The 5th Annual Meeting for Whole-Organism Science Society

Joint Meeting with

The 14th Annual Meeting of Structural-Biological Whole Cell Project

December 19 (Sat)-20 (Sun), 2015

Engineering Science International Bldg. Sigma hall

（豊中キャンパス・基礎工学国際棟シグマホール）

Toyonaka campus, Osaka University, Toyonaka, Osaka, Japan

〒560-0043 大阪府 豊中市 待兼山町 1-3

https://yoyaku.es.osaka-u.ac.jp/sigmahall/map.htm

http://www.thermus.org/

（version: Dec 19, 2015）

PROGRAM

Saturday, December 19

13:00-13:15 Introduction
Kenji Matsuno

<Symposium>

Green : Student

Chairperson: Kenji Matsuno

13:15-13:55 **Medaka as population genomics resources**
メダカを用いた集団ゲノム学リソースの樹立
○Kiyoshi Naruse
(Lab. of Bioresources, Natl. Inst. Basic Biol.)

13:55-14:35 **Insect and pathogen interaction: friend or enemy?**
病原体と媒介節足動物のバイオロジー
○Hirotaka Kanuka[1,2]
([1]Dept. Trop. Med., [2]Ctr. Med. Entomol., Jikei Univ. Sch. Med.)

Abstract No. 【1】

<Oral Presentation 1>

Chairperson: Akira Nakamura

14:35-15:00 **Investigation of regulatory system for the eukaryotic ciliary movement using a green alga, *Chlamydomonas reinhardtii***
単細胞緑藻クラミドモナスを用いた繊毛の運動制御機構探索
○Ryosuke Yamamoto
(Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.)

15:00-15:25 **Regulatory Mechanism for the DNA Mismatch Repair Endonuclease**
DNA ミスマッチ修復系における DNA 切断活性の制御機構
○Kenji Fukui[1], Hitoshi Iino[2], Atsuhiro Shimada[3], Ryoji Masui[4] and Seiki Kuramitsu[5]
([1]Osaka Med. Coll., [2]Kawaijuku Educational Inst., [3]Univ. Hyogo,

Abstract No. 【2】

[4]Osaka City Univ., [5]Osaka Univ.)

15:25-15:45 Coffee Break, Taking photographs

<Poster Flash Talk>

Chairperson: Tomoko Yamakawa

15:45-15:50 **Lytic enzyme of *Thermus Thermophilus* phage ϕMN1**
***Thermus thermophilus* に感染するファージϕMN1 の溶菌酵素の解析**
○Maho Kawai, Masatada Tamakoshi, Akihiko Yamagishi
(Dept. Appl. Life Sci., Tokyo Univ. Pharm. Life Sci.)

Abstract No. 【3】

15:50-15:55 **Effect of nutrient starvation on stationary phase for 3-hydroxypropionic acid production in *Escherichia coli***
制限基質による大腸菌増殖定常期の 3-ヒドロキシプロピオン酸生産への影響
○Kento Tokuyama[1,2], Yoshihiro Toya[1], Hiroshi shimizu[1]
([1]Dept. Bioinfo. Eng., Grad. Sch. IST, Osaka Univ., [2]JSPS research fellow (DC1))

Abstract No. 【4】

16:55-16:00 **Establish a zebrafish model of mitochondrial disease by using CRISPR/ Cas9 system**
CRISPR/Cas9 システムによるミトコンドリア病モデルゼブラフィッシュの作製
○Takemasa Nagao[1], Takaharu Hayashi[2], Yasunori Shintani[1, 2] and Seiji Takashima[1, 2]
([1]Grad. Sch. Frontier Biosci., Osaka Univ., [2]Dept. Med., Grad. Sch. Med., Osaka Univ.)

Abstract No. 【5】

16:00-16:05 **Encapsulation of protein crystals in hydrogel microbeads for crystal manipulation**
ハイドロゲルのマイクロビーズによるタンパク質結晶保護
○Fumiaki Tomoike and Shoji Takeuchi
(CIBiS-IIS)

Abstract No. 【6】

16:05-16:10 **Whole cell analysis of protein phosphorylation in the model prokaryote**

Abstract No. 【7】

○Yota Iio[1], Noriko Nakagawa[1], Seiki Kuramitsu[1], and Ryoji Masui[2]
([1]Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ. [2] Dept. Biol. Sci., Grad. Sch. Sci., Osaka City Univ.)

16:10-16:15 **NurA and HerA play inhibitory roles in repairing DNA cross-link in a thermophilic bacterium *Thermus thermophilus* HB8**

高度好熱菌 *Thermus thermophilus* HB8 由来 NurA, HerA は DNA 鎖架橋構造の修復に対して抑制的に働く

Abstract No. 【8】

○Yuki Fujii[1], Masao Inoue[2], Kenji Fukui[3], Kwang Kim[2], Seiki Kuramitsu[1, 2], Masahiro Ueda[1, 2], and Ryoji Masui[4]
([1]Grad. Sch. Frontier Biosci., Osaka Univ., [2]Grad. Sch. Sci., Osaka Univ., [3]Dept. Biochem., Osaka Med. College., [4]Grad. Sch. Sci., Osaka City Univ.)

16:15-16:20 **Proteome-wide analysis showed the abundance of lysine propionylation and its physiological significance**

蛋白質翻訳後修飾は、真核・原核生物に広く存在する：とくに、新規プロピオニル化について

Abstract No. 【9】

○岡西 広樹[1]、金 光[1]、倉光 成紀[1]、増井 良治[2]
([1]大阪大学　大学院理学研究科　生物科学専攻、[2]大阪市立大学　大学院理学研究科　生物地球系専攻)

16:20-16:25 **Transcriptome analysis to identify genes responding to mechanical force in developing *Drosophila* embryos**

Abstract No. 【10】

○Tomoki Ishibashi[1], Katsushi Yamaguchi[2], Shuji Shigenobu[2], and Kenji Matsuno[1]
([1]Osaka Univ., [2]NIBB)

16:25-16:30 **Evolutionary cooperativity between mating position and rotation of male genitalia in Diptera**
双翅目昆虫における交尾体位と雄生殖器回転の間の進化的な協調性
○Momoko Inatomi[1], Chisako Sakuma[2], Hirotaka Kanuka[2] and Kenji Matsuno[1]
([1]Osaka Univ., [2]The Jikei Univ. Sch. of Med.)
Abstract No. 【11】

16:30-16:35 **Functional interaction between Pecanex and NSF2 in Notch signaling**
Pecanex と NSF2 の Notch シグナル伝達における機能的相互作用の研究
○Ami Yamagishi, Tomoko Yamakawa, and Kenji Matsuno
(Department of Biological Sciences, Osaka University)
Abstract No. 【12】

16:35-16:40 **BioID-based identification of proteins interacting with Myosin31DF, which controls left-right asymmetry in *Drosophila*.**
ショウジョウバエの左右非対称性を制御する Myo31DF 相互作用因子の BioID 法を用いた探索
○Yusuke Kamei, Hiroki Okanishi, Takeshi Sasamura, Seiki Kuramitsu, and Kenji Matsuno,
(Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ.)
Abstract No. 【19】

16:40-16:45 **Biophysical characterization of a DNA-binding protein (TTHA0139) and a protein kinase (TTHA1370) from Thermus thermophilus HB8**
○Kazuya Takao[1], ○Yusuke Fujino[1], Yota Iio[2], Takero Miyagawa[3], Masao Inoue[2], Seiki Kuramitsu[2] and Ryoji Masui[1]
([1]Dept. Biol., Fac. Sci., Osaka City Univ.; [2]Grad. Sch. Sci., Osaka Univ.; [3]Grad. Sch. Frontier Biosciences, Osaka Univ.)
Abstract No. 【20】

<Poster Discussion>

17:00-17:30 Abstract odd number
17:30-18:00 Abstract even number

18:00-20:00 Banquet

Sunday, December 20

8:30-9:00 **Morning Poster Discussion**

<Oral Presentation 2>

Chairpersons: Ryoji Masui and Takeshi Sasamura

9:00-9:25 **Dynamic range extension of eukaryotic chemotaxis via regulation of heterotrimeric G protein dynamics.**

三量体 G タンパク質のダイナミクス制御を介した走化性応答レンジの拡大

○Yukihiro Miyanaga [1,2], Yoichiro Kamimura [2] and Masahiro Ueda [1,2]
([1] Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., [2] RIKEN QBiC)

9:25-9:37 **Analysis of VapC toxin-antitoxin, TTC0125-TTC0126, in *Thermus thermophilus* HB27**

Abstract No. 【13】

○Yuqi Fan, Takayuki Hoshino, and Akira Nakamura
(Fac. Life Environ. Sci., Univ. Tsukuba)

9:37-9:50 **Functional analyses of t^6A modification-associated genes with *Thermus thermophilus* HB27 strain**

Thermus thermophilus HB27 株を用いた t^6A 修飾関連遺伝子の機能解析

Abstract No. 【14】

○川端祐佳 [1], 澤田泰平 [1],北原一正 [1],小野瀬晃由 [1], 星野貴行 [2], 吉澤聡子 [3], 朝原治一 [4], 中村顕 [2]
([1] 筑波大学生命環境科学研究科, [2] 筑波大学生命環境系, [3]CNRS-I2BC, [4]New England Biolabs)

9:50-10:15 **Isolation and characterization of *Thermus thermophilus* HB8 phage ϕMN1**

Thermus thermophilus HB8 に感染するϕMN1 の解析

Abstract No. 【15】

○Masatada Tamakoshi, Tomoya Nakayama, and Akihiko Yamagishi
(Dept. Appl. Life Sci., Tokyo Univ. Pharm. Life Sci.)

10:15-10:40 **Genes involved in polyamine metabolism of *Thermus thermophilus***

Thermus thermophilus のポリアミン生合成関連遺伝子について

○Tairo Oshima
(Institute of Environmental Microbiology, Kyowa-kako Co.)

Abstract No. 【16】

10:40-11:05 **Structure and function of Lon protease-like C-terminal domain of DNA repair protein RadA/Sms**

DNA 修復タンパク質 RadA/Sms C 末端ドメインの構造と機能

○Masao Inoue[1], Kenji Fukui[2], Yuki Fujii[3], Takato Yano[2], Seiki Kuramitsu[1], and Ryoji Masui[4]
([1]Dept. Biol. Sci., Grad. Sch. Sci., Osaka Univ., [2]Dept. Biochem., Osaka Medical College, [3]Grad. Sch. Frontier Biosci., Osaka Univ., [4]Grad. Sch. Sci., Osaka City Univ.)

Abstract No. 【17】

11:05-11:30 **Analysis of cellular dynamics in left-right asymmetric rotation of *Drosophila* hindgut**

左右非対称な内臓捻転における細胞挙動の解明

○Mikiko Inaki [1], Hisao Honda [2] and Kenji Matsuno [1]
([1] Dep. Biol. Sci., Grad. Sch. Sci., Osaka Univ., [2] Dep. Med., Grad. Sch. Med., Kobe Univ.)

Abstract No. 【18】

11:30-12:00 General Assembly and Award Ceremony