

# The 2nd Annual Meeting for Whole-Organism Science Society

## Joint Meeting with The 11th Annual Meeting of Structural-Biological Whole Cell Project

### Program

#### Friday, September 28

#### <Symposium> Model Organisms (1)

Abstract No.

**Chair Persons: Gota Kawai and Seiki Kuramitsu**

- 13:30 – 14:00 **Disruption of *Drosophila* serine palmitoyl transferase and acetyl-coA carboxylase cause tissue overgrowth associated with altered Notch and Wnt signaling** [1]  
○Takeshi Sasamura<sup>1</sup>, Kenji Matsuno<sup>1</sup>, Mark E. Fortini<sup>2</sup>  
(<sup>1</sup>Osaka Univ., <sup>2</sup>Thomas Jefferson Univ.)
- 14:00 – 14:30 ***Halocynthia roretzi*, a Japanese ascidian species, as a model animal for the study of chordate embryogenesis** [4]  
○Gaku Kumano, Naohito Takatori, Hiroki Nishida  
(Dep. of Biol. Sci., Grad. Sch. of Sci., Osaka Univ.)
- 14:30 – 15:00 **Reverse proteomics in fission yeast** [5]  
○Akihisa Matsuyama, Minoru Yoshida  
(Chem. Genet. Lab., RIKEN Adv. Sci. Institut.)
- 15:00 – 15:30 **Functional profiling of the *E.coli* genes in long-term stationary phase - Application of new single gene deletion library with bar code tag -** [6]  
○Hirotsada Mori<sup>1</sup>, Yuta Otsuka<sup>1</sup> and Barry L. Wanner<sup>2</sup>  
(<sup>1</sup>Grad. Sch. of Biol. Sci., Nara Inst. of Sci. and Technol.,  
<sup>2</sup>Dep. of Biol. Sci., Purdue Univ.)
- 15:30 – 16:00 **Coffee Break, Taking Photographs of All Members**

#### <Symposium> Imagings of SACLA and SPring-8

Abstract No.

**Chair Persons: Masaki Yamamoto and Noritake Yasuoka**

- 16:00 – 16:30 **Molecular imaging of whole cells with coherent X-rays** [7]  
Changyong Song  
(RIKEN SPring-8 Center)
- 16:30 – 17:00 **Protein crystallography free from radiation damage at SACLA** [8]  
○Hideo Ago<sup>1</sup>, Go Ueno<sup>1</sup>, Kunio Hirata<sup>1</sup>, Takaaki, Hikima<sup>1</sup>, Hironori Murakami<sup>1</sup>, Eiki Yamashita<sup>2</sup>, and Masaki Yamamoto<sup>1</sup>  
(<sup>1</sup>RIKEN SPring-8 Center, <sup>2</sup>Osaka Univ.)
- 17:00 – 17:30 **Achieved protein micro-crystallography at the micro-focus beamline BL32XU** [9]  
○Kunio Hirata<sup>1</sup>, Yoshiaki Kawano<sup>1</sup>, Koichi Hashimoto<sup>1</sup>, Go Ueno<sup>1</sup>, Kazuya Hasegawa<sup>1,2</sup>, Hideo Okumura<sup>2</sup>, Takashi Kumasaka<sup>1,2</sup>, and Masaki Yamamoto<sup>1</sup>  
(<sup>1</sup>RIKEN/SPring-8 Center, <sup>2</sup>JASRI/SPring-8)

17:30 – 18:00 **SAXS & MD simulation to investigate protein flexibility in solution** [10]  
○Mamoru Sato<sup>1</sup>, Mitsunori Ikeguchi<sup>1</sup>, Tomotaka Oroguchi<sup>2</sup>  
(<sup>1</sup>Yokohama City Univ., <sup>2</sup>Keio Univ.)

18:00 – 19:30 **Seminar Banquet (in Cafeteria)**

19:30 – 21:15 **Oral Presentation**  
**Chair Persons: Keiko Sakamoto, Hitoshi Iino, and Kenji Fukui**

**Quantification of mechanical force driving the left-handed twisting of the gut epithelial tube in *Drosophila*** [2]

○Naotaka Nakazawa<sup>1,3</sup>, Reo Maeda<sup>1</sup>, Shukei Sugita<sup>2</sup>, Takeo Matsumoto<sup>2</sup>, and Kenji Matsuno<sup>3</sup>  
(<sup>1</sup>Dept. Biol. Sci./Tec., Tokyo Univ. Sci., <sup>2</sup>Dept. Mech. Eng., Nagoya Inst. Tech.,  
<sup>3</sup>Dept. Biol. Sci., Osaka Univ.)

**Control of cell number mediated by a *Drosophila* RhoGEF, Pebble, is required for left-right asymmetric development of the embryonic hindgut** [3]

○Mitsutoshi Nakamura<sup>1,2</sup>, Kenjiroo Matsumoto<sup>1,2</sup>, Yuta Iwamoto<sup>1,2</sup>, Takeshi Mugaruma<sup>1</sup>,  
Naotaka Nakazawa<sup>1,2</sup>, Ryo Hatori<sup>1,2</sup>, Kiichiro Taniguchi<sup>1</sup>, Reo Maeda<sup>1</sup>, and Kenji Matsuno<sup>2</sup>  
(<sup>1</sup>Dep. Biol. Sci. and Technol., Tokyo Univ. Sci., <sup>2</sup>Dep. Biol. Sci., Grad. Sch. of Sci., Osaka Univ.)

**Functional profiling of the *E. coli* genes in long-term stationary phase - Application of new single gene deletion library with bar code tag -** [6]

Hirotsada Mori<sup>1</sup>, ○Yuta Otsuka<sup>1</sup> and Barry L. Wanner<sup>2</sup> (<sup>1</sup>Grad. Sch. Biol. Sci., Nara Inst. Sci. and Technol., <sup>2</sup>Dep. Biol. Sci., Purdue University)

**Substrate tRNA recognition mechanism of tRNA (m<sup>5</sup>U54) methyltransferase (TrmFO) based on biochemical analysis** [13]

○Ryota Yamagami<sup>1</sup>, Koki Yamashita<sup>1</sup>, Hiroshi Nishimasu<sup>2</sup>, Chikako Iwashita<sup>1</sup>, Akira Hirata<sup>1</sup>,  
Osamu Nureki<sup>2</sup>, and Hiroyuki Hori<sup>1,3</sup> (<sup>1</sup>Dept. Materials Sci. Biotechnol., Grad. Sch. of Sci. and Eng., Ehime Univ., <sup>2</sup>Dept. of Basic Biophysic. and Biochem. Grad. Sch. of Sci., Univ. of Tokyo, <sup>3</sup>VBL, Ehime Univ.)

**Substrate tRNA recognition mechanism of eubacterial tRNA (m<sup>1</sup>A58) methyltransferase (TrmI) from *Thermus thermophilus*** [14]

○Hiroyuki Takuma<sup>1</sup>, Masayuki Minoji<sup>1</sup>, Natumi Ushio<sup>1</sup>, Chie Tomikawa<sup>1</sup>, Akira Hirata<sup>1</sup>,  
Chikako Iwashita<sup>1</sup>, Ochi Anna<sup>1</sup>, and Hiroyuki Hori<sup>1,2</sup> (<sup>1</sup>Dept. of Materials Sci. and Biotechnol., Grad. Sch. of Sci. and Eng., Ehime Univ., <sup>2</sup>VBL, Ehime Univ.)

**Functional analysis of Yeast tRNA (m<sup>2</sup>G10) methyltransferase (Trm11-Trm112)** [15]

○Yu Nishida, Kazuki Okada, Akira Hirata, and Hiroyuki Hori (Dept. of Materials Sci. and Biotechnol., Grad. Sch. of Sci. and Eng., Ehime Univ.)

**Whole-cell research of *Thermus thermophilus* HB8: N-terminomics using MS/MS database** [21]

○Kwang Kim<sup>1</sup>, Hiroki Okanishi<sup>1</sup>, Kiyoshi Yamazaki<sup>2</sup>, Teruo Yasunaga<sup>2</sup>, Yoshitaka Bessho<sup>3</sup>, Ryoji Masui<sup>1,3</sup>, and Seiki Kuramitsu<sup>1,3</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., <sup>2</sup>Dept of Genome Informatics, Research Institute for Microbial Diseases, Osaka Univ, and <sup>3</sup>RIKEN SPring-8 Center, Harima Institute.)

**Whole-cell research of *Thermus thermophilus* HB8: role of RNases** [22]

○Hiromasa Ohyama<sup>1</sup>, Yoshihiro Agari<sup>2</sup>, Kenji Fukui<sup>2</sup>, Noriko Nakagawa<sup>1,2</sup>, Akeo Shinkai<sup>2</sup>,  
Seiki Kuramitsu<sup>1,2</sup>, and Ryoji Masui<sup>1,2</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.,  
<sup>2</sup>RIKEN SPring-8 Center, Harima Inst.)

**Whole cell research of *Thermus thermophilus* HB8: protein phosphorylation** [23]

○Yota Iio<sup>1</sup>, Yoshio Takahata<sup>2</sup>, Masao Inoue<sup>1</sup>, Kwang Kim<sup>1</sup>, Kenji Fukui<sup>3</sup>, Yoshihiro Agari<sup>3</sup>,  
Akeo Shinkai<sup>3</sup>, Ryoji Masui<sup>1,3</sup> and Seiki Kuramitsu<sup>1,2,3</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci.,  
Osaka Univ., <sup>2</sup>Grad. Sch. Frontier Biosci., Osaka Univ., and <sup>3</sup>RIKEN SPring-8 Center,  
Harima Inst.)

- Nucleotide binding extremely stabilizes a protein kinase from *Thermus thermophilus* HB8** [24]  
 ○Takeo Miyagawa<sup>1</sup>, Ryoji Masui<sup>2,3</sup> and Seiki Kuramitsu<sup>1,2,3</sup> (<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Univ., and <sup>3</sup>RIKEN SPring-8 Center, Harima Inst.)
- Whole-cell research of *Thermus thermophilus* HB8: protein acetylation** [25]  
 ○Hiroki Okanishi<sup>1</sup>, Kwang Kim<sup>1</sup>, Ryoji Masui<sup>1,2</sup>, and Seiki Kuramitsu<sup>1,2</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.; <sup>2</sup>RIKEN SPring-8 Center)
- RIKEN SPring-8 Center Protein Crystallography Database** [27]  
 ○Naoki Kunishima<sup>1</sup>, Michihiro Sugahara<sup>1</sup>, Tomoyuki Tanaka<sup>1</sup>, Hisashi Naitow<sup>1</sup>, Yoshihiro Agari<sup>1</sup>, Akeo Shinkai<sup>1</sup>, Seiki Kuramitsu<sup>1</sup>, Koro Nishikata<sup>2</sup>, Tetsuro Toyoda<sup>2</sup>, Yukuhiko Asada<sup>1</sup> (<sup>1</sup>RIKEN SPring-8 Center, <sup>2</sup>RIKEN Bioinformatics and Systems Engineering Division)
- Functional analysis of TTC1871 LysR-type transcriptional regulator** [30]  
 ○Matsushita Hajime<sup>1</sup>, Takeo Tomita<sup>1</sup>, Tomohisa Kuzuyama<sup>1</sup>, Makoto Nishiyama<sup>1,2</sup> (<sup>1</sup>Biotechnology Research Center, The University of Tokyo, <sup>2</sup>RIKEN SPring-8 center)
- Analysis of structure-function relationships of homoisocitrate dehydrogenase homologs from *Sulfolobus acidocaldarius*** [31]  
 ○Kento Takahashi<sup>1</sup>, Takeo Tomita<sup>1</sup>, Tomohisa Kuzuyama<sup>1</sup>, Makoto Nishiyama<sup>1,2</sup> (<sup>1</sup>Biotechnology Research Center, The University of Tokyo, <sup>2</sup>RIKEN Spring-8)
- Analyses of interacting proteins with PilF and PilT from *Thermus thermophilus*** [33]  
 ○Takuto Yasuda<sup>1</sup>, Ayumi koike<sup>1</sup> (<sup>1</sup>Dept. Appl. Biosci., Grad. Sch. Eng., Kanagawa Inst. of Tech.)
- Developing a new disulfide formation assay using superfolder GFP** [19]  
 ○Yuma Mori, Takashi Tamura, Akio Ebihara, Seiki Kuramitsu, and Kenji Inagaki (Dept of Bioscience, Grad. Sch. Nat. Sci. & Tech., Okayama Univ.)
- Regulatory mechanism for endonuclease activity of the DNA mismatch repair endonuclease MutL** [35]  
 ○Kenji Fukui<sup>1</sup>, Hitoshi Iino<sup>1</sup>, Tatsuya Yamamoto<sup>2</sup>, Kwang Kim<sup>3</sup>, Atsuhiko Shimada<sup>3</sup>, Seiki Kuramitsu<sup>1,3</sup> (<sup>1</sup>RIKEN Harima Inst., <sup>2</sup>Keio Univ., <sup>3</sup>Osaka Univ.)
- Small-angle X-ray scattering analysis of the DNA mismatch repair endonuclease** [36]  
 ○Hitoshi Iino<sup>1</sup>, Takaaki Hikima<sup>1</sup>, Seiki Kuramitsu<sup>1,2</sup>, and Kenji Fukui<sup>1</sup> (<sup>1</sup>RIKEN SPring-8 Center, <sup>2</sup>Grad. Sch. of Sci. Osaka Univ.)
- MutS stimulates the endonuclease activity of MutL in an ATP hydrolysis-dependent manner** [37]  
 ○Atsuhiko Shimada<sup>1</sup>, Ryoji Masui<sup>1,2</sup>, Seiki Kuramitsu<sup>1,2</sup>, and Kenji Fukui<sup>2</sup> (<sup>1</sup>Grad. Sch. of Sci. Osaka Univ., <sup>2</sup>RIKEN SPring-8 Center, Harima Inst.)
- Kinetic analysis of interactions between MutS and MutL involved in DNA mismatch repair** [38]  
 ○Yoshito Hata<sup>1</sup>, Atsuhiko Shimada<sup>1</sup>, Ryoji Masui<sup>1,2</sup>, Kenji Fukui<sup>2</sup>, and Seiki Kuramitsu<sup>1,2</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., <sup>2</sup>RIKEN SPring-8 Center, Harima Inst.)
- Molecular functional analysis of RadA/Sms protein, a bacterial RecA paralog** [39]  
 ○Masao Inoue<sup>1</sup>, Kenji Fukui<sup>2</sup>, Noriko Nakagawa<sup>1,2</sup>, Ryoji Masui<sup>1,2</sup>, and Seiki Kuramitsu<sup>1,2</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., <sup>2</sup>RIKEN SPring-8 Center, Harima Inst.)
- Genetic analysis of putative nucleases and helicases involved in double-strand break repair in *Thermus thermophilus* HB8** [40]  
 ○Yuki Fujii<sup>1</sup>, Masao Inoue<sup>2</sup>, Kenji Fukui<sup>3</sup>, Ryoji Masui<sup>2,3</sup>, and Seiki Kuramitsu<sup>1,2,3</sup> (<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Univ., and <sup>3</sup>RIKEN SPring-8 Center, Harima Inst.)
- Analysis of unique catalytic mechanism of exonuclease TTHA0118 from *Thermus thermophilus* HB8** [41]  
 ○Yuri Uemura<sup>1</sup>, Taisuke Wakamatsu<sup>1</sup>, Atsuhiko Shimada<sup>2</sup>, Ryoji Masui<sup>2,3</sup> and Seiki Kuramitsu<sup>1,2,3</sup> (<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Univ., <sup>3</sup>RIKEN SPring-8 Center, Harima Inst.)
- Nucleoid-associated histone-like protein HU may act on RNA** [42]  
 ○Yuya Nishida<sup>1</sup>, Noriko Nakagawa<sup>2,3</sup>, Ryoji Masui<sup>2,3</sup> and Seiki Kuramitsu<sup>1,2,3</sup> (<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., <sup>2</sup>RIKEN SPring-8 Center, Harima Inst., <sup>3</sup>Grad. Sch. Sci., Osaka Univ.)

- Identification of various types of post-translational modifications of the bacterial histone-like protein HU in *Thermus thermophilus* HB8** [43]  
 ○Yoshiyuki Tochizawa<sup>1</sup>, Yuya Nishida<sup>1</sup>, Kwang Kim<sup>2</sup>, Ryoji Masui<sup>2,3</sup>, and Seiki Kuramitsu<sup>1,2,3</sup> (<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Univ., and <sup>3</sup>RIKEN SPring-8 Center, Harima Inst.)
- Structural analysis of the heterodimer structure of the *T. thermophilus* tRNA modification enzymes, MnmE/MnmG using SAXS** [48]  
 ○Aya Kitamura<sup>1</sup>, Takaaki Hikima<sup>1</sup>, Masaki Yamamoto<sup>1</sup>, Kayoko Matsumoto<sup>1</sup>, Toshi Arima<sup>1</sup>, Kwang Kim<sup>2</sup>, Seiki Kuramitsu<sup>1,2</sup>, Yoshitaka Bessho<sup>1</sup> (<sup>1</sup>RIKEN Spring-8 Center, Harima Inst., <sup>2</sup>Dep. Biol. Sci., Grad. Sch. Sci., Osaka Univ.)
- Crystal structure of PurC from *Sulfolobus tokodaii*** [50]  
 ○Ryosuke Umabayashi<sup>1</sup>, Mayumi Kanagawa<sup>2</sup>, Seiki Baba<sup>2,3</sup>, Gota Kawai<sup>2,4</sup>, and Gen-ichi Sampei<sup>1,2</sup> (<sup>1</sup>Univ. Electro-Commun., <sup>2</sup>RIKEN SPring-8 Center, <sup>3</sup>SPring-8/JASRI, <sup>4</sup>Chiba Inst. Tech.)
- Crystal structure of PurU from *Thermus thermophilus* HB8** [51]  
 ○Yuki Yanagida<sup>1</sup>, Naoki Ogata<sup>1</sup>, Mayumi Kusano<sup>2</sup>, Mayumi Kanagawa<sup>3</sup>, Yumiko Inoue<sup>3</sup>, Seiki Baba<sup>3,4</sup>, Gota Kawai<sup>2,3</sup>, and Gen-ichi Sampei<sup>1,3</sup> (<sup>1</sup>Univ. Electro-Commun., <sup>2</sup>Chiba Inst. Tech., <sup>3</sup>RIKEN SPring-8 Center, <sup>4</sup>SPring-8/JASRI)
- Reaction mechanisms of the two related enzymes, PurN and PurU** [52]  
 Mayumi Kusano<sup>1</sup>, Toshiaki Shimasaki<sup>1</sup>, Gen-ichi Sampei<sup>2,3</sup> and ○Gota Kawai<sup>1,3</sup> (<sup>1</sup>Chiba Inst. Tech., <sup>2</sup>Univ. Electro-Commun., <sup>3</sup>RIKEN SPring-8 Center)
- Nucleoside salvage pathway in *Thermus thermophilus* HB8** [53]  
 ○Fumiaki Tomoike<sup>1</sup>, Noriko Nakagawa<sup>2,3</sup>, Seiki Kuramitsu<sup>1,2,3</sup>, and Ryoji Masui<sup>2,3</sup> (<sup>1</sup>Grad. Sch. Frontier Biosci., Osaka Univ., <sup>2</sup>Grad. Sch. Sci., Osaka Univ., <sup>3</sup>RIKEN SPring-8 Center.)
- Mn-catalase as a primary scavenger of intracellular hydrogen peroxide in *Thermus thermophilus*** [54]  
 ○Akio Ebihara<sup>1,2</sup>, Miho Manzoku<sup>1</sup>, Kenji Fukui<sup>1</sup>, Seiki Kuramitsu<sup>1,3</sup> (<sup>1</sup>RIKEN SPring-8 Center, <sup>2</sup>Gifu Univ., <sup>3</sup>Osaka Univ.)
- Whole-cell research of *Thermus thermophilus* HB8: metabolism via whole-cell proteomics** [55]  
 ○Kwang Kim<sup>1</sup>, Hiroki Okanishi<sup>1</sup>, Ryoji Masui<sup>1,2</sup>, and Seiki Kuramitsu<sup>1,2</sup> (<sup>1</sup>Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., and <sup>2</sup>RIKEN SPring-8 Center, Harima Inst.)

## Saturday, September 29

8:30 – 9:00 Morning Poster Discussion

### <Symposium> Model Organisms (2) : Thermophiles etc.

Abstract No.

Chair Persons: Hiroyuki Hori and Ken Hirotsu

- 9:00 – 9:10 **Visiting Yellowstone National Park, the place of discovery of thermophiles** 【11】  
Hiroyuki Hori  
(Ehime Univ.)
- 9:10 – 9:30 **Adaptation of *Thermus thermophilus* to environmental temperature via tRNA modification enzymes-modified nucleotides network in tRNA** 【12】  
Chie Tomikawa<sup>1</sup>, Kazuo Ishida<sup>1</sup>, Takashi Kunibayashi<sup>1</sup>, Anna Ochi<sup>1</sup>, Tamotsu Kanai<sup>2</sup>, Akira Hirata<sup>1</sup>, Chikako Iwashita<sup>1</sup>, and ○Hiroyuki Hori<sup>1,3</sup>  
(<sup>1</sup>Grad. Sch. of Sci. and Eng., Ehime Univ., <sup>2</sup>Grad. Sch. of Eng., Kyoto Univ., <sup>3</sup>VBL, Ehime Univ.)
- 9:30 – 10:00 **Studies on molecular recognition by tylosin-resistance methyltransferase enzyme** 【16】  
Satoko Yoshizawa  
(Centre de Génétique Moléculaire UPR 3404, CNRS, Université Paris-Sud)
- 10:00 – 10:30 **Functions of Genes Involved in Polyamine Biosynthesis in *Thermus thermophilus*** 【17】  
○Tairo Oshima<sup>1</sup>, Toshiyuki Moriya<sup>1</sup>, Yumiko Takeda<sup>2</sup>, Toshihiro Ohta<sup>2</sup>, Yuka Niiya<sup>3</sup>, Toshiro Iwaki<sup>3</sup>, and Masami Ishida<sup>3</sup>  
(<sup>1</sup>Inst of Envir. Microbiol., Kyowa-kako Co., <sup>2</sup>The Dep. of Envir. Genomics, Tokyo Univ. of Pharm. and Life Sci., <sup>3</sup>The Grad. Sch. of Marine and Technol., Tokyo Univ. of Marine Sci. and Technol.)
- 10:30 – 11:00 **A trial to predict DNA-binding residues and their target sequences of transcription factors** 【18】  
Ayumi Numazawa, ○Kei Yura (Ochanomizu Univ.)
- 11:00 – 11:30 **Poster Discussion**
- 11:30 – 12:15 **Lunch Break**
- 12:15 – 12:30 **General Assembly (学会総会)**

<Symposium> **Model Organisms (3) : Extreme Thermophiles etc.** Abstract No.

**Chair Persons: Tairo Oshima and Takashi Tamura**

- 12:30 – 12:45 **Curation of genome annotation of *Thermus thermophilus* HB8** [20]  
○Ryoji Masui<sup>1,2</sup> and Seiki Kuramitsu<sup>1,2</sup>  
(<sup>1</sup>Grad. Sch. Sci., Osaka Univ., <sup>2</sup>RIKEN SPring-8 Center)
- 12:45 – 13:00 **Thermophiles resources, fission yeast resources and other genetic materials at RIKEN BioResource Center** [26]  
○Takehide Murata, Masato Okubo, Shotaro Kishikawa, Yukari Kujime, Chitose Kurihara, Megumi Sakayori, Koji Nakade, Satoko Masuzaki, Takahito Yamasaki, and Yuichi Obata (Gene Engineering Division, RIKEN BioResource Center)
- 13:00 – 13:15 **An L-glucose catabolic pathway in *Paracoccus* sp. 43P** [28]  
Tetsu Shimizu, Naoki Takaya, and ○Akira Nakamura  
(Faculty of Life Environ. Sci., University of Tsukuba)
- 13:15 – 13:30 **Substrate recognition mechanism of a homolog of homoisocitrate dehydrogenase from *Thermococcus kodakarensis*, TK0280** [29]  
○Takeo Tomita<sup>1</sup>, Yin Lu Lu<sup>1</sup>, Kento Takahashi<sup>1</sup>, Haruyuki Atomi<sup>2</sup>, Tomohisa Kuzuyama<sup>1</sup>, Makoto Nishiyama<sup>1,3</sup>  
(<sup>1</sup>Biotechnology Research Center, The University of Tokyo, <sup>2</sup>Grad. Sch. of Eng., Kyoto Univ., <sup>3</sup>RIKEN SPring-8 Center)
- 13:30 – 13:45 **Type IV pilus structural protein of *Thermus thermophilus* HB8 and HB27** [32]  
○Masatada Tamakoshi<sup>1,2</sup>, Hibiki Itoga<sup>1</sup>, Satoshi Akanuma<sup>1</sup>, Akihiko Yamagishi<sup>1</sup>  
(<sup>1</sup>Dept. Mol. Biol., Tokyo Univ. of Pharm. Life Sci., <sup>2</sup>RIKEN SPring-8 Center, Harima Institute)
- 13:45– 14:00 **A comparative study on homologous recombination mediators from *T. thermophilus*** [34]  
○Takeshi Shinohara<sup>1,2</sup>, Tatsuhiko Inoue<sup>3</sup>, Ryouji Masui<sup>3</sup>, Seiki Kuramitsu<sup>3</sup>, Takehiko Shibata<sup>1,2</sup>, Tsutomu Mikawa<sup>2</sup>  
(<sup>1</sup>Grad. Sch. Nanobiosci., Yokohama City Univ., <sup>2</sup>RIKEN Adv. Sci. Inst., <sup>3</sup>Department of Biological Sciences, Graduate School of Science, Osaka University)
- 14:00 – 14:15 **Coffee Break**
- Chair Persons: Yoshinori Koyama and Tsutomu Mikawa**
- 14:15 – 14:30 **Functional identification of transcriptional regulators from *T. thermophilus* HB8** [44]  
Akeo Shinkai (RIKEN SPring-8 Center, Harima Inst.)
- 14:30 – 14:45 **Structural and functional analysis of TetR family transcriptional regulator PfmR from *Thermus thermophilus* HB8** [45]  
○Yoshihiro Agari, Keiko Sakamoto, Akeo Shinkai  
(RIKEN SPring-8 Center, Harima Inst.)
- 14:45 – 15:00 **Structural and functional analysis of TetR family transcriptional regulator TTHA0167 from *T. thermophilus* HB8** [46]  
○Keiko Sakamoto, Yoshihiro Agari, Akeo Shinkai  
(RIKEN SPring-8 Center, Harima Inst.)

- 15:00 – 15:15 **Research and development of bio-molecular imaging technology at SPring-8/SACLA** **[47]**  
○Yoshitaka Bessho<sup>1</sup>, Yasumasa Joti<sup>2</sup>, Takashi Kimura<sup>3</sup>, Aya Kitamura<sup>1</sup>, Akemi Shibuya<sup>1</sup>, Masami Ueta<sup>4</sup>, Akira Wada<sup>4</sup>, Shoji Takeuchi<sup>5</sup>, Toshifumi Sakaguchi<sup>6</sup>, Tamakoshi Masatada<sup>7</sup>, Shota Nitahara<sup>7</sup>, Toshiyuki Moriya<sup>8</sup>, Tairo Oshima<sup>8</sup>, Yoshinori Nishino<sup>3</sup>  
(<sup>1</sup>RIKEN Spring-8 Center., <sup>2</sup>XFEL division, JASRI, <sup>3</sup>RIES, Hokkaido Univ., <sup>4</sup>Yoshida Biol. Lab. <sup>5</sup>Tokyo Univ., <sup>6</sup>Pref. Univ. Hiroshima, <sup>7</sup>Tokyo Univ. of Pharm. and Life Sci., <sup>8</sup>Kyowa-kako Co. Ltd.)
- 15:15 – 15:30 **Origin and evolution of the enzymes in the purine biosynthetic pathway: an analysis in view of protein structures** **[49]**  
○Gen-ichi Sampei<sup>1,2</sup>, Seiki Baba<sup>2,3</sup>, Mayumi Kanagawa<sup>2</sup>, Gota Kawai<sup>2,4</sup>  
(<sup>1</sup>Univ. Electro-Commun., <sup>2</sup>RIKEN SPring-8 Center, <sup>3</sup>SPring8/JASRI, <sup>4</sup>Chiba Inst. Tech.)
- 15:30 – 15:45 **Example of genome-based identification of novel enzymatic activity and metabolic pathway** **[56]**  
Yutaka Kawarabayashi (Lab. for Func. Genomics of Extremophiles, Kyushu Univ.)
- 15:45 – 16:00 **Award Ceremony**  
Tairo Oshima (President)