

## 2010 Annual Meeting of the Society for Actinomycetes Japan (SAJ)

Chairperson: Fumio Kato (Toho University)

The 2010 annual meeting of SAJ will be held in September 2010 in Tokyo, Japan. We look forward to welcoming you to participate in the meeting and to submit papers.

Updated information will be provided on the SAJ annual meeting Home Page:

<http://www.phar.toho-u.ac.jp/event/otheve/018091.html>

### General Outline

Dates: September 2 (Thu) – 3 (Fri), 2010  
Venue: Tower Hall Funabori,  
4-4-1 Funabori, Edogawa, Tokyo 134-0091  
Phone: +81-3-5676-2211 <http://www.towerhall.jp/>

Registration fee including abstracts:

SAJ member	8,000 yen (6,000 yen until June 30, 2010)
Student	4,000 yen (3,000 yen until June 30, 2010)
Non-member	10,000 yen (8,000 yen until June 30, 2010)
Abstracts only	2,000 yen

Registration procedure may be acceptable through the following e-mail address, effective from March 1<sup>st</sup>, 2010saj@phar.toho-u.ac.jp

Reception: September 2 (Thu), 2010 at Tower Hall Funabori  
Fee: Member 10,000 yen (8,000 yen until June 30, 2010)  
Student 6,000 yen (4,000 yen until June 30, 2010)  
Non-member 10,000 yen (8,000 yen until June 30, 2010)

Scientific program:

An invited lecture, SAJ award lectures and contributing paper (oral presentations and posters) sessions will be arranged.

Submission of abstracts:

Abstracts for oral presentation and poster should be submitted via an exclusive e-mail address (2010saj@phar.toho-u.ac.jp) as an attachment file written by using MS Word<sup>®</sup>.

Deadline for submission of abstracts: June 30, 2010

For further information contact:

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# Scientific Program

## September 2 (Thursday)

- 9:55 Opening Remarks
- 10:00 Contributed Papers (Session 1)
- O-1 Analysis of actinomycete flora in plant and searching for novel bioactive compounds**  
○Inahashi, Y.<sup>1</sup>, Matsumoto, A.<sup>2</sup>, Iwatsuki, M.<sup>2</sup>, Ishiyama, A.<sup>2</sup>, Ootoguro, K.<sup>2</sup>, Ōmura, S.<sup>2</sup>, and Takahashi, Y.<sup>1,2</sup>  
(<sup>1</sup>Graduate School of Infection Control, Kitasato Univ., <sup>2</sup>Kitasato Inst. for Life Sciences)
- O-2 Application of 454 pyrosequencing for the analysis of PKS and NRPS genes**  
○Komaki, H.<sup>1</sup>, Nakagawa, S.<sup>2</sup>, Takagi, M.<sup>2</sup>, Isogai, T.<sup>3</sup>, Shin-ya, K.<sup>4</sup>, Suzuki, K.<sup>1</sup>, Ando, K.<sup>1</sup>, and Harayama, S.<sup>1,5</sup>  
(<sup>1</sup>NITE, <sup>2</sup>JBIC, <sup>3</sup>Univ. Tokyo, <sup>4</sup>AIST, <sup>5</sup>Chuo Univ.)
- O-3 Phylogenetic analysis of  $\beta$ -lactamases in Actinobacteria**  
Ogawara, H.  
(HO Bio Institute)
- O-4 New bioactive pyrones produced by two *Nocardioopsis* strains**  
○Ogura, H.<sup>1</sup>, Shimasaki, R.<sup>1</sup>, Hayashi, K.<sup>1</sup>, Imada, C.<sup>2</sup>, Panbangred, W.<sup>3</sup>, Nihira, T.<sup>4</sup>, Oikawa, T.<sup>5</sup>, Mori, M.<sup>6</sup>, Shiomi, K.<sup>6</sup>, Oku, N.<sup>1</sup> and Igarashi, Y.<sup>1</sup>  
(<sup>1</sup>Biotech. Res. Center, Toyama Pref. Univ., <sup>2</sup> Tokyo Univ. Mar. Sci. Tech., <sup>3</sup>Mahidol Univ., <sup>4</sup>Osaka Univ., <sup>5</sup>Kanagawa Univ. Human Services, <sup>6</sup>Kitasato Inst. Life Sci., Kitasato Univ.)
- O-5 Structure-activity relationship of lasso peptide lariatin with antimycobacterial activity**  
○Miyake, M.<sup>1</sup>, Shimizu, Y.<sup>1</sup>, Inokoshi, J.<sup>1</sup>, Ōmura, S.<sup>2</sup>, and Tomoda, H.<sup>1</sup>  
(<sup>1</sup>Pharm. Sci., Univ. Kitasato, <sup>2</sup>Kitasato inst. for life sciences, Univ. Kitasato)
- O-6 Suppression of undesirable side-activity of vitamin D<sub>3</sub> hydroxylase from *Pseudonocardia autotrophica* by amino acid substitution**  
○Nishimura, K.<sup>1</sup>, Fujii, Y.<sup>1</sup>, Yasutake, Y.<sup>2</sup>, Tamura T.<sup>2</sup> and Arisawa, A.<sup>1</sup>  
(<sup>1</sup>Mercian Bioresource Laboratories, <sup>2</sup>Res Inst. Bioprocess, AIST)
- O-7 Overproduction of various secretory-form proteins in *Streptomyces lividans***  
Noda, S.<sup>1</sup>, Tanaka, T.<sup>2</sup>, Kondo, A.<sup>1</sup>, and ○Ogino, C.<sup>1</sup>  
(<sup>1</sup>Grad. Sch. Eng. & <sup>2</sup>Org. Adv. Sci. Tech., Kobe Univ.)
- 11:24 Break
- 11:35 **Poster Session (odd numbers)**
- 12:20 Lunch
- 13:15 The SAJ Plenary Meeting
- 14:15 **Awarding Ceremony**

