

37th Annual Meeting of the Society for Actinomycetes Japan

Dates: September 7 (Thu) - 8 (Fri), 2023

Venue: Higashi Hiroshima Arts & Culture Hall **Kurara**

September 7 (Thu)

9:00 **Venue Opened**

9:30 **Opening Remark**

9:35 **Oral Presentation**

9:35 O-1 Proposal of a novel species of the genus *Nocardia* isolated from clinical specimens

○ Moriyuki Hamada^{1,2}, Narumi Enomoto¹, Masahiro Toyokawa³, Hiroki Takahashi², Takashi Yaguchi²

(NITE, NBRC¹, Mycology Res. Cent., Chiba Univ.², Fukushima Med. Univ.³)

9:48 O-2 Extensive screening of bioactive compounds in Indonesian Actinomycetes
○ Rukman Muslimin^{1,2}, Alimuddin Ali³, Nurjannah³, Sho Ogaki¹, Kuninobu Inada⁴, Hiroki Koyama⁵, Hisato Kuniyoshi¹, Kenji Arakawa¹

(¹Grad. Sch. Integr. Sci. Life, Hiroshima Univ., ²STIFA Makassar, ³Biol. Dept., Makassar State Univ., ⁴N-BARD, Hiroshima Univ., ⁵Grad. Sch. Mar. Sci. Tech., Tokyo Univ. Mar. Sci. Tech.)

10:01 O-3 Various properties and anticancer activities of actinomycetes isolated from Izu-Akazawa deep-sea water

○ Chiaki Imada¹, Jun Wakasugi¹, Yuji Shibata², Katsuhisa Yamada²

(¹Tokyo Univ. of Mar. Sci. and Technol., ²DHC Co.)

10:14 **Break (10 min)**

10:24 **Short Presentation by Conference Sponsors**

10:36 **Oral Presentation**

10:36 O-4 Secondary metabolic enhancement by environmental stress

Kento Tsuchiya¹, Yuki Hasuie¹, Ryusuke Usuda¹, ○Masakazu Kataoka^{1,2,3,4}

(¹Grad. Sch. BioMedical Sc. Shinshu Univ., ²RCAM Shinshu Univ., ³CREST · JST, ⁴COI-NEXT · JST)

10:49 O-5 A possible mechanism of erythromycin resistance in *Streptomyces* 23S rRNA mutants

○ Kosuke Tanioka¹, Yuta Nakashima¹, Yu Imai², Takeshi Hosaka^{1,2}

(¹Grad. Sch. of Sci. and Technol., Shinshu Univ., ²IBS-ICCER, Shinshu Univ.)

- 11:02 O-6 Microbial chemical communications drive hyphal branching of actinomycetes
○Shumpei Asamizu^{1,2}, Manami Kato^{1,3}, Hiroyasu Onaka^{1,4}
(¹Univ. of Tokyo., ²Kobe Univ., ³Keio Univ., ⁴Gakushuin Univ.)
- 11:15 **Break** (10 min)
- 11:25 **Invited Lecture I**
How c-di-GMP controls progression through the *Streptomyces* life cycle
Mark Buttner (John Innes Centre, UK)
- 12:00 **Break** (90 min, Lunch)
- 13:30 **The SAJ Plenary Meeting**
- 14:00 **Award Ceremony**
- 14:25 **Award Lecture (Ōmura Award)**
Biosynthetic studies on bioactive secondary metabolites in actinomycetes
Ikuro Abe (Graduate School of Pharmaceutical Sciences, The University of Tokyo)
- 15:05 **Award Lectures (Hamada Award)**
Biosynthetic studies on the nucleoside antibiotics produced by actinobacteria
Taro Shiraishi (Graduate School of Agricultural and Life Science, The University of Tokyo)
- 15:25 **Break** (15min)
- 15:40 **Invited Lecture II**
Actinobacterial Response to Oxidants and Antibiotics: Novel Strategies
Jung-Hye Roe (Seoul National University, Korea)
- 16:15 **Break** (15min)
- 16:25 **Poster Session I** (odd numbers)
- 17:25 **Break**
- 17:30 **Move to the banquet venue**
- 18:30 **Banquet** (18:30 – 20:30)
- 20:30 **Banquet close**

September 8 (Fri)

