshimoto, T., Nagashima, A., Tanaka, J. and Tsubota, T. 2013. Pregnancy during hibernation in Japanese black bears: effects on body temperature and blood biochemical profiles. *J. Mammal.*, **94**: 618–627. (doi: 10.1644/12-MAMM-A-246.1).
 - 5) Taylor, K. R., Takano, A., Konnai, S., Shimozuru, M., Kawabata, H. and Tsubota, T. 2013. Differential tick burdens may explain differential *Borrelia afzelii* and *Borrelia garinii* infection rates among four, wild, rodent species in Hokkaido, Japan. *J. Vet. Med. Sci.* **75**: 785–790. (doi: 10.1292/jvms.12-0439).
 - 6) Moustafa, M. A., Ismail, M. N., Mohamed, A. S., Ali, A. O. and Tsubota, T. 2013. Hematological and biochemical parameters of free-ranging female Nile monitors in Egypt. *J. Wildl. Dis.*, **49**: 750–754.
 - 7) Okuyama, M. W., Shimozuru, M., Abe, G., Nakai, M., Sashika, M., Shimada, K-I., Takahashi, N., Fukui, D., Nakamura, R. and Tsubota, T. 2013. Timing of puberty and its relationship with body growth and season in male raccoons (*Procyon lotor*) in Hokkaido. *J. Reprod. Dev.*, **59**: 361–367.
 - 8) Kooriyama, T., Okamoto, M., Yoshida, T., Nishida, T., Tsubota, T., Saito, A., Tomonaga, M., Matsuzawa, T., Akari H., Nishimura, H. and Miyabe-Nishiwaki, T. 2013. Epidemiological study of zoonoses derived from humans in captive chimpanzees. *Primates*, **54**: 89–98. (doi: 10.1007/s10329-012-0320-8)

Publications other than original articles

- 1) Tsubota, T. 2013. Recent status of bear habitation and damage by bears. *Journal of the Japanese Veterinary Medical Association*, **66**: 131–137. (in Japanese).

Laboratory of Veterinary Hygiene

Original articles

- 1) Ohsawa, N., Song, C. -H., Suzuki, A., Furuoka, H., Hasebe, R. and Horiuchi, M. 2013. Therapeutic effect of peripheral administration of an anti-prion protein antibody on mice infected with prions. *Microbiol. Immunol.*, **57**: 288–297.
- 2) Sakai, K., Hasebe, R., Takahashi, Y., Song, C. -H., Suzuki, A., Yamasaki, T. and Horiuchi, M. 2013. Absence of CD14 delays progression of prion diseases accompanied by increased microglial activation. *J. Virol.*, **87**: 13433–13445.

Publications other than original articles

- 1) Yamasaki, T. and Horiuchi, M. 2013. Infection and intracellular dynamics of prions. *Dementia Japan*, **27**: 215–224 (in Japanese).

Laboratory of Veterinary Teaching Hospital

Original articles

- 1) Yamazaki, H., Takagi, S., Hoshino, Y., Hosoya, K. and Okumura, M. 2013. Inhibition of survivin influences the biological activities of canine histiocytic sarcoma cell lines. *PLoS*