### ***SAJ Award***

Studies on an alternative menaquinone biosynthetic pathway operating in actinomycetes

**Dr. Tohru Dairi**

(Faculty of Engineering, Hokkaido University)

***SAJ Merit Award***

Analysis of the cell-surface properties and structures of *Rhodococcus* for application to the environmental biotechnologies

**Dr. Mutsuyasu Nakajima**

(College of Bioresource Sciences, Nihon University)

***Hamada Award***

Characterization and modification of biosynthetic enzymes involved in secondary metabolism of *Streptomyces*

**Dr. Masashi Ueki**

(Department of Chemical Biology, RIKEN ASI)

14:35 Break

14:45 **SAJ 25th Anniversary Symposium**

***“From genomic information, To production of valuable compounds by Actinomycetes”***

**S-1 Microbial Genome Analysis by Next-Generation Sequencer**

**Dr. Masanari Kitagawa**

(Takarabio Inc., DragonGenomicsCtr.)

**S-2 Genome analysis of *Micromonospora griseorubida* using next generation sequencer**

**Dr. Jun Ishikawa**

(Dept. Bioactive Molecules, Natl. Inst. Infect. Dis.)

**S-3 Studies on an alternative menaquinone biosynthetic pathway operating in actinomycetes**

***SAJ Award***

**Dr. Tohru Dairi**

(Faculty of Engineering, Hokkaido University)

**S-4 Optimization of *Streptomyces avermitilis* genome for the heterologous expression of secondary metabolism**

**Dr. Haruo Ikeda**

(Kitasato Institute for Life Sciences, Kitasato University)

16:35 Break

16:50 **Invited Lectures**

**Lecture for 25th Anniversary, SAJ**

**Episodes around the Inauguration of SAJ in 1985**

**Dr. Yasumasa Koyama**

(Emeritus Professor, TohoUniversity)

**Special Lecture**

**Pathogenic bacteria infection of intestinal epithelium and circumvention of the host innate defense system**

**Dr. Chihiro Sasagawa**

(The Institute of Medical Science, The University of Tokyo)

18:10 Break

18:30 Reception

## September 3 (Friday)

9:20 Contributed Papers (Session 2)

**O-8 Mechanism of spiroacetal formation in reveromycin A biosynthesis**

○Takahashi, S., Kumano, T., Takagi, H., Nogawa, T., Oowada, E., Uramoto, M., and Osada, H.

(Chemical Biology Department, RIKEN ASI)

**O-9 Functional analysis of D-cycloserine-biosynthesizing enzymes**

○Uda, N., Matoba, Y., Oda, K., Noda, M., Kumagai, T., and Sugiyama, M.,

(Graduate School of Biomedical Sciences, Hiroshima Univ.)

**O-10 Chain length determination in epsilon-Poly-L-lysine synthetase**

○Yoshimura, T.<sup>1</sup>, Yamanaka, K.<sup>1</sup>, Maruyama, C.<sup>2</sup>, and Hamano, Y.<sup>2</sup>

(<sup>1</sup>Chisso Corp., <sup>2</sup>Dept. Biosci., Fukui Pref. Univ.)

**O-11 Studies on the first step of futasoline pathway in actinobacteria**

○Arakawa, T.<sup>1</sup>, Kuratsu, M.<sup>2</sup>, Seto, H.<sup>3</sup>, and Dairi, T.<sup>4</sup>.