09:00 **Venue Opened**

09:15 **Oral Presentation**

- 9:15 O-7 Involvement of the sortase-mediated cell wall-localized protein AMIS_68180 in sporangium formation in *Actinoplanes missouriensis*
○Zhuwen Tan¹, Takeaki Tezuka^{1,2}, Yasuo Ohnishi^{1,3}
(¹Grad. Sch. of Agric. and Life Sci., The Univ. of Tokyo, ²Grad. Sch. Infection Control Sci., Kitasato Univ., ³CRIM, The Univ. of Tokyo)
- 9:28 O-8 Taxonogenomic analysis of marine-derived *Streptomyces* sp. N11-50 and the profile of PKS and NRPS gene clusters
○Hisayuki Komaki¹, Yasuhiro Igarashi², Tomohiko Tamura²
(¹NBRC, ²Fac. Eng., Toyama Prefectural Univ.)
- 9:41 O-9 Isolation, structure determination, and analysis for thermotolerance-promoting mechanism of heat shock metabolite (HSM) produced by *Streptomyces* sp. JA74
○Yurika Okumura¹, Shun Saito¹, Kayo Funayama¹, Keisuke Fukaya², Daisuke Urabe², Midori A. Arai¹
(¹Grad. Sch. Sci. Tech., Keio Univ., ²Grad. Eng. Biotech., Toyama Pref. Univ.)
- 9:54 O-10 Biosynthetic Studies on Antitumor Antibiotic Mitomycins
○Yudai Takahashi¹, Yo Nakagawa¹, Takeshi Tsunoda², Tohru Dairi², Yasushi Ogasawara²
(¹Grad. Sch. Chem. Sci. Eng., Hokkaido Univ., ²Grad. Sch. Eng., Hokkaido Univ.)
- 10:07 O-11 Heterologous production of a new lanthipeptide nocardiopeptin
○Ryo Kobayashi, Keita Saito, Shinya Kodani
(Grad. Sch. Agr. Sci. Shizuoka Univ.)
- 10:20 O-12 Study for fluostatins, *Actinomycete* secondary metabolites
○Shigehiro Tohyama, Masaki Hatano, Chigusa Hayashi, Hideyuki Muramatsu, Isao Momose, Hiroyuki Igarashi
(Institute of Microbial Chemistry)
- 10:33 O-13 Structural and mechanistic insights into the ATP-dependent isomerization during biosynthesis of albomycins
○Richiro Ushimaru^{1,2}, Takahiro Mori¹, Ziyang Zheng², Hung-wen Liu², Ikuro Abe¹
(¹Grad. Sch. Pharm. Sci., Univ. Tokyo., ²Dept. Chem., UT at Austin)

10:46 **Break** (10min)

10:56 **Poster Session II** (even numbers)

11:56 **Break** (74 min, Lunch)

13:10 **Invited Lecture III**

Structural enzymology and diversity-oriented biosynthesis for development of new glycopeptide antibiotics

Tsung-Lin Li (Academia Sinica, Taiwan)

13:45 **Break** (10min)

13:55 **Oral Presentation**

13:55 O-14 Biosynthesis of verticilactams produced by *Streptomyces spiroverticillatus* JC-8444

○ Yu Zheng, Katsuyuki Sakai, Hiroshi Takagi, Yumi Shiozaki-Sato, Toshihiko Nogawa, Shunji Takahashi
(RIKEN CSRS)

14:08 O-15 Structural and functional analysis of the ATP-dependent diazotase CmaA6

○Seiji Kawai¹, Yohei Katsuyama^{1,2}, Yasuo Ohnishi^{1,2}

(¹Grad. Sch. of Agric. and Life Sci., The Univ. of Tokyo, ²CRIIM, The Univ. of Tokyo)

14:21 O-16 Improvement of the cellular internalization of the canonical CPP-protein conjugates by ϵ -poly-L- α -lysine

○Yamato Takeuchi, Fumihito Hasebe, Chitose Maruyama, Yoshimitsu Hamano
(Biosci. Biotec., Fukui Pref. Univ.)

14:34 O-17 Thymoquinone is an organocatalyst causing oxidative stress

Takahide Miyamoto¹, ○Tatsuya Nishiyama², Takehiro Nagasawa², Kenji Ueda^{1,2}

(¹Grad. Sch. Biosci. Biotec, Nihon Univ., ²College of Bioresource Sciences, Nihon Univ.)

14:47 O-18 Extracellular expression of *Streptomyces* spp. laccases in *Rhodococcus erythropolis*

○Jyothi Priya Putcha^{1,2}, Wataru Kitagawa^{1,2}

(¹Grad School of Agriculture, Hokkaido University, ²Bioproduction Research Institute, AIST)

15:00 O-19 Surface structure of cells that constitute floating flocs specifically formed during hexadecane degradation by *Rhodococcus jostii* RHA1

○Kohei Inoue¹, Noraiza Suhaim¹, Nurul Syahirah Shamsol Anuar¹, Keisuke Miyazawa², Takeshi Fukuma², Yosuke Tashiro³, Kenshi Suzuki¹, Naoki Sunagawa¹, Yasuo Ohnishi^{1,4}, Hirofumi Hara^{1,4}

(¹Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo, ²Inst. of Sci. and Eng., Kanazawa Univ., ³Grad. Sch. of Intgr. Sci. Technol., Shizuoka Univ.,

⁴CRIIM, Univ. of Tokyo)

15:13 O-20 Design of *rpoB* mutation using machine-learning Sparse analysis.