- One*, **8**: e79810.
- 2) Oh, N., Sunaga, T., Yamazaki, H., Hosoya, K., Takagi, S. and Okumura, M. 2013. Limited inhibitory effects of non-steroidal antiinflammatory drugs on in vitro osteogenic differentiation in canine cells. *Jpn. J. Vet. Res.*, **61**: 97-107.
 - 3) Hosoya, K., Takagi, S. and Okumura, M. 2013. Iatrogenic tumor seeding after ureteral stenting in a dog with urothelial carcinoma. *J. Am. Anim. Hosp. Assoc.*, **49**: 262-6.
 - 4) Sunaga, T., Takagi, S., Ogawa, S., Hosoya, K. and Okumura, M. 2013. Application of Artificial Dermis and Free Skin Grafting for Four Dogs with Wide Skin Defects in the Distal Limb or Tail. *Journal of the Japan Veterinary Medical Association*, **66**: 57-60.
 - 5) Helal, M. A., Hoshino, Y., Takagi, S. and Tajima, M. 2013. C-X-C chemokine receptor type 4 and cytokine expressions in cows of a dairy herd with high prevalence of calves persistently infected with bovine viral diarrhoea virus. *Jpn. J. Vet. Res.* **61**: 109-16.
 - 6) Osuga, T., Nakamura, K., Lim, S. Y., Tamura, Y., Kumara, W. R., Murakami, M., Sasaki, N., Morishita, K., Ohta, H., Yamasaki, M. and Takiguchi, M. 2013. Repeatability and reproducibility of measurements obtained via two-dimensional speckle tracking echocardiography of the left atrium and time-left atrial area curve analysis in healthy dogs. *Am. J. Vet. Res.*, **74**: 864-869.
 - 7) Lim, S. Y., Nakamura, K., Morishita, K., Sasaki, N., Murakami, M., Osuga, T., Ohta, H., Yamasaki, M. and Takiguchi, M. 2013. Qualitative and quantitative contrast enhanced ultrasonography of the pancreas using bolus injection and continuous infusion methods in normal dogs. *J. Vet. Med. Sci.*, **75**: 1601-1607.
 - 8) Tamura, Y., Ohta, H., Torisu, S., Yuki, M., Yokoyama, N., Murakami, M., Lim, S. Y., Osuga, T., Morishita, K., Nakamura, K., Yamasaki, M. and Takiguchi, M. 2013. Markedly increased expression of interleukin-8 in the colorectal mucosa of inflammatory colorectal polyps in miniature dachshunds. *Vet. Immunol. Immunopathol.*, **156**: 32-42.
 - 9) Ohta, H., Takada, K., Torisu, S., Yuki, M., Tamura, Y., Yokoyama, N., Osuga, T., Lim, S. Y., Murakami, M., Sasaki, N., Nakamura, K., Yamasaki, M. and Takiguchi, M. 2013. Expression of CD4+ T cell cytokine genes in the colorectal mucosa of inflammatory colorectal polyps in miniature dachshunds. *Vet. Immunol. Immunopathol.*, **155**: 259-263.
 - 10) Yanase, S., Mori, T., Hoshino, Y., Ito, Y., Murakami, M., Nishitani, Y., Noguchi, S., Sakai, H., Yanai, T. and Maruo, K. 2012. Outcome of chemoradiotherapy using orthovoltage x-ray for canine intranasal tumors. *Japanese Journal of Veterinary Anesthesia & Surgery*, **43**: 41-45.
 - 11) Shiokawa, Y., Mori, T., Hoshino, Y., Ito, Y., Noguchi, S., Sakai, H., Yanai, T. and Maruo, K. 2013. Breed predilection of canine histiocytic sarcoma at Gifu university. *Journal of the Japan Veterinary Medical Association*, **66**: 321-324.
 - 12) Kato, Y., Murakami, M., Hoshino, Y., Mori, T., Maruo, K., Hirata, A., Nakagawa, T. L., Yanai, T. and Sakai, H. 2013. The class A macrophage scavenger receptor CD204 is a useful immunohistochemical marker of canine histiocytic sarcoma. *J. Comp. Path.* **148**: 188-196.
 - 13) Suzuki, S., Fukushima, R., Yamamoto, Y., Ishikawa, T., Hamabe, L., Kim, S., Yoshiyuki, R., Fukayama, T., Machida, N. and Tanaka, R. 2013. Comparative effect of carperitide and furosemide on left atrial pressure in dogs with experimentally induced mitral valve regurgitation. *J. Vet. Intern. Med.*, **27**: 1097-1104.
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 - 19) Yamashita, K., Saitoh, Y., Adachi, M., Itami, T., Ishizuka, T., Tamura, J., Fukui, S. and Miyoshi, K. 2013. Clinical evaluation of peri-operative pain control using constant rate infusions of remifentanyl combined with low dose fentanyl in dogs. *Journal of the Japan Veterinary Medical Association*, **66**: 45-51.

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- 2) Takagi, S. 2013. The clinical application of the axial pattern flap technique; the forelimb. *Surgeon*. **17**: 30-33. (in Japanese).
- 3) Takagi, S. 2013. The clinical application of the axial pattern flap technique; the body trunk. *Surgeon*. **17**: 34-37. (in Japanese).
- 4) Takagi, S. 2013. Pathologies of the dental hard tissues. In: *Small animal dental, oral and maxillofacial disease*, pp. 142-157, Hashimoto, Y. ed., Midori shobo, Tokyo. (Japanese translation) .
- 5) Takagi S. 2013. In: *Small animal surgery. Surgery atlas, a step-by-step guide*, the pelvic area. anal sac inflammation., pp. 60-75, general technique., pp. 230-241. (Japanese translation).
- 6) Nakamura, K. 2013. Systematic approach in diagnostic imaging of liver. *Companion Animal Practice*, **288**: 28-36. (in Japanese).
- 7) Nakamura, K. 2013. Cough: Assessment and treatment of patient in cardiovascular department. *Veterinary Circulation*, **2**: 37-50. (in Japanese).
- 8) Nakamura, K. 2013. Sonazoid-enhanced Ultrasonography for the diagnosis of canine focal liver lesion. *MP Aguro Journal*, **14**: 2-5. (in Japanese).
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- 10) Nakamura, K. 2013. Heart. In: *BSAVA Manual of Canine and Feline Ultrasonography*. pp. 41-74, Takiguchi, M. ed., Gakuso-Sha, Tokyo. (Japanese Translation).
- 11) Nakamura, K. 2013. Liver. In: *BSAVA Manual of Canine and Feline Ultrasonography*. pp. 88-102, Takiguchi, M. ed., Gakuso-Sha, Tokyo. (Japanese Translation).
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- 13) Hoshino, Y. 2014. Repair of umbilical and abdominal wall hernia. *Surgeon*. **18**:46-53. (in Japanese).