(<sup>1</sup>Biotechnology Research Center, Toyama Prefectural University, <sup>2</sup>Kyowa Hakko Bio Co. Ltd., <sup>3</sup>Faculty of Applied Bioscience, Tokyo University of Agriculture, <sup>4</sup> Faculty of Engineering, Hokkaido University)

**O-12 Structural analysis of the linear chromosome of *Streptomyces rochei* 7434AN4**

○Cao, Z.<sup>1</sup>, Yosi, N.<sup>1</sup>, Yang, Y.<sup>1</sup>, Arakawa, K.<sup>1</sup>, Tagami, M.<sup>2</sup>, Alexander, L.<sup>2</sup>, and Kinashi, H.<sup>1</sup>

(<sup>1</sup>Dept. Mol. Biotech., Grad. Sch. ADSM, Univ. Hiroshima, <sup>2</sup>Omics Science Center, RIKEN)

10:20 Break

10:30 Contributed Papers (Session 3)

**O-13 Effects of GroEL2 on the cell-localization of *Rhodococcus erythropolis* PR4 in alkane/medium two-phase cultures**

○Iwabuchi, N., Akase, Y., Takihara, H., and Sunairi, M.

(Dept. Appl. Bio. Sci., Nihon Univ.)

**O-14 New cultural method for *Streptomyces* using solid-liquid binary-phase medium: rethinking the role of AmfS, the morphogenic peptide**

○Urano, H., Takano, H., and Ueda, K.

(Life Science Research Center, College of Bioresource Sciences, Nihon Uni)

**O-15 Aggregation and sedimentation of *Streptomyces* cells**

○Fujimoto, M., Yamada, A., Takano, H., and Ueda, K.

(Life Science Research Center, Nihon University)

**O-16 Identification of lysine-acetylated proteins in *Streptomyces griseus***

○Ishigaki, Y.<sup>1</sup>, Akanuma, G.<sup>1</sup>, Kosono-Matsuda, S.<sup>2</sup>, Yoshida, M.<sup>2</sup>, Horinouchi, S.<sup>1</sup>, and Ohnishi, Y.<sup>1</sup>

(<sup>1</sup>Department of Biotechnology, Graduate School of Agriculture and Life Science, The University of Tokyo, <sup>2</sup>Advanced Science Institute, RIKEN)

**O-17 Characterization of a novel ECF-sigma factor which governs genes involved in transcription and translation in *Streptomyces griseus***

○Otani, H., Higo, A., Horinouchi, S. and Ohnishi, Y.

(Department of Biotechnology, Graduate School of Agriculture and Life Sciences, The University of Tokyo)

- O-18 Negative feedback regulation of grixazone biosynthesis in *Streptomyces griseus***  
○Nakamura, K., Hashimoto, K., Horinouchi, S., and Ohnishi, Y.  
(Department of Biotechnology, Graduate School of Agriculture and Life Sciences,  
The University of Tokyo)
- 11:42 Break
- 11:55 **Poster Session (even numbers)**
- 12:40 Lunch
- 13:35 **Awardee's Lectures**  
***SAJ Merit Award***  
**Dr. Mutsuyasu Nakajima**  
(College of Bioresource Sciences, Nihon University)
- Hamada Award***  
**Dr. Masashi Ueki**  
(Department of Chemical Biology, RIKEN ASI)
- 14:25 Awarding Ceremony (Poster Award and Excellent Student Award)
- 14:35 Closing Remarks
- 15:00 **Prof. Sueharu Horinouchi Memorial Symposium**