○ Takashi Tamura¹, Hiromu Hasegawa¹, Tadayoshi Kanao¹, Michiko Nemoto¹, Michio Yamamoto²

(¹Grad. Sch. Env. Life Sci., Okayama Univ., ²Osaka Univ.)

15:26 **Break** (5 min)

15:31 **Poster Award Ceremony**

15:50 **SAJ38th Announcement**

15:55 **Closing Remarks**

Poster Presentation

- P-1 Taxonomic study of *Actinoplanes* isolates isolated from Republic of the Union of Myanmar and Japan
○Masaru Watanabe¹, Tomohiro Arai¹, Tomohiro Iwabuchi¹, Moriyuki Hamada², Tomohiko Tamura², Susumu Kokubo¹, Youji Nakagawa¹, Nyunt Phay³, Masayuki Hayakawa^{1,4}, Hideki Yamamura¹
(¹Fac. Life Environ. Sci., Univ. Yamanashi, ²NITE-NBRC, ³Pathein Univ., ⁴Yamanashi Pref. Univ.)
- P-2 Optimization of the method for isolating actinomycetes from a single soil particle
○Mizuki Abe¹, Yuka Nakanishi², Yu Imai³, Takeshi Hosaka^{1,2,3}
(¹Grad. Sch. of Sci. and Technol., Shinshu Univ. ²Fac. of Agric., Shinshu Univ. ³IBS-ICCER., Shinshu Univ.)
- P-3 Explore for useful actinomycetes with NO signal
○Masaki Takei¹, Shinsaku Ito², Shunsuke Yajima², Yasuyuki Sasaki²
(¹Grad.Sch Life Sci.,Tokyo Univ.of Agri., ²Grad. Sch.Agri.,Tokyo Univ.of Agri.)
- P-4 Isolation of actinomycetes in soil environment using Water-in-Oil Droplets (WODL)
○Jo Saito¹, Akihiro Nakamura², Yuu Fujimura³, Wataru Ogasawara², Natsumi Saito⁴
(¹Dept. Adv. Eng., NIT, Tsuruoka College, ²Nagaoka Univ. of Tech., ³On-Chip Biotechnologies Co., Ltd, ⁴Dept. Creative Eng., NIT Tsuruoka College)
- P-5 Taxonomic identification and secondary metabolite evaluation of *Krasilnikovia* related strains isolated from Republic of the Union of Myanmar and Japan
○Shunsuke Waki¹, Yuki Higashiyama¹, Maho Inoue¹, Moriyuki Hamada², Tomohiko Tamura², Susumu Kokubo¹, Youji Nakagawa¹, Nyunt Phay³, Masayuki Hayakawa^{1,4}, Hideki Yamamura¹
(¹Fac. Life Environ. Sci, Univ. Yamanashi, ²NITE-NBRC, ³Pathein Univ., Yamanashi Pref. Univ.)
- P-6 Isolation and taxonomic study of actinomycetes from agricultural products and fertilizers
○Akira Také¹, Yoshihiko Sakaguchi², Yuki Inahashi^{3,4}, Kazuyoshi Gotoh⁵, Shunji Hayashi¹
(¹Sch. Med., Kitasato Univ., ²Pharm. Sci., Tokushima Bunri Univ., ³Grad. Sch. Infection Control Sci., Kitasato Univ., ⁴Ōmura Satoshi Mem. Inst., Kitasato Univ., ⁵Grad. Sch. Health Sci., Okayama Univ.)
- P-7 Verification of effectiveness for lysozyme pretreatment in selective isolation of actinomycetes
○Hanako Naito, Tomomi Asano, Narumi Enomoto, Tomohiko Tamura, Moriyuki Hamada

(NITE · NBRC)