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Department of Global Epidemiology

Original articles

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- 7) Yonezawa, K., Igarashi, M., Ueno, K., Takada, A. and Ito, K. 2013. Resampling nucleotide sequences with closest-neighbor trimming and its comparison to other methods. *PLoS One*, **8**: e57684.
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- 17) Poudel, A., Maharjan, B., Nakajima, C., Fukushima, Y., Pandey, B. D., Beneke, A. and Suzuki, Y. 2013. Characterization of extensively drug-resistant *Mycobacterium tuberculosis* in Nepal. *Tuberculosis*, **93**: 84–88.

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Division of Molecular Pathobiology

Original articles

- 1) Suzuki, T., Orba, Y., Makino, Y., Okada, Y., Sunden, Y., Hasegawa, H., Hall, W. W. and Sawa, H. 2013. Viroporin activity of the JC polyomavirus is regulated by interactions with the adaptor protein complex 3. *Proc. Natl. Acad. Sci. U. S. A.*, **110**: 18668–18673.
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- 3) Yamaguchi, H., Kobayashi, S., Ishii, A., Ogawa, H., Nakamura, I., Moonga, L., Hang'ombe, B. M., Mweene, A. S., Thomas, Y., Kima, T., Sawa, H. and Orba, Y. 2013. Identification of a novel polyomavirus from vervet monkeys in Zambia. *J. Gen. Virol.* **94**: 1357-1364.
- 4) Kobayashi, S., Suzuki, T., Igarashi, M., Orba, Y., Ohtake, N., Nagakawa, K., Niikura, K., Kimura, T., Kasamatsu, H. and Sawa, H. 2013. Cysteine residues in the major capsid protein, Vp1, of the JC Virus are important for protein stability and oligomer formation. *PLoS One*, **8**: e76668.
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Division of Collaboration and Education

Original articles

- 1) Nakao, R., Abe, T., Njihof, A., Yamamoto, S., Jongejan, F., Ikemura, T. and Sugimoto, C. 2013. A novel approach, based on BLSOMs (Batch Learning Self-Organizing Maps), to the microbiome analysis of ticks. *ISEM J.*, **7**: 1003–1015.
- 2) Hayashida, K., Abe, T., Weir, W., Nakao, R., Ito, K., Kajino, K., Suzuki, Y., Jongejan, F., Geysen, D. and Sugimoto, C. 2013. Whole-genome sequencing of *Theileria parva* strains provides insight into parasite migration and diversification in the African continent. *DNA Res.*, **20**: 209–220.
- 3) Namangala, B., Oparaocha, E., Kajino, K., Hayashida, K., Moonga, L., Inoue, N., Suzuki, Y. and Sugimoto, C. 2013. Preliminary investigation of trypanosomiasis in exotic dog breeds from Zambia's Luangwa and Zambezi valleys using LAMP. *Am. J. Trop. Med. Hyg.*, **89**: 116–118.
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- 6) Nakao, R., Qiu, Y., Igarashi, M., Magona, J. W., Zhou, L., Ito, K. and Sugimoto, C. 2013. High prevalence of spotted fever group rickettsiae in *Amblyomma variegatum* from Uganda and their identification using sizes of intergenic spacers. *Ticks Tick Borne Dis.*, **4**: 506–512.
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- 9) Nakayima, J., Nakao, R., Alhassan, A., Hayashida, K., Namangala, B., Mahama, C., Afakye, K. and Sugimoto, C. 2013. Genetic diversity among *Trypanosoma (Duttonella) vivax* strains from Zambia and Ghana, based on cathepsin L-like gene. *Parasite*, **20**: 24.
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- 11) Nakamura, I., Hang'ombe, B. M., Sawa, H., Kobayashi, S., Orba, Y., Ishii, A., Thomas, Y., Isozumi, R., Yoshimatsu, K., Mweene, A. S., Takada, A., Sugimoto, C. and Arikawa, J. 2013. Cross-reactivity of secondary antibodies against African rodents and application for sero-surveillance. *J. Vet. Med. Sci.* **75**: 819–825.
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- 13) Sasaki, M., Ishii, A., Orba, Y., Thomas, Y., Hang'ombe, B. M., Moonga, L., Mweene, A. S., Ogawa, H., Nakamura, I., Kimura, T. and Sawa, H. 2013. Human parainfluenza virus type 3 in wild nonhuman primates, Zambia. *Emerg. Infect. Dis.* **19**: 1500–1503.