## Poster Session

- P-1 Taxonomic study of new Anthracycline compound producing actinomycete strain from Malaysia.**  
○Muramatsu, H<sup>1</sup>., Murakami, R<sup>2</sup>., Shahab, N<sup>3</sup>., and Nagai, K<sup>1</sup>.  
(<sup>1</sup>Astellas Research Technologies Co. Ltd., <sup>2</sup>Astellas Pharma Inc., <sup>3</sup>SIRIM, Malaysia)
- P-2 T5592, a novel inhibitor of epithelial-mesenchymal transitions purified from actinomycete, strain 645122 from Malaysia.**  
○Chikanishi, T<sup>1</sup>., Hatori, H<sup>2</sup>., Murakami, R<sup>3</sup>., Ohtsu, Y<sup>3</sup>., Sasamura, H<sup>2</sup>., Takase, S<sup>3</sup>., Ogawa, H<sup>1</sup>., Imaizumi, K<sup>1</sup>., Hisamatsu, S<sup>1</sup>., Sugimoto, Y<sup>1</sup>., Yamamoto, M<sup>1</sup>., and Nakajima, H<sup>3</sup>.  
(<sup>1</sup>Teijin Pharma Ltd., <sup>2</sup>Astellas Research Technologies Co., Ltd. <sup>3</sup>Astellas Pharma Inc.)
- P-3 Isolation of marine actinomycetes belonging to the family *Micromonosporaceae*.**  
○Yamamoto, E., Muramatsu, H., Takaya, K., and Nagai, K.  
(Fermentation Research Div., Astellas Research Technologies Co., Ltd)
- P-4 Identification of Amycolamicin producing strain MK575-fF5**  
○Kinoshita, N., Hatano, M., and Igarashi, M.  
(Institute of Microbial Chemistry)
- P-5 Isolation of quorum quenching actinomycetes and controlling of seedling blight of rice**  
○Hatano, M., Ishizaki, Y., Igarashi, M., and Nishimura, Y.  
(Institute of Microbial Chemistry)
- P-6 Taxonomic and physiological characteristics of actinomycetes isolated from lichens**  
○Ashizawa, H.<sup>1</sup>, Sakuraki, Y.<sup>1</sup>, Tamura, T.<sup>2</sup>, Yamamura, H.<sup>1</sup> and Hayakawa, M.<sup>1</sup>  
(<sup>1</sup>Division of Applied Biological Sciences, University of Yamanashi, <sup>2</sup>NITE Biological Resource Center (NBRC))
- P-7 Taxonomic and physiological characteristics of actinomycetes isolated from the root surfaces of herbaceous plants**  
○Ishii, A.<sup>1</sup>, Sakamoto, M.<sup>2</sup>, Yamamura, H.<sup>1</sup> and Hayakawa, M.<sup>1</sup>  
(<sup>1</sup>Division of Applied Biological Sciences, University of Yamanashi, <sup>2</sup>Synaptech, Co. Ltd.)
- P-8 Extensive isolation and diversity analysis of actinomycetes from soil amended with composted swine manure**  
○Hayashi, Y.<sup>1</sup>, Kawa, Y.<sup>1</sup>, Kunugi, N.<sup>1</sup>, Tamura, T.<sup>2</sup>, Yamamura, H.<sup>1</sup> and Hayakawa, M.<sup>1</sup>  
(<sup>1</sup>Division of Applied Biological Sciences, University of Yamanashi, <sup>2</sup>NITE Biological Resource Center (NBRC))
- P-9 Taxonomic characterization of actinomycetes isolated from soil under acidic condition**  
○Shimajima, Y.<sup>1</sup>, Tamura, T.<sup>2</sup>, Yamamura, H.<sup>1</sup> and Hayakawa, M.<sup>1</sup>  
(<sup>1</sup>Division of Applied Biological Sciences, University of Yamanashi, <sup>2</sup>NITE Biological Resource Center (NBRC))
- P-10 Evaluation of a new isolation method for soil actinomycetes using anion-exchange resin**  
○Kamurai, K.<sup>1</sup>, Tamura, T.<sup>2</sup>, Yamamura, H.<sup>1</sup> and Hayakawa, M.<sup>1</sup>  
(<sup>1</sup>Division of Applied Biological Sciences, University of Yamanashi, <sup>2</sup>NITE Biological Resource Center (NBRC))

- P-11 Analysis of L-hercynine-sensitive bacteria**  
 ○Kawai, R.<sup>1</sup>, Yamada, T.<sup>1</sup>, Yokota, A.<sup>2</sup>, Nagasawa, H.<sup>1</sup>, and Sakuda, S.<sup>1</sup>  
 (1Dept. Appl. Biol. Chem., Univ. Tokyo, 2Inst. Mol. Cell. Biosci., Univ. Tokyo)
- P-12 Isolation and characterization of agar-digesting actinomycetes from marine environment**  
 ○Takegasa, Y., Imada, C., Kobayashi, T., and Hamada-Sato, N.  
 (Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology)
- P-13 Community structure analysis of actinomycetes in neritic surface seawater around Japan by PCR-DGGE method**  
 ○Harunari, E., Saito, K., Imada, C., and Kobayashi, K.  
 (Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology)
- P-14 Hyaluronidase inhibitor produced by actinomycete isolated from marine organisms.**  
 ○Harunari, E., Imada, C., Kobayashi, T., and Hamada-Sato, N.  
 (Graduate School of Marine Science and Technology, Tokyo University of Marine Science and Technology)
- P-15 Taxonomic study of pathogenic actinomycetes isolated from animals in Brazil.**  
 ○Shibazaki, A.<sup>1,2</sup>, Ookusu, E.<sup>1</sup>, Yazawa, K.<sup>1</sup>, Yaguchi, T.<sup>1</sup>, Larissa Anuska Zeni Condas<sup>3</sup>, Marcio Garcia RIBEIRO<sup>3</sup>, and Gonoi, T<sup>1</sup>  
 (1MMRC, Chiba Univ, Inohana, 2Graduate School of Advanced Integration Science, Chiba Univ, 3Enfermidades Infecciosas dos Animais, Departamento de Higiene Veterinaria e Saude Publica, Faculdade de Medicina Veterinaria e Zootecnia/UNESP, Botucatu, SP, Brasil)
- P-16 Taxonomic study of actinomycetes isolated from Vietnamese samples**  
 Sakiyama, Y., Dinh Thuy Hang<sup>1</sup>, Dao Thi Luong<sup>1</sup>, Nguyen K. N. Thao<sup>1</sup>, Chu Thi Thanh Binh<sup>1</sup>, ○Miyadoh, S., Duong Van Hop<sup>1</sup>, and Ando, K.  
 (NITE-DOB, <sup>1</sup>IMBT-VNUH)
- P-17 Taxonomic study of an actinomycete strain related to the genus *Salinispora*, isolated from mangrove soil**  
 ○Tamura, T., Ishida, Y., Komukai, C. and Suzuki, K.  
 (NITE Biological Resource Center (NBRC))
- P-18 Taxonomic study of three isolates closely related to the genus *Humihabitans* isolated from soil of Rishiri Island and Iriomote Island**  
 ○Hamada, M.<sup>1,2</sup>, Komukai, C.<sup>1</sup>, Ishida, Y.<sup>1</sup>, Yamamura, H.<sup>2</sup>, Otoguro, M.<sup>1</sup>, Tamura, T.<sup>1</sup>, Suzuki, K.<sup>1</sup> and Hayakawa, M.<sup>2</sup>  
 (1NITE Biological Resource Center (NBRC), 2Division of Applied Biological Sciences, Univ. of Yamanashi)
- P-19 Novel Type III secretion system inhibitor, produced by *Streptomyces* sp. KK-88**  
 ○Takizawa, M.<sup>1</sup>, Iwatsuki, M.<sup>2</sup>, Duangmal, K.<sup>3</sup>, Matsumoto, A.<sup>2</sup>, Takahashi, Y.<sup>1,2</sup>, Abe, S.<sup>1,2</sup>, Thamchaipenet, A.<sup>3</sup>, Shiomi, K.<sup>1,2</sup>, and Ōmura, S.<sup>2</sup>  
 (1Grad. Sch. Infect. Cont. Sci., Kitasato Univ., 2Kitasato Inst. Life Sci., 3Kasetsart Univ.)