- P-8 Genome analysis of rare actinomycete, *Kitasatospora cystarginea* NBRC14836
○Junfu Morii, Daichi Morita, Teruo Kuroda, Takanori Kumagai
(Grad. Sch. Biomed. Health Sci., Hiroshima Univ.)
- P-9 A rare-cutting restriction endonuclease-mediated genome editing system for Actinobacterial strains
○Syunsuke Kabaya¹, Nobuki Sakurai², Tadao Oikawa¹, Kazuya Yamanaka¹
(¹Grad. Sch. Sci. Eng. Kansai Univ., ²JNC Corp. Yokohama RC)
- P-10 Engineering a diaminopimelate pathway in *Streptomyces albulus* for enhanced production of ϵ -poly-L-lysine
○Yoshiya Miyake¹, Fumihito Hasebe², Yoshimitsu Hamano², Tadao Oikawa¹, Kazuya Yamanaka¹
(¹Grad. Sch. Sci. Eng. Kansai Univ., ²Fukui Prefectural Univ.)
- P-11 Observation of the unique cell growth of the genus *Sporichthya*
○Xinzhe Guo¹, Norio Takeshita², Takeaki Tezuka^{1,3}, Yasuo Ohnishi^{1,4}
(¹Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo, ²MiCS, Faculty of Life and Environ. Sci., Univ. of Tsukuba, ³Grad. Sch. of Infection Control Sci., Kitasato Univ., ⁴CRIIM, Univ. of Tokyo)
- P-12 Identification of *AMIS_66880-66890* as key genes for sporangium membrane formation in *Actinoplanes missouriensis*
○Hayato Ito¹, Takeaki Tezuka^{1,2}, Yasuo Ohnishi^{1,3}
(¹Grad. Sch. of Agri. and Life Sci., Univ. of Tokyo, ²Grad. Sch. of Infection Control Sci., Kitasato Univ., ³CRIIM, Univ. of Tokyo)
- P-13 Search for a lipase(s) involved in sporangium dehiscence in *Actinoplanes missouriensis*
○Shixuan Hu¹, Takeaki Tezuka^{1,2}, Yasuo Ohnishi^{1,3}
(¹Grad. Sch. of Agric. and Life Sci., Univ. of Tokyo, ²Grad. Sch. of Infection Control Sci., Kitasato Univ., ³CRIIM, Univ. of Tokyo)
- P-14 Light-inducible and genome-integrative high expression system "iLiEX"
○Airi Watanabe, Kibune Chihiro, Hideaki Takano
(Grad. Sch. Bioresour. Sci, Nihon Univ.)
- P-15 High production system of recombinant protein in *Streptomyces* using genome-integrative vector
○Taichi Okazaki, Hideaki Takano
(Grad. Sch. Bioresour. Sci, Nihon Univ.)
- P-16 Establishment of a simple DNA transfer system for *Rhodococcus* spp. and its application for light-inducible gene expression
○Soichiro Mitsuke, Hideaki Takano

- (Grad. Sch. Bioresour. Sci, Nihon Univ.)
- P-17 Development and application of a novel vitamin B12 bioassay using Actinomycetes
○Zhang Yushu, Hideaki Takano
(Grad. Sch. Bioresour. Sci, Nihon Univ.)
- P-18 Multicopy number plasmid-based light-inducible expression system "pLiEX" in *Streptomyces*
○Ryuta Noya, Hideaki Takano
(Grad. Sch. Bioresour. Sci, Nihon Univ.)
- P-19 Analysis of the concentration-dependent effects of antibiotics on spore germination of actinomycetes
○Keiichiro Mukai^{1,3}, Ami Yoshimatsu², Yu Imai³, Takeshi Hosaka^{1,2,3}
(¹Grad. Sch. of Med. Sci. and Technol., Shinshu Univ., ²Fac. of Agric., Shinshu Univ., ³IBS-ICCER, Shinshu Univ.)
- P-20 Analysis of the concentration-dependent effects of ribosome-targeting antibiotics on streptomycetes
○Tomoko Shibayama¹, Keiichiro Mukai^{1,2}, Yu Imai², Takeshi Hosaka^{1,2}
(¹Grad. Sch. of Sci. and Technol., Shinshu Univ., ²IBS-ICCER, Shinshu Univ.)
- P-21 Effects of acid stress on nucleic acid antibiotic production and expression of quality control genes in the actinomycete *Streptomyces incarnatus*
○Mao Kubo, Haruka Yamagata, Yuriko Nakashima, Tadayoshi Kanao, Michiko Nemoto, Takashi Tamura
(Grad. Sch. Env. Life. Sci, Okayama Univ.)
- P-22 The Effect of mutagenesis of the *rpoB* gene on H457 to increase sinefungin production
○Hiromu Hasegawa, Tadayoshi Kanao, Michiko Nemoto, Takashi Tamura
(Grad. Sch. Env. Life Sci., Okayama Univ.)
- P-23 Novel contractile injection systems of *Streptomyces davawensis* JCM4913
○Toshiki Nagakubo^{1,2}, Tatsuya Nishiyama³, Tatsuya Yamamoto¹, Nobuhiko Nomura^{1,2,4}, Masanori Toyofuku^{1,2}
(¹Life and Environ. Sci., Univ. Tsukuba, ²MiCS, Univ. Tsukuba, ³Biores. Sci., Nihon Univ., ⁴TARA Center, Univ. Tsukuba)
- P-24 Isolation, structure determination and analysis for production mechanism of heat shock metabolites (HSMs) produced by *Streptomyces* sp. AY2
○Yanagi Mori¹, Shun Saito¹, Yohei Kathuyama^{2,3}, Yasuo Ohnishi^{2,3}, Midori A. Arai¹
(¹Grad. Sch. Sci. Tech., Keio Univ., ²Grad. Sch. of Agric. and Life Sci., and ³CRIIM, UTokyo)
- P-25 Isolation, structure determination, and evaluation of thermotolerance-promoting activity of heat shock metabolites (HSMs) produced by *Streptomyces* sp. HR41