Division of Bioinformatics

Original articles

- 1) Takano, R., Kiso, M., Igarashi, M., Le, Q. M., Sekijima, M., Ito, K., Takada, A. and Kawaoka, Y. 2013. Molecular mechanisms underlying oseltamivir resistance mediated by an I117V substitution in the neuraminidase of subtype H5N1 avian influenza A viruses. *J. Infect. Dis.*, **207**: 89–97.
- 2) Hayashida, K., Abe, T., Weir, W., Nakao, R., Ito, K., Kajino, K., Suzuki, Y., Jongejan, F., Geysen, D. and Sugimoto, C. 2013. Whole-genome sequencing of *Theileria parva* strains provides insight into parasite migration and diversification in the African continent. *DNA Res.*, **20**: 209–220.
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- 4) Seto, J., Suzuki, Y., Otani, K., Qiu, Y., Nakao, R., Sugimoto, C. and Abiko, C. 2013. Proposed vector candidate: *Leptotrombidium palpale* for Shimokoshi type *Orientia tsutsugamushi*. *Microbiol. Immunol.*, **57**: 111–117.
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- 6) Kajihara, M., Nakayama, E., Marzi, A., Igarashi, M., Feldmann, H. and Takada, A. 2013. Novel mutations in Marburg virus glycoprotein associated with viral evasion from antibody mediated immune pressure. *J. Gen. Virol.*, **94**: 876–883.
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- 10) Noyori, O., Matsuno, K., Kajihara, M., Nakayama, E., Igarashi, M., Kuroda, M., Isoda, N., Yoshida, R. and Takada, A. 2013. Differential potential for envelope glycoprotein-mediated steric shielding of host cell surface proteins among filoviruses. *Virology*, **446**: 152–161.
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- 1) Ito, K. 2013. Prediction of the evolution of influenza viruses. *Infection, Inflammation & Immunity*, **42**: 330–332. (in Japanese).

Division of Infection and Immunity

Original articles

- 1) Sudo, H., Yamada, K., Iwasaki, K., Higashi, H., Ito, M., Minami A. and Iwasaki N. Global identification of genes related to nutrient deficiency in intervertebral disc cells in an experimental nutrient deprivation mode. *PLoS One*, **8**: e58806.
- 2) Fujikura, D., Chiba, S., Muramatsu, D., Kazumata, M., Nakayama, Y., Kawai, T., Akira, S., Kida, H. and Miyazaki, T. Type-I interferon is critical for FasL expression on lung cells to determine the severity of influenza. *PLoS One*, **8**: e55321.

Unit of Risk Analysis and Management

Original articles

- 1) Noyori, O., Matsuno, K., Kajihara, M., Nakayama, E., Igarashi, M., Kuroda, M., Isoda, N., Yoshida, R. and Takada, A. 2013. Differential potential for envelope glycoprotein-mediated steric shielding of host cell surface proteins among filoviruses. *Virology*, **446**: 152–161.
- 2) Kuribayashi, S., Sakoda, Y., Kawasaki, T., Tanaka, T., Yamamoto, N., Okamatsu, M., Isoda, N., Tsuda, Y., Sunden, Y., Umemura, T., Nakajima, N., Hasegawa, H. and Kida, H. 2013. Excessive cytokine response to rapid proliferation of highly pathogenic avian influenza viruses leads to fatal systemic capillary leakage in chickens. *PLoS One*, **9**: e68375.
- 3) Seto, J., Suzuki, Y., Otani, K., Qiu, Y., Nakao, R., Sugimoto, C. and Abiko, C. 2013. Proposed vector candidate: *Leptotrombidium palpale* for Shimokoshi type *Orientia tsutsugamushi*. *Microbiol. Immunol.*, **57**: 111–117.
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