- P-20 Metabolome mining in thermophilic gram-positive bacterium *Laceyella* sp. for novel bioactive molecules.**  
 ○Akiyama, H.<sup>1</sup>, Oku, N.<sup>1</sup>, Kasai, H.<sup>2</sup>, Shizuri, Y.<sup>2</sup>, and Igarashi, Y.<sup>1</sup>  
 (1Biotech. Res. Center, Toyama Pref. Univ., 2Mar. Biotech. Kamaishi Lab., Kitasato Univ.)
- P-21 Pterocidin, a new anti-invasive compound produced by *Streptomyces* sp.**  
 ○Asano D.<sup>1</sup>, Furihata K.<sup>2</sup>, Oku N.<sup>1</sup>, and Igarashi Y.<sup>1</sup>  
 (1Toyama Prefectural University, 2 Graduate School of Agricultural and Life Sciences, The University of Tokyo)
- P -22 Cyslabdams and nosokophic acid, new potentiators of  $\beta$ -lactam activity, produced by *Streptomyces* sp. K04-0144**  
 ○Tokura, Y.<sup>1</sup>, Koyama, N.<sup>1</sup>, Matsumoto, A.<sup>2</sup>, Takahashi, Y.<sup>2</sup>, Ōmura, S.<sup>2</sup>, and Tomoda, H.<sup>1</sup>  
 (1 Grad. Sch. Pharm. Sci., Univ. Kitasato, 2 Grad. Sch. Inf. Cont. Sci., Univ. Kitasato)
- P-23 Screening of L-ascorbate oxidase form actinomycetes**  
 ○Nishiyama, T.<sup>1</sup>, Hashimoto, Y.<sup>1</sup>, Kusakabe, H.<sup>2</sup>, and Kobayashi, M.<sup>1</sup>  
 (1Univ. of Tsukuba, 2Enzyme sensor Co., Ltd.)
- P-24 Novel post-translational activation mechanism of *Rhodococcus* NHase**  
 ○Hashimoto, Y., Cui, T., Zhou, Z., and Kobayashi, M.  
 (Univ. of Tsukuba)
- P-25 Comparison of *Arthrobacter* isonitrile hydratase with *Pseudomonas* isonitrile hydratase**  
 ○Sato, H., Hashimoto, Y., and Kobayashi, M.  
 (Grad. Sch. Life and Environ. Sci., The University of Tsukuba)
- P-26 Purification and characterization of a soil specific chitinase from *Streptomyces coelicolor* A3(2)**  
 ○Nazari, B.<sup>1,2</sup>, Kobayashi, M.<sup>1</sup>, and Fujii, T.<sup>2</sup>  
 (1Life. Environ. Sci., Univ. Tsukuba, 2 Div. Environ. Biofun., NIAES)
- P-27 Properties, cloning and over-expression of xylanase from *Saccharopolyspora pathumthaniensis* S582 isolated from guts of a grass-feeding termite.**  
 ○Sinma, K.<sup>1</sup>, Kitpreechavanich, V.<sup>2</sup>, and Tokuyama, S.<sup>1</sup>  
 (1 Faculty of Agriculture, Shizuoka University, 2 Faculty of science, Kasetsart University)
- P-28 Development of screening system and identification of biomediators of reveromycin A biosynthesis**  
 ○Panthee, S., Futamura, Y., Takahashi, S., and Osada, H.  
 (Chemical Biology Department, RIKEN, ASI)
- P-29 Elucidation of genes and enzymes involved in the side chain formation of cytotrienin.**  
 ○Ueki, M.<sup>1</sup>, Koshiro, N.<sup>1,2</sup>, Hayashi, T.<sup>1</sup>, and Osada, H.<sup>1</sup>  
 (1Chemical Biology Dept., RIKEN ASI, 2Mat. Sci. Eng, Tokyo Denki Univ.)
- P-30 Functional analysis of the two-component monooxygenase systems involved in the biosyntheses of actinorhodin and alnumycin**  
 ○Taguchi, T.<sup>1</sup>, Okamoto, S.<sup>2</sup>, and Ichinose, K.<sup>1</sup>  
 (1Musashino University, 2National Food Research Institute)
- P-31 Functional analysis of P450 hydroxylase LkmF in lankamycin biosynthesis**  
 ○Kondo, H., Tonokawa, T., Konaka, Y., Itakura, Y., Arakawa, K., and Kinashi, H.  
 (Dept. Mol. Biotech., Grad. Sch. AdSM, Hiroshima Univ.)

- P-32 Biosynthetic study of Amycolose involved in antibiotic Amycolamicin.**  
 ○Tohyama, S., and Takahashi, Y.  
 (Institute of Microbial Chemistry, Tokyo)
- P-33 Cloning of the gene cluster responsible for the biosynthesis of RQN-18690A.**  
 ○Hayashi, Y.<sup>1</sup>, Nakamura, T.<sup>1</sup>, Oshima, K.<sup>2</sup>, Hattori, M.<sup>2</sup>, Osada, H.<sup>3</sup>, and Kakeya, H.<sup>1</sup>  
 (1Graduate school of Pharmaceutical Sciences, Kyoto University, 2Graduate school of Frontier Sciences, Tokyo University, 3Chemical Biology Core Facility, RIKEN,)
- P-34 The Biosynthesis of A-90289 Antibiotics, Translocase I Inhibitors, Featuring a New type of Sulfotransferase.**  
 ○Funabashi, M.<sup>1</sup>, Baba, S.<sup>2</sup>, Nonaka, K.<sup>2</sup>, Fujita, Y.<sup>1</sup>, and Kizuka, M.<sup>1</sup>,  
 and Steven G. Van Lanen<sup>3</sup>  
 (1 Lead Discovery & Optimization Laboratories I, Daiichisankyo Co., Ltd., 2 Biopharmaceutical Technology Research Laboratories, Daiichisankyo Co. Ltd., 3 Department of Pharmaceutical Science, University of Kentucky)
- P-35 Gene disruption analysis of the D-cycloserine biosynthetic gene cluster from *Streptomyces lavendulae* ATCC11924**  
 ○Kumagai, T., Koyama, Y., Oda, K., Noda, M., Matoba, Y., and Sugiyama, M.  
 (Grad. Sch. Biomed. Sci., Hiroshima Univ.)
- P-36 Unusual non-ribosomal peptide synthetases in the streptothricin biosynthesis**  
 ○Maruyama C., Toyoda J., Yano A., and Hamano Y.  
 (Dept. Biosci., Fukui Pre. Univ.)
- P-37 Functional analysis of hatomarubigin biosynthesis genes**  
 ○Kawasaki, T.<sup>1</sup>, Hirashima, R.<sup>2</sup>, Yamada, Y.<sup>2</sup>, Takeda, M.<sup>2</sup>, Maeda, A.<sup>2</sup>,  
 and Hayakawa, Y.<sup>2</sup>  
 (1RISH, Kyoto Univ., 2Fac. Pharm. Sci., Tokyo Univ. Sci.)
- P-38 Analysis of rosamicin biosynthetic gene in *Micromonospora rosaria* IFO13697**  
 ○Higashi, N., Iizaka, Y., Idemoto, N., Ishida, M., Oiwa, R., Suwa, D., Anzai, Y.,  
 and Kato, F.  
 (Faculty of Pharmaceutical Sciences, Toho Univ.)
- P-39 Genetic analysis of *mycCI* and *mycG* encoding cytochrome P450 involved in biosynthesis of mycinamicin macrolide antibiotics**  
 ○Anzai, Y.<sup>1</sup>, Harada, C.<sup>1</sup>, Masuda, R.<sup>1</sup>, Kinoshita, K.<sup>2</sup>, and Kato, F.<sup>1</sup>  
 (1Faculty of Pharmaceutical Sciences, Toho Univ., 2School of Pharmaceutical Sciences, Mukogawa Women's Univ.)
- P-40 Introduction of mycinose biosynthetic gene into actinomycete strains producing macrolide Antibiotics**  
 Sakai, A<sup>1</sup>, ○Anzai, Y.<sup>1</sup>, Furukawa, M.<sup>1</sup>, Mitsumori, A.<sup>1</sup>, Kinoshita, K.<sup>2</sup>, and Kato, F.<sup>1</sup>  
 (1Faculty of Pharmaceutical Sciences, Toho Univ., 2School of Pharmaceutical Sciences, Mukogawa Women's Univ.)
- P-41 Expression of genes encoding diterpene synthases in the versatile host.**  
 ○Uchiyama, T.<sup>1</sup>, Komatsu, M.<sup>1</sup>, Tomoda, H.<sup>2</sup>, and Ikeda, H.<sup>1</sup>  
 (1Graduate School of Infection Control Sciences, Kitasato University, 2Graduate School of Pharmaceutical Sciences, Kitasato University.)

- P-42 Characterization of *relA* mutant of industrial microorganism *Streptomyces avramitilis***  
 ○Komatsu, M.<sup>1</sup>, Ochi, K.<sup>2</sup>, and Ikeda, H.<sup>1</sup>  
 (1Kitasato Institute for Life Sciences, Kitasato University, <sup>2</sup>Hiroshima Institute of Technology)
- P-43 Effects of the gene encoding glyceraldehyde 3-phosphate dehydrogenase (GAPDH) on the combined culture**  
 Mori Y., Igarashi Y., and ○Onaka H.  
 (Biotechnology Research Center, Toyama Prefectural Univ.)
- P-44 Identification of metabolites from *Streptomyces* sp. RK95-74**  
 ○Koshiro, N.<sup>1,2</sup>, Ueki, M.<sup>1</sup>, Saito, A.<sup>1</sup>, Kawasaki, H.<sup>2</sup>, and Osada, H.<sup>1</sup>  
 (1Antibiot Lab, RIKEN ASI, <sup>2</sup>Mat. Sci. Eng, Tokyo Denki Univ.)
- P-45 Rare earth elements activate the secondary metabolite–biosynthetic gene clusters in *Streptomyces coelicolor* A3(2)**  
 ○Tanaka, Y.<sup>1</sup>, Hosaka, T.<sup>2</sup>, and Ochi, K.<sup>3</sup>  
 (1JBIC, <sup>2</sup>International Young Researchers Empowerment Center, Shinshu University, <sup>3</sup>Hiroshima Institute of Technology)
- P-46 Phenotypic analysis of spontaneous erythromycin-resistant mutants isolated from various actinomycetes.**  
 ○Imai, Y.<sup>1</sup>, Fujiwara, T.<sup>1</sup>, Tanaka, Y.<sup>2</sup>, Sen, K.<sup>3</sup>, Ochi, K.<sup>4</sup>, and Hosaka, T.<sup>5</sup>  
 (1Graduate School of Agriculture, Shinshu University, <sup>2</sup>JBIC, <sup>3</sup>Faculty of Agriculture, Shinshu University, <sup>4</sup>Faculty of Applied Information Science, Hiroshima Institute of Technology, <sup>5</sup>International Young Researcher Empowerment Center, Shinshu University)
- P-47 Activation of the dormant ability to produce antibacterial compounds in antibiotic non-producing actinomycetes by generating a drug-resistant mutation.**  
 ○Yoshida, T.<sup>1</sup>, Tagawa, R.<sup>1</sup>, Iwakawa, C.<sup>2</sup>, Watanabe, K.<sup>2</sup>, Sen, K.<sup>2</sup>, Ochi, K.<sup>3</sup>, and Hosaka, T.<sup>4</sup>  
 (1Graduate School of Agriculture, Shinshu University, <sup>2</sup>Faculty of Agriculture, Shinshu University, <sup>3</sup>Faculty of Applied Information Science, Hiroshima Institute of Technology, <sup>4</sup>International Young Researcher Empowerment Center, Shinshu University)
- P-48 Characterization of *visG* function for virginiamycin S biosynthesis in *Streptomyces virginiae***  
 ○Ningsih, F., Kitani, S., Fukushima, E., and Nihira, T.  
 (International Center for Biotechnology (ICBiotech), Osaka Univ.)
- P-49 Functional analysis of TetR type repressor *SrrB* in antibiotic biosynthesis of *Streptomyces rochei***  
 ○Suzuki, T., Sasaki H., Yamamoto, S., Arakawa, K., and Kinashi, H.  
 (Department of Molecular Biotechnology, Graduate School of Advanced Sciences of Matter, Hiroshima University)
- P-50 Characterization of promoter region of the methanol-inducible *icl* gene in *Rhodococcus erythropolis*.**  
 Kagawa, Y.<sup>1</sup>, Mitani, Y.<sup>2</sup>, Nakashima, N.<sup>2</sup>, Tamura, N.<sup>2</sup>, and ○Tamura, T.<sup>1,2</sup>  
 (1 Grad. Sch. Agric., Hokkaido Univ., <sup>2</sup>Natl. Inst. Adv. Ind. Sci. Technol. (AIST))

- P-51** **Transcriptional analysis of three *dapF* genes in *Kitasatospora setae* KM-6054<sup>T</sup>**  
 Miura, H.<sup>1</sup>, ○Kato, Y.<sup>2</sup>, Yagisawa, Y.<sup>1</sup>, Fujita, N.<sup>3</sup>, Ōmura, S.<sup>1</sup>, and Takahashi, Y.<sup>1,2</sup>  
 (1Kitasato Institute for Life Sciences, 2Graduate School of Infection Control Sciences, Kitasato University, 3NITE Bioresource information Center)
- P-52** **Mechanism of reactive oxygen species generation from laboratory conventional media**  
 ○Nakashima, T.<sup>1</sup>, Miura, H. <sup>1</sup>, Matsumoto, A. <sup>1</sup>, Shimada, R. <sup>2</sup>, Ōmura, S. <sup>1</sup>, and Takahashi, Y. <sup>1,2</sup>  
 (1 Kitasato Institute for Life Sciences, 2Graduate School of Infection Control, Kitasato University)
- P-53** **Studies on Putative Trk of *Streptomyces lividans* TK24.**  
 ○Suwa, Y.<sup>1</sup>, Kuwahara, C.<sup>2</sup>, Suzuki, A. <sup>1</sup>, Morikawa, K.<sup>1</sup>, Shiino, Y.<sup>1</sup>, Kaneko, K.<sup>1</sup>, Maeda, C.<sup>1</sup>, Anzai, Y.<sup>1</sup>, and Kato, F.<sup>1</sup>  
 (1Faculty of Pharmaceutical Sciences, Toho Univ., 2 Kanagawa Prefectural Institute of Public Health)
- P-54** **Comparative effects of rhizospheric actinomycetes on the growth of tomato**  
 ○Hiramatsu, Y., Shimizu, M., and Ehara, H.  
 ( Fac. Bioresources, Mie Univ. )
- P-55** **Endophytic Actinomycetes from Wheat crop: A potential biocontrol agent**  
 Satyendra P. Singh, Ashutosh K. Prajapati, ○Anurag chaurasia, and D. K. Arora  
 NBAIM, ICAR, *Kusmaur, Mau Nath Bhanjan, India-275101*
- P-56** **Analysis of the TraB protein and the *cis*-acting locus of transfer (*clt*) for the *Streptomyces nigrifaciens* plasmid pSN22**  
 ○Miyatake, T., and Kataoka, M.  
 (Graduate School of Engineering, Shinshu University)
- P-57** **Conjugative transfer of *Streptomyces* linear plasmid SAP1: A basic characterization.**  
 ○Matsuda, T.<sup>1</sup>, Ikeda, H.<sup>2</sup>, and Kataoka, M.<sup>1</sup>  
 (1Grad. Sch. Eng. Shinshu-Univ., 2Inst. Life Sci. Kitasato Univ.)