第3日目12月3日（金）

3AS-01　Room 01 (Pacifico Yokohama Conference Center, 1F, Main Hall)　9:00-11:15【E】

Continuity of the life and Aging

Organizers：Takehiko Kobayashi（The University of Tokyo）
Akiko Takahashi（Cancer Institute）

3AS-01-Introduction　【9:00】

Takehiko Kobayashi（The University of Tokyo）

3AS-01-1　【9:04】

The budding yeast, as a model for aging study

Takehiko Kobayashi（Inst. for Quant. Biosci. (IQB), Univ. of Tokyo）

3AS-01-2　【9:24】

Molecular mechanisms underlying organismal lifespan regulation in C. elegans

Masaharu Uno, Masanori Nono, Emiko Okabe, Saya Kishimoto, Chika Takahashi, Eisuke Nishida（RIKEN BDR）

3AS-01-3　【9:49】

Novel regulatory mechanism of SASP in cellular senescence

Akiko Takahashi（Proj. for Cell. Senes., Cancer Inst., JFCR）

3AS-01-4　【10:14】

Mechanisms of ribosomal DNA maintenance

Yamashita M. Yukiko[1,2], George J. Watase[1,2], Jonathan O. Nelson[1,2]（[1]Whitehead Institute for Biomedical Research/MIT, [2]Howard Hughes Medical Institute）

3AS-01-5　【10:44】

Achieving Productive Aging: The Systemic Regulatory Mechanism of Mammalian Aging and Longevity and Anti-Aging Intervention

Shin-ichiro Imai（Dept. of Dev. Biol. and Med. Washington U. Sch. Med.）

3AS-01-Conclusion　【11:14】

Akiko Takahashi（Cancer Institute）

3AS-02　Room 02 (Pacifico Yokohama Conference Center, 3F, 301)　9:00-11:15【E】

Physical properties of biomolecules in human life and diseases

Organizers：Fumiyo Ikeda（Kyushu University）
Makoto Kinoshita（Nagoya University）

3AS-02-Introduction　【9:00】

Fumiyo Ikeda（Kyushu University）

3AS-02-1　【9:03】

Regulation of cellular stress responses by stress granule formation

Mutsuhiro Takekawa（Div. of Cell Sig. & Mol. Med., Inst. of Med. Sci., Univ. of Tokyo）

3AS-02-2　【9:23】

Modification of physical properties and reconstruction of postsynaptic density by liquid-liquid phase separation

Tomohisa Hosokawa[1], Pin-Wu Liu[2], Makoto Kinoshita[1]（[1]Dept. of Mol. Biol., Grad. Sch. of Sci., Nagoya Univ., [2]Grad. Sch. of Med., Kyoto Univ.）

3AS-02-3　【9:43】

Global interactome analysis in living cells using advanced proteomic technologies

Hidetaka Kosako（Inst. Adv. Med. Sci., Tokushima Univ.）

3AS-02-4　【10:03】

Comprehensive identification of novel interactors of viral RNA receptor MDA5 based on in vitro and cell-based interaction assays

Hirotaka Takahashi[1], Shion Sakaguchi[1], Norihiro Hayashi[1], Takashi Irie[2], Hidetaka Kosako[3], Tatsuya Sawasaki[1]（[1]PROS, Ehime Univ., [2]Dept. of Virol., Institute of Biomed. & Health Sci., Hiroshima Univ., [3]Inst. of Adv. Med. Sci., Tokushima Univ.）

3AS-02-5　【10:23】

A novel LUBAC-bidning protein plays important role in response to parasite infection

Yuri Shibata, Sachin Khurana, Niccolay Madiedo Soler, Ethan Goddard-Borger, Chris Tonkin, David Komander（WEHI）

3AS-02-6 【10:43】

Cellular functions regulated by complex-type ubiquitination including linear polyubiquitin chain

Fuminori Tokunaga, Seigo Terawaki, Daisuke Oikawa, Kouhei Shimizu（Dept. of Pathobiochem., Grad. Sch. of Med., Osaka City Univ.）

3AS-02-Discussion 【11:03】

3AS-02-Conclusion 【11:13】

Makoto Kinoshita（Nagoya University）

3AS-03　Room 03 (Pacifico Yokohama Conference Center, 3F, 302)　9:00-11:15【E】

Novel approaches combining 3-dimensional biology and cutting-edge technologies to analyze tumor tissues toward the conquest of cancer

Organizers：Noriko Gotoh（Kanazawa University）
Koji Okamoto（National Cancer Center Research Institute）