- Shun Saito, Sosuke Kataoka, Shiina Suzuki, Midori A. Arai
(Grad. Sch. Sci. Tech., Keio Univ.)
- P-26 Functional analysis of the keto reductase Gra-6 regulates the stereochemistry of granaticin biosynthesis (2nd)
○Kazuki Ishikawa^{1,2}, Noriko Kusuoku¹, Minori Hashimoto¹, Chiharu Nozaki¹, Makoto Hashimoto^{1,2}, Koji Ichinose^{1,2}
(¹Fac. Pharm. Musashino Univ., ²Research Institute of Pharm. Sci., Musashino Univ.)
- P-27 Sulfoxidation of labionin enhances antibacterial activity
○Shinta Ijichi, Shotaro Hoshino, Shumpei Asamizu, Hiroyasu Onaka
(Dept. of Life Sci., Gakushuin Univ.)
- P-28 Exploration of arsenic secondary metabolic pathways distributed in actinomycetes
○Shotaro Hoshino, Shumpei Asamizu, Hiroyasu Onaka
(Dept. of Life Sci., Gakushuin Univ.)
- P-29 New salicyloylglycerol from Thailand coral-derived *Micromonospora*
○Haruka Doyo¹, Enjuro Harunari¹, Wongsakorn Phongsopitanun², Somboon Tanasupawat², Makamas Sutthacheep³, Thamasak Yeemin³, Yasuhiro Igarashi¹
(¹Toyama Pref. Univ., ²Chulalongkorn Univ., ³Ramkhamhaeng Univ.)
- P-30 Novel phenylpropanoid produced by protoplastization of *Streptomyces*
○Enjuro Harunari, Nodoka Yago, Yasuhiro Igarashi
(Toyama Pref. Univ.)
- P-31 Study on the biosynthetic mechanism of β -homolysine found in resormycin
○Chisaki Imahori¹, Kazuya Yamanaka², Yasushi Ogasawara³, Masayuki Igarashi⁴, Tohru Dairi³, Fumihito Hasebe¹, Yoshimitsu Hamano¹, Chitose Maruyama¹
(¹Grad. Sch. Biosci. Biotec., Fukui Pref. Univ., ²Fac. Chem. Mater. Bioeng., Kansai Univ., ³Grad. Sch. Eng., Hokkaido Univ., ⁴Institute of Microbial Chemistry, BIKAKEN.)
- P-32 Identification of novel methionine biosynthetic pathway in *Streptomyces albulus*
○Kazuya Adachi, Chitose Maruyama, Yoshimitsu Hamano, Fumihito Hasebe
(Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)
- P-33 Searching for Specific Inhibitors of the Alternative Pathway of Peptidoglycan Biosynthesis
Shuhei Umetsu¹, Takeshi Tsunoda², Yuki Inahashi³, Kenichi Nonaka³, ○Yasushi Ogasawara², Tohru Dairi²
(¹Grad. Sch. Chem. Sci. Eng and ²Grad. Sch. Eng, Hokkaido University, ³Omura Inst., Kitasato Univ.)
- P-34 Biosynthetic studies on natural product containing α,α -disubstituted amino acid
○Takeshi Tsunoda¹, Shunkichi Furumura², Haruka Yamazaki², Yasushi Ogasawara¹, Tohru Dairi¹
(¹Grad. Sch. Eng., Hokkaido Univ., ²Grad. Sch. Chem. Sci. Eng., Hokkaido Univ.)

- P-35 Direct cloning and refactoring of an orphan biosynthesis gene cluster putatively for non-ribosomal peptide with branching structure in *Streptomyces lydicamycinicus*
○Daichi Kitaura, Tadao Oikawa, Kazuya Yamanaka
(Grad. Sch. Sci. Eng. Kansai Univ.)
- P-36 Isolation of new kinanthraquinones and analysis of biosynthetic mechanism using a heterologous expression system
○Katsuyuki Sakai, Yushi Futamura, Hiroyuki Koshino, Hiroyuki Osada, Shunji Takahashi
(REKEN CSRS)
- P-37 Expression of SYO_1.56 SARP Regulator Unveils Unprecedented Elasin Derivatives with Remarkable Antibacterial Activity
○Islam A. Abdelhakim^{1,2}, Yushi Futamura³, Naoko Kito¹, Arisa Shibata⁴, Sachiko Masuda⁴, Ken Shirasu⁴, Hiroyuki Osada³, Jun Ishikawa⁵, Shunji Takahashi¹
(¹Nat. Prod. Biosynth., RIKEN CSRS, ²Fac. Pharm., Assiut Univ., ³Chem. Res. Dev., RIKEN CSRS, ⁴Plant Immunity, RIKEN CSRS, ⁵NIID)
- P-38 The Structure-Activity Relationship of Novel Antibiotic MM249 Compounds
○Makiko Komagata^{1,2}, Hikaru Abe¹, Maya Umekita¹, Atsushi Tsugita³, Yoshimasa Ishizaki¹, Rie Arisaka¹, Masaki Hatano¹, Tomoyuki Kimura¹, Ryuichi Sawa¹, Yoshikazu Tanaka³, Takeshi Yokoyama³, Takumi Watanabe¹, Masayuki Igarashi¹
(¹Institute of Microbial Chemistry, BIKAKEN, ²Grad. Sch. Sci. & Eng., Keio Univ., ³Grad. Sch. Life Sci., Tohoku Univ.)
- P-39 Crystal structure analysis of cytochrome P450 enzyme RosC catalyzing the same-site multistep oxidation reactions
○Yohei Iizaka, Hironori Suzuki, Haruki Kawasaki, Kanon Fujimoto, Atsushi Fukumoto, Shuji Noguchi, Yojiro Anzai
(Fac. Pharmaceutical Sci. Toho Univ.)
- P-40 Study of quorum sensing inhibitors with α -pyridone ring structure produced by actinomycetes
○Jiahao Zeng, Asumi Kasahara, Riku Takeuchi, Yohei Iizaka, Atsushi Fukumoto, Yojiro Anzai
(Fac. Pharm. Sci., Toho Univ.)
- P-41 Isolation and proposed biosynthetic pathway of a novel secondary metabolite produced by amino group-carrier protein in *Streptomyces lydicus* ATCC 25470
○Yuta Hayashi¹, Yusuke Sone¹, Ayako Yoshida^{1,2}, Saori Kosono^{1,2}, Makoto Nishiyama^{1,2}
(¹Grad. Sch. of Agri. and Life Sci., UTokyo, ²CRIIM, UTokyo)
- P-42 Modification of the substrate recognition of AzpC, an AMPylation enzyme derived from alazopeptin biosynthesis

- Takashi Maruyama¹, Kouki Miyake¹, Seiji Kawai¹, Yoshitaka Moriwaki^{1,2}, Tohru Terada^{1,2}, Yohei Katsuyama^{1,2}, Yasuo Ohnishi^{1,2}
 (1Grad. Sch. of Agric. and Life Sci., The Univ. of Tokyo, 2CRIIM, The Univ. of Tokyo)
- P-43 The biosynthesis of streptazones, polyketides with a cyclopenta[b]pyridine ring from *Streptomyces*
 ○Taichi Hiramatsu¹, Yohei Katsuyama^{1,2}, Yasuo Ohnishi^{1,2}
 (1Grad. Sch. of Agric. and Life Sci., The Univ. of Tokyo, 2CRIIM, The Univ. of Tokyo)
- P-44 Elucidation of the pathway leading to spirocycle formation in yoropyrazone biosynthesis
 ○Suzuna Kiyofuji¹, Yohei Katsuyama^{1,2}, Yasuo Ohnishi^{1,2}
 (1Grad. Sch. of Agric. and Life Sci., The Univ. of Tokyo, 2CRIIM, The Univ. of Tokyo)
- P-45 Characterization of a tyrosine isocyanide synthase HzmA
 ○Hirotō Maruyama, Kumiko Imachi, Kenichi Matsuda, Toshiyuki Wakimoto
 (Faculty of Pharmaceutical Sciences, Hokkaido University)
- P-46 Metabolomic analysis of membrane-vesicles-induced natural product from actinomycetes
 ○Ryusuke Nakada, Aya Yoshimura, Toshiyuki Wakimoto
 (Faculty of Pharmaceutical Science, Hokkaido University)
- P-47 Identification of lavencidin biosynthetic genes in *S. lavendulae* FRI-5 by Target-AID technology
 ○Ryo Otsuka¹, Yu Sato², Eiji Okamura³, Kohsuke Honda^{1,4}, Shigeru Kitani^{1,3}
 (1ICBiotech, Osaka Univ., 2Grad. Sch. Sci. Tech. Innov. Agric., Yamaguchi Univ., 3Col. Sci. Eng., Aoyama Gakuin Univ., 4OTRI, Osaka Univ.)
- P-48 The metabolism of black pepper bioactive compound in an actinomycete
 ○Pu Jian¹, Takuto Kumano², Mio Kimura³, Makoto Kurisaki³, Yoshiteru Hashimoto², Michihiko Kobayashi²
 (1Agro-biological resource sciences, University of Tsukuba, 2MiCS, University of Tsukuba, 3Graduate School of Life and Environmental Sciences, University of Tsukuba)
- P-49 Genome analysis of rare actinomycete *Actinoplanes nipponensis* NBRC14063
 ○Takuma Iwami, Daichi Morita, Teruo Kuroda, Takanori Kumagai
 (Grad. Sch. Biomed. Health Sci., Hiroshima Univ.)
- P-50 Analysis of molecular diversity and versatility of butenolide-type signaling molecule SRB
 ○Asahi Hirata¹, Momoko Akimoto¹, Hazuki Fujita², Miho Sumiyoshi³, Teshima Aiko¹, Kenji Arakawa^{1,2}
 (1Grad. Sch. Integr. Sci. Life, Hiroshima Univ., 2Hiroshima Univ. 3Grad. Sch. AdSM, Hiroshima Univ.)

- P-51 Structural and biosynthetic investigation of novel hydrazide compounds produced in a mutant KA57 of *Streptomyces rochei*
○Haruka Nagano¹, Yu Tanaka¹, Mei Okano¹, Takuya Kishimoto², Ayaka Tatsukawa²
Hirofumi Kunitake², Kaito Fukumori³, Atsushi Fukumoto⁴, Yojiro Anzai⁴, Kenji Arakawa^{1,2,3}
(¹Grad. Sch. Integr. Sci. Life, Hiroshima Univ., ²Grad. Sch. AdSM, Hiroshima Univ., ³Hiroshima Univ., ⁴Faculty of Pharmacy, Toho Univ.)
- P-52 Functional evaluation of esterified lankacidin derivatives based on computational prediction
○Mei Okano¹, Natsumi Nishiura², Rukman Muslimin², Aiko Teshima², Mohamed Ali Elrefaiy³, Kiep Min Do⁴, Takeshi Kodama⁴, Hiroyuki Morita⁴, Ahmed T. Ayoub⁵, Kenji Arakawa^{1,2}
(¹Grad. Sch. Integr. Sci. Life, Hiroshima Univ., ²Grad. Sch. AdSM, Hiroshima Univ., ³Zewail City of Science and Technology, ⁴Toyama Univ., ⁵HToO Bioscience)
- P-53 Approach to genome mining for secondary metabolites using the *Streptomyces* butenolide-type signaling molecules
○Momoko Akimoto¹, Asahi Hirata¹, Miho Sumiyoshi², Toshihiro Suzuki³, Aiko Teshima¹, Kenji Arakawa¹
(¹Grad. Sch. Integr. Sci. Life, Hiroshima Univ., ²Grad. Sch. AdSM, Hiroshima Univ., ³Ferment. Sci. Tech. Tokyo Univ. Agric.)
- P-54 A lankamycin derivative with a branched-chain sugar isolated from a blocked mutant of chalcose biosynthesis in *Streptomyces rochei* 7434AN4
○Mingge Zhang¹, Bao Shuang², Kenji Arakawa^{1,2}
(¹Grad. Sch. Integr. Sci. Life, Hiroshima Univ., ²Grad. Sch. AdSM, Hiroshima Univ.)
- P-55 Analysis of the SARP-type transcriptional activators for secondary metabolite production in actinomycetes
○Yang Liu, Yuya Misaki, Yosi Nindita, Kenji Arakawa
(Grad. Sch. Integr. Sci. Life, Hiroshima Univ.)
- P-56 Relationship of actinomycetes-derived secondary metabolite in kusaya gravy, a high salt fermented fish gravy
○Sachiko Masaki¹, Sakura Nogimura¹, Asahi Hirata², Takahiro Osada³, Kenji Arakawa², Ryosuke Unno¹, Morio Ishikawa¹, Toshihiro Suzuki¹
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- P-57 Salt-dependent co-production of secondary metabolites in *Streptomyces diastaticus* strain TUA-NKU25 isolated from a Japanese traditional fermented fish product
○Miu Ueki¹, Aoi Takeuchi¹, Asahi Hirata², Aiko Teshima², Takuma Ikegami¹, Kenichi Matsuda³, Toshiyuki Wakimoto³, Kenji Arakawa², Ryosuke Unno¹, Morio Ishikawa¹,

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P-58 N-Formimidoylation/-iminoacetylation modification in aminoglycosides requires FAD-dependent and ligand-protein NOS bridge dual chemistry

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P-59 Kasugamycin Analogs: Harnessing Immune Reprogramming and Infiltration in the Immunosuppressive Tumor Microenvironment by Targeting Chitinases for Potential Cancer Therapy

○An Ning Cheng, Tsung-Lin Li

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P-60 Biosynthetic studies of glycopeptide antibiotic apovaricin and re-programme pathways to develop new antibiotics

○Kuan-Hung, Lin, Tsung-Lin, Li

(Academia Sinica, Genomic Research Center, Taiwan)

P-61 Characterization of metal ion dependent xylose isomerase from *Lactococcus subsp. Lactis*

○Ning-Shian Hsu, Yung-Ling Wang, Kuan-Hung Lin, Tsung-Lin Li

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P-62 Identify the essential *cis*-acting region for conjugation of SAP1 linear plasmid

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P-63 Synchronization of growth phases improves the chromosomal mobilization frequency between different *Streptomyces* species

○Kento Yoda¹, Akane Mizowaki¹, Masakazu Kataoka¹

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P-64 The mechanism of antibacterial activity of organocatalysts

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P-65 Crystallization and structural characterization of the actinorhodin binding protein

○Mirai Hino¹, Mana Fukazawa², Reina Nagayasu¹, Tatsuya Nishiyama², Takeo

Tomita^{3,4}, Makoto Nishiyama^{3,4}, Kenji Ueda^{1,2})

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Univ. of Tokyo)

- P-66 Spectroelectrochemical analysis of the membrane permeation mechanism of fluorescently labeled ϵ -poly-L-lysine at the biomimetic interface
Hiroki Sakae¹, Yamato Takeuchi², ○Saha Otsuka², Chitose Maruyama², Yoshimitsu Hamano², Yoshio Nishiyama¹, Hirohisa Nagatani¹
(¹Kanazawa Univ., ²Grad. Sch. Biosci. Biotec., Fukui Pref. Univ.)
- P-67 Exploring the uncharacterized NRPS in the *Actinomycetota* genomes
○Arisa Nishihara¹, Takuya Hashimoto², Moriya Ohkuma¹
(¹JCM, RIKEN-BRC, ²BPRI, AIST)
- P-68 Characteristics of phosphate solubilizing actinomycetes isolated from plant rhizosphere
Runa Sagae, Nobuhiro Sasaki, Eiko Takahashi, Shinko Ito, ○Natsumi Saito
(Dept. Creative Eng., NIT Tsuruoka College)
- P-69 Mechanism of nitric oxide homeostasis by Mycothiol in *Streptomyces coelicolor* A3(2) M145
○Kogo Minoru¹, Tomoki Yoshizumi¹, Yukiko Shibui², Sota Honma², Shinsaku Ito^{1,2}, Shunsuke Yajima^{1,2}, Yasuyuki Sasaki^{1,2}
(¹Grad. Sch. Sci. Life, Tokyo Univ. of Agri, ²Grad. Sch. Agri., Tokyo Univ. of Agri,)
- P-70 Effect of acetophenone on antibiotic production activity in *Streptomyces coelicolor* A3(2) M145
○Nanami Nakajima¹, Kana Ishii², Sota Honma¹, Shinsaku Ito^{1,2}, Shunsuke Yajima^{1,2}, Yasuyuki Sasaki^{1,2}
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- P-71 Construction of an efficient screening system for modified PKS with novel fluorescence probe
○Manami Kato^{1,2}, Shinichi Sato³, Satoshi Yuzawa^{1,2}
(¹IAB, Keio Univ., ²Grad. Sch. Med. Govern, Keio Univ., ³FRIS, Tohoku. Univ.)
- P-72 Antibiotics productivity improvement via ribosome engineering of *Amycolatopsis nivea* strain TUA-HKG02Y isolated from a high salt fermented fish gravy
○Aoto Saka¹, Kana Shinoda¹, Takahiro Osada², Minenosuke Matsutani³, Kenji Arakawa⁴, Ryosuke Unno¹, Morio Ishikawa¹, Toshihiro Suzuki¹
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⁴Integ. Sci. life., Hiroshima Univ.)
- P-73 Construction of an agricultural bioformulation based on *Streptomyces* sp. exhibiting inhibitory activity against *Xanthomonas arboricola* pv. *Pruni*

○Yuka Okubo¹, Susumu Kokubo¹, Youji Nakagawa¹, Mitsuyoshi Soya², Tomoya Izumi², Masayuki Hayakawa³, Hideki Yamamura¹

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P-74 Screening of Actinomycetes Isolates for *In-vitro* and *In-vivo* Plant Growth Promotion Activities

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P-75 *Micromonospora* sp. Strain MCN027, a Marine-derived Actinomycetes with Anticancer Potential

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P-76 Analyzing the ability to produce secondary metabolites of actinomycetes using genome information

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P-77 Taxonomic study of *Longispora* sp. K20-0274 isolated from T-PIRC farm

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P-78 Biosynthetic study on a compound consisting of maleic anhydride and polyketide skeleton

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