
日本大学生物資源科学部総合研究所

研究業績集

—— 第19巻 ——

[平成 22(2010)年 4月1日
～平成 23(2011)年 3月31日]

目 次

第1章 研究論文[平成 22(2010)年度]

植物資源科学科 生物資源生産科学専攻

Inoculation with arbuscular mycorrhizal fungi or crop rotation with mycorrhizal plants improves the growth of maize in limed acid sulfate soil

Masao Higo, Katsunori Isobe,
Dong-Jin Kang, Kazuhiro Ujiie,
Rhae A. Drijber and Ryuichi Ishii

生命化学科 応用生命科学専攻

Relationship between lipophilicity and inhibitory activity against cancer cell growth of nine kinds of alk(en)yl trisulfides with different side chains

Yuji Iitsuka, Yuki Tanaka,
Tomomi Hosono-Fukao, Takashi Hosono
Taiichiro Seki and Toyohiko Ariga

生命化学科 応用生命科学専攻

Verification of the antidiabetic effects of cinnamon (*Cinnamomum zeylanicum*) using insulin-uncontrolled type 1 diabetic rats and cultured adipocytes

Yan Shen, Misato Fukushima,
Yoshimasa Ito, Etsuko Muraki,
Takashi Hosono, Taiichiro Seki
and Toyohiko Ariga

生命化学科 応用生命科学専攻

Replacing white rice with pre-germinated brown rice mildly ameliorates hyperglycemia and imbalance of adipokine levels in type 2 diabetes model rats

Mariko Torimitsu, Ryouhei Nagase,
Megumi Yanagi, Miyuki Homma,
Yousuke Sasai, Yukihiko Ito,
Kousuke Hayamizu, Shouta Nonaka,
Takashi Hosono, Mitsuo Kise,
Taiichiro Seki and Toyohiko Ariga

生命化学科

Honokiol increases ABCA1 expression level by activating retinoid X receptor beta

Cha-Gyun Jung, Hirofumi Horike,
Byung-Yoon Cha, Kyung-Ok Uhm,
Rena Yamauchi, Takamasa Yamaguchi,
Takashi Hosono, Kagami Iida,
Je-Tae Woo, and Makoto Michikawa

生命化学科

Lipoprotein lipase is a novel amyloid β (A β)-binding protein that promotes glycosaminoglycan-dependent cellular uptake of A β in astrocytes

Kazuchika Nishitsuji, Takashi Hosono,
Kenji Uchimura, and Makoto Michikawa

生命化学科

Apolipoprotein E regulates the integrity of tight junctions in an isoform-dependent manner in an *in vitro* blood-brain barrier model

Kazuchika Nishitsuji, Takashi Hosono,
Toshiyuki Nakamura, Guojun Bu,
and Makoto Michikawa

生命化学科 生物資源利用科学専攻

Family M42 aminopeptidase from the syntrophic bacterium *Symbiobacterium thermophilum* : Characterization using recombinant protein

Yasuko Kumaki, Masahiro Ogawa,
Takano Hirano, Keiko Yoshikawa,
Naoya Iwasawa, Takurou Yagi,
Wataru Hakamata, Tadatake Oku,
and Toshiyuki Nishio

生命化学科 生物資源利用科学専攻

α -グルコシダーゼ阻害剤開発における酵素情報の重要性

袴田 航

生命化学科 生物資源利用科学専攻

グリコシダーゼの基質特性解析と阻害剤開発に関する研究

袴田 航

獣医学科 獣医学専攻

Small interfering RNA (siRNA) against the *survivin* gene increases apoptosis in a canine melanoma cell line

Miyuki Moriyama, Rui Kano,
Haruhiko Maruyama, Atsuhiko Hasegawa
and Hiroshi Kamata

獣医学科 動物資源科学科

獣医学専攻 生物環境科学専攻

Use of flow cytometry to separate *Leucocytozoon caulleryi* gametocytes from avian blood

Sumie Omori, Yukita Sato,
Hideaki Toda, Kazue Sasaki,
Takashi Isobe, Teruyuki Nakanishi,
Koichi Murata and Masayoshi Yukawa

獣医学科 獣医学専攻

Kinetics of CD4⁺ and CD8a⁺ T-cell subsets in graft-versus-host reaction (GVHR) in ginbuna crucian carp *Carassius auratus langsdorffii*

Yasuhiro Shibasaki, Hideaki Toda,
Isao Kobayashi, Tadaaki Moritomo,
Teruyuki Nakanishi

獣医学科 獣医学専攻

A molecule in teleost fish, related with human MHC-encoded G6F, has a cytoplasmic tail with ITAM and marks the surface of thrombocytes and in some fishes also of erythrocytes

Ken Ohashi, Fumio Takizawa,
Norihiro Tokumaru, Chihaya Nakayasu,
Hideaki Toda, Uwe Fischer,
Tadaaki Moritomo, Keiichiro Hashimoto,
Teruyuki Nakanishi,
Johannes Martinus Dijkstra

獣医学科 獣医学専攻

Perforin-dependent cytotoxic mechanism in killing by CD8 positive T cells in ginbuna crucian carp, *Carassius auratus langsdorffii*

Hideaki Toda, Kyosuke Araki,
Tadaaki Moritomo, Teruyuki Nakanishi

獣医学科 獣医学専攻

Clonal growth of carp (*Cyprinus carpio*) T cells *in vitro*

Takuya Yamaguchi, Fumihiko Katakura,
Satoshi Shitanda, Yoshimitsu Niida,
Hideaki Toda, Maki Ohtani,
Takeshi Yabu, Hiroaki Suetake,
Tadaaki Moritomo, Teruyuki Nakanishi

海洋生物資源科学科 生物資源生産科学専攻

Culturable bacterial flora in the intestinal tract of Japanese pufferfish *Takifugu rubripes*

Haruo Sugita, Kazumi Sugiyama
and Shiro Itoi

海洋生物資源科学科 生物資源生産科学専攻

Diversity of siderophore-producing bacteria isolated from the intestinal tracts of fish along the Japanese coast

Haruo Sugita, Hirotaka Mizuki

and Shiro Itoi

海洋生物資源科学科 生物環境工学科

生物環境科学専攻

Temporal variability in physicochemical properties, phytoplankton standing crop and primary production for 7 years (2002-2008) in the neritic area of Sagami Bay, Japan

Koichi Ara, Koh Yamaki,

Keisuke Wada, Satoshi Fukuyama,

Takeshi Okutsu, Sadao Nagasaka,

Akihiro Shiromoto, Juro Hiromi

食品生命学科 生物資源利用科学専攻

Mixed-species biofilm formation by direct cell-cell contact between brewing yeasts and lactic acid bacteria

Soichi Furukawa, Kanako Yoshida,

Hirokazu Ogihara, Makari Yamasaki,

and Yasushi Morinaga

食品生命学科 生物資源利用科学専攻

Orally administered *Bifidobacterium* triggers immune responses following capture by CD11c⁺ cells in Peyer's patches and cecal patches

Yasuhiro Hiramatsu, Akira Hosono,

Takuma Konno, Yusuke Nakanishi,

Masamichi Muto, Akari Suyama,

Satoshi Hachimura, Ryuichiro Sato,

Kyoko Takahashi, Shuichi Kaminogawa

食品生命学科 生物資源利用科学専攻

Intestinal commensal bacteria promote T cell hyporesponsiveness and down-regulate the serum antibody responses induced by dietary antigen

Masato Tsuda, Akira Hosono,

Tsutomu Yanagibashi, Miran Kihara-Fujioka,

Satoshi Hachimura, Kikuji Itoh,

Kazuhiro Hirayama, Kyoko Takahashi,

Shuichi Kaminogawa

食品生命学科 生物資源利用科学専攻

Commensal bacteria promote migration of mast cells into the intestine

Junichi Kunii, Kyoko Takahashi,

Kazumi Kasakura, Masato Tsuda,

Kou Nakano, Akira Hosono,

Shuichi Kaminogawa

食品生命学科 生物資源利用科学専攻

Comparison of immunoresponses between cecal patch cells and Peyer's patch cells stimulated by bacterial components

Takuma Konno, Akira Hosono,
Yasuhiro Hiramatsu, Satoshi Hachimura,
Kyoko Takahashi, and Shuichi Kaminogawa

応用生物科学科

Vital roles of the second DNA-binding site of Rad52 protein in yeast homologous recombination

Naoto Arai, Wataru Kagawa,
Kengo Saito, Yoshinori Shingu,
Tsutomu Mikawa, Hitoshi Kurumizaka,
and Takehiko Shibata

応用生物科学科 応用生命科学専攻

A novel culture system for mouse spermatid maturation which produces elongating spermatids capable of inducing calcium oscillation during fertilization and embryonic development

Hisataka Hasegawa, Yukihiro Terada,
Tomohisa Ugajin, Nobuo Yaegashi,
Kahei Sato

応用生物科学科 応用生命科学専攻

Promomycin, a polyether promoting antibiotic production in *Streptomyces* spp.

Sho-ichi Amano, Tatsuya Morota,
Yu-ki Kano, Hiroyuki Narita,
Tohko Hashidzume, Setsuya Yamamoto,
Kotaro Mizutani, Shohei Sakuda,
Kazuo Furihata, Hatsumi Takano-Shiratori,
Hideaki Takano, Teruhiko Beppu
and Kenji Ueda

応用生物科学科 応用生命科学専攻

Cross-interaction of anti- σ^H factor RshA with BldG, an anti-sigma factor antagonist in *Streptomyces griseus*

Hideaki Takano, Masahiro Fujimoto,
Hirofumi Urano, Teruhiko Beppu
and Kenji Ueda

応用生物科学科 応用生命科学専攻

Unique evolution of *Symbiobacterium thermophilum* suggested from gene content and orthologous protein sequence comparisons

Kenro Oshima, Kenji Ueda,
Teruhiko Beppu, and Hiromi Nishida

応用生物科学科 応用生命科学専攻

***Cohnella fontinalis* sp. nov., a xylanolytic bacterium isolated from fresh water**

Hatsumi Shiratori, Yudai Tagami,
Teruhiko Beppu and Kenji Ueda

獣医学科 応用生物科学科

獣医学専攻 応用生命科学専攻

***Bartonella japonica* sp. nov. and *Bartonella silvatica* sp. nov., isolated from *Apodemus* mice**

Kai Inoue, Hidenori Kabeya,
Hatsumi Shiratori, Kenji Ueda,
Michel Y. Kosoy, Bruno B. Chomel,
Henri-Jean Boulouis and Soichi Maruyama

応用生物科学科 応用生命科学専攻

Use of RAPD analysis to assess the threat of interspecific hybridization to the critically endangered *Polemonium kiushianum* in Japan

Hideyuki Matoba, Kazufumi Inaba,
Katsuya Nagano, Hiroshi Uchiyama

応用生物科学科 応用生命科学専攻

***Burkholderia acidipaludis* sp. nov., aluminium-tolerant bacteria isolated from Chinese water chestnut (*Eleocharis dulcis*) growing in highly acidic swamps in South-East Asia**

Tomoko Aizawa, Nguyen Bao Ve,
Pisoot Vijarnsorn, Mutsuyasu Nakajima
and Michio Sunairi

応用生物科学科 応用生命科学専攻

***Burkholderia bannensis* sp. nov., an acid-neutralizing bacterium isolated from torpedo grass (*Panicum repens*) growing in highly acidic swamps**

Tomoko Aizawa, Pisoot Vijarnsorn,
Mutsuyasu Nakajima and Michio Sunairi

応用生物科学科 応用生命科学専攻

Identification of significant regions of transcription factor DP-1 (TFDP-1) involved in stability/instability of the protein

Takashi Arakawa, Yoshikazu Masuhiro,
Yoshiaki Kamiya, Hirohisa Kojima,
Shigemasa Hanazawa