3AS-03-1 【9:00】

Multicellular cancer organoid recapitulating cancer ecosystem using patient-derived pancreatic cancer cells

Keisuke Sekine（National Cancer Center Research Institute）

3AS-03-2 【9:22】

The membrane-linked adaptor FRS2beta fashions a cytokine-rich inflammatory microenvironment that promotes breast cancer carcinogenesis*

Noriko Gotoh（Div. Can. Cell BIol., Can. Res. Inst., Kanazawa Univ.）

3AS-03-3 【9:44】

Innovative 3D imaging technique for next-generation cancer research

Takeshi Imamura（Dept. of Mol. Med. for Pathogenesis. Ehime Univ. Grad. Sch. of Med. ）

3AS-03-4 【10:06】

Preclinical patient-derived models revealed potential therapeutic targets for renal cell carcinoma

Satoshi Inoue[1,2]（[1]Dept. Aging Sci. & Med., Tokyo Metropolitan Inst. of Gerontology, [2]RCGM, Saitama Med. Univ.）

3AS-03-5 【10:28】

TEM8 marks neovasculogenic tumor initiating cells in triple negative breast cancer

Suling Liu（Fudan University）

3AS-03-6 【10:50】

Understanding of cancer heterogeneity and chemoresistance via integration of single-cell analyses and spatial transcriptomics

Koji Okamoto（Div. Cancer Differentiation, Natl. Cancer Ctr. Res. Inst.）

3AS-03-Discussion 【11:12】

3AS-04　Room 04 (Pacifico Yokohama Conference Center, 3F, 303)　9:00-11:15【E】

Mechanisms of intracellular clearance and pathogenesis caused by its disruption

Organizers：Hideki Nishitoh（University of Miyazaki）
Akira Kobayashi（Doshisha University）

3AS-04-Introduction 【9:00】

Hideki Nishitoh（University of Miyazaki）

3AS-04-1 【9:01】

Clearance of aberrant nascent proteins by ribosome-associated quality control(RQC) is critical for neuron morphogenesis and survival

Tsuyoshi Udagawa[1], Moeka Seki[1], Taku Okuyama[1], Shungo Adachi[2], Tohru Natsume[2], Takuya Noguchi[1], Atsushi Matsuzawa[1], Toshifumi Inada[1,3]（[1]Grad. Sch. of Pharm. Sci., Tohoku Univ., [2]Molecular Profiling Research Center for Drug Discovery, AIST, [3]Inst. of Med. Sci., Univ. of Tokyo）

3AS-04-2 【9:23】

Molecular mechanism of co-translational degradation on the ER membrane

Hisae Kadowaki, Hideki Nishitoh（Lab. of Biochem. Mol. Biol. Dept. of Med. Sci., Univ. of Miyazaki）

3AS-04-3 【9:45】

Wipi3 is essential for Golgi membrane-associated degradation (GOMED) pathway and its loss causes neurodegeneration

Satoko Arakawa, Hirofumi Yamaguchi, Shigeomi Shimizu（Pathol. Cell Biol., Med. Res. Inst., Tokyo Med. Dent. Univ. (TMDU)）

3AS-04-4 【10:07】

Clearance of misfolded proteins via extracellular vesicle secretion

Toshihide Takeuchi[1], Yoshitaka Nagai[2]（[1]LSRI, Kindai Univ., [2]Faculty of Med, Kindai Univ.）

3AS-04-5 【10:29】

NRF1 and NRF3 complementarily maintain basal proteasome activity in cancer cells through CPEB3-Mediated translational repression

Tsuyoshi Waku, Akira Kobayashi（Dep. of Med. Life Sys., Fac. of Life and Med. Sci., Doshisha Univ.）

3AS-04-6 【10:51】

Manipulation of the Ubiquitin Proteasome System by human papilloma virus oncoprotein

Takuya Tomita（Prot. Metab. Project, TMiMS）

3AS-04-Conclusion 【11:13】

Akira Kobayashi（Doshisha University）

3AS-05 Room 05 (Pacifico Yokohama Conference Center, 3F, 304) 9:00-11:15【E】

Co-hosted by: Grant-in-Aid for Scientific Research on Innovative Areas "Periodicity and its Modulation in Plants"

One small step, one giant leap: impacts of molecules and fluctuations on plant development

Organizers：Minako Ueda（Tohoku University）
Misato Ohtani（The University of Tokyo）

3AS-05-Introduction 【9:00】

Minako Ueda（Tohoku University）

3AS-05-1 【9:05】

Live-cell imaging of the polarization dynamics of plant zygote

Minako Ueda[1,2], Yusuke Kimata[1], Hikari Matsumoto[1], Takumi Higaki[3], Taiho Komatsu[1], Sayuri Tanaka[4], Daisuke Kurihara[5,6], Tetsuya Higashiyama[4,5,7]（[1]Dept. of Eco. Dev. Adapt. Life Sci., Grad. Sch. of Life Sci., Tohoku Univ., [2]Suntory, SunRiSE, [3]IROAST, Kumamoto Univ., [4]Div. of Biol. Sci., Grad. Sch. of Sci., Nagoya Univ., [5]ITbM, Nagoya Univ., [6]JST, PRESTO, [7]Dept. of Biol. Sci., Grad. Sch. of Sci., Univ. of Tokyo）

3AS-05-2 【9:25】

Endoplasmic reticulum dynamics and plant development

Haruko Ueda, Ikuko Hara-Nishimura（Dept. of Biol., Fac. of Sci. & Eng., Konan Univ.）

3AS-05-3 【9:50】

Morphological evolution in plant reproduction - taking plant sperms and structural color in flowers as examples -

Shizuka Koshimizu（Sch. Agri., Meiji Univ.）

3AS-05-Break 【10:15】

3AS-05-4 【10:25】

Seasonal cues control the daily expression patterns of *FT* to optimize flowering time in nature

Akane Kubota[1], Yusuke Ozaki[1], Yoshinori Kondo[1], Motomu Endo[1], Takato Imaizumi[2]（[1]Dev. of Biosci., NAIST, [2]Dept. of Biology, Univ. of Washington）

3AS-05-5 【10:50】

How to transcribe and modify which species of snRNA: metabolic regulation of small nuclear RNA is a key to environmentally-adaptable development of plants

Misato Ohtani[1,2,3]（[1]Dept. of Integ. Biosci., Grad. Sch. of Front. Sci., Univ. of Tokyo, [2]Div. Biol. Sci., NAIST, [3]CSRS, RIKEN）

3AS-05-Conclusion 【11:10】

Misato Ohtani（The University of Tokyo）

3AS-17　Room 17 (Pacifico Yokohama Conference Center, 5F, 503)　9:00-11:15【E】

Co-hosted by: Transformative Research Areas (B) Mammalian hibernation biology ~ survival strategies via hypometabolism and hypothermia

Regulation of hypometabolism and hypothermia in and around hibernation

Organizers：Genshiro Sunagawa（RIKEN）
Yoshifumi Yamaguchi（Hokkaido University）

3AS-17-Introduction　【9:00】

Genshiro Sunagawa（RIKEN）

3AS-17-1　【9:03】

Can torpor delay disease progression?

Genshiro A. Sunagawa（RIKEN BDR）

3AS-17-2　【9:23】

Cold adaptation and adipose tissue remodeling

Yuko Okamatsu-Ogura（Lab. of Biochem., Fac. of Vet. Med., Hokkaido Univ.）

3AS-17-3　【9:43】

Biological Clock in Cold World

Naohiro Kon[1], Takahiro Iwamoto[2], Yoshitaka Fukada[3]（[1]ITbM, Nagoya University, [2]Facul. of Med., Fukuoka Univ., [3]Dept. of Med., Univ. of Tokyo）

3AS-17-4　【10:03】

Reduced glucose metabolism in the longest-lived rodent, the naked mole-rat

Kaori Oka[1], Kyoko Miura[1,2]（[1]POIE, Kumamoto Univ., [2]Faculty of Life Sci., Kumamoto Univ.）

3AS-17-5　【10:23】

An adenosine model of obligate hibernation

Kelly Drew[1], Bernard Laughlin[1], Zachary Carlson[1], Carla Frare[1], Sarah Rice[1], Julie Reisz[2], Angelo D'Alessandro[2]（[1]University of Alaska Fairbanks, [2]University of Colorado Denver – Anschutz Medical Campus）

3AS-17-Conclusion　【11:13】

Yoshifumi Yamaguchi（Hokkaido University）

3PS-02　Room 02 (Pacifico Yokohama Conference Center, 3F, 301)　15:45-18:00【E】

Cell-cell communications generating “autonomy" in multicellular life systems

Organizers：Tohru Ishitani（Osaka University）
Tatsushi Igaki（Kyoto University）

3PS-02-Introduction　【15:45】

Tatsushi Igaki（Kyoto University）

3PS-02-1　【15:47】

Dissecting the core pathway of cell competition

Tatsushi Igaki（Grad. Sch. of Biostudies, Kyoto Univ.）

3PS-02-2　【16:06】

Stem cell competition: unraveling the riots that shape multicellular dynamics

Shakiba Nika（School of Biomedical Engineering, UBC）

3PS-02-3　【16:32】

Local tension imbalance drives global organ patterning and fate specification

Rashmi Priya, Srinivas Allanki, Alessandra Gentile, Shivani Mansingh, Hans-Martin Maischein, Didier Stainier（The Francis Crick Institute）

3PS-02-4　【16:58】

Mechano-chemical feedbacks in multicellular epithelial tissues for pattern formation and morphogenesis

Tsuyoshi Hirashima[1,2], Michiyuki Matsuda[2,3]（[1]The Hakubi Center, Kyoto Univ, [2]Grad Sch Biostudies, Kyoto Univ, [3]Grad Sch Med, Kyoto Univ）

3PS-02-5　【17:19】

Cell competition contributes to the autonomous error correction of morphogen gradient.

Tohru Ishitani（RIMD, Osaka Univ.）

3PS-02-6 【17:38】

Programming autonomous multicellular patterning with synthetic cell-cell signaling

Satoshi Toda（NanoLSI, Kanazawa Univ.）

3PS-02-Conclusion 【17:59】

Tohru Ishitani（Osaka University）

3PS-16 Room 16 (Pacifico Yokohama Conference Center, 5F, 502) 15:45-18:00【E】

Supported by: Moonshot Research & Development Program "Understanding and Control of Virus-Human Interaction Networks"

Digital transformation for fighting against emerging infectious diseases

Organizers：Teppei Shimamura（Nagoya University）
Shingo Iwami（Nagoya University）

3PS-16-Introduction 【15:45】

Teppei Shimamura（Nagoya University）

3PS-16-1 【15:46】

Deep learning to decipher cell dynamics and cell-cell interactions

Teppei Shimamura（Div. of Syst. Biol., Nagoya Univ. Grad. Sch. of Med.）

3PS-16-2 【16:08】

High throughput analysis of cell morphology by ghost cytometry

Sadao Ota[1,2]（[1]RCAST, Univ. of Tokyo, [2]Thinkcyte Inc.）

3PS-16-3 【16:30】

Respiratory virus infection model: is an equation worth a thousand pictures?

Christian Quirouette[1], Nada P. Younis[1], Micaela B. Reddy[3], **Catherine Beauchemin**[1,2]（[1]Dept. Physics, Ryerson Univ., [2]iTHEMS, RIKEN, [3]Array Biopharma Inc.）

3PS-16-4 【16:52】

The genetic determinants of SARS-CoV-2 associated diseases

Vanessa Sancho Shimizu[1,2]（[1]Department of Paediatric Infectious Diseases and Virology, Imperial College London, [2]Centre for Paediatrics and Child Health, Faculty of Medicine, Imperial College London）

3PS-16-5 【17:14】

On the use of mathematical techniques in response to COVID-19 pandemic

Hiroshi Nishiura（Kyoto University）

3PS-16-6 【17:36】

Rethinking antiviral effects for COVID-19 in clinical studies: early initiation is key to successful treatment

Shingo Iwami（iBLab, Div. of Biol. Sci., Grad. Sch. of Sci., Nagoya Univ.）

3PS-16-Conclusion 【17:58】

Shingo Iwami（Nagoya University）

3PS-17 Room 17 (Pacifico Yokohama Conference Center, 5F, 503) 15:45-18:00【E】

Synthetic Embryology - Bottom-up approaches to study human & animal development

Organizers：Mitinori Saitou（Kyoto University）
Cantas Alev（Kyoto University）

3PS-17-Introduction 【15:45】

Mitinori Saitou（Kyoto University）

3PS-17-1 【15:47】

Blastoids model blastocyst development and implantation.

Nicolas Rivron（IMBA）

3PS-17-2 【16:13】

In vitro 3D gastruloid models of mouse and human development

Naomi Moris（Francis Crick Institute）

3PS-17-3 【16:39】

Reconstituting human somitogenesis in vitro

Yoshihiro Yamanaka[1], Kumiko Yoshioka-Kobayashi[1], Sirajam Munira[1], Sofiane Hamidi[1], Shunsuke Kihara[2], Yuzuru Kurokawa[1], Taro Tsujimura[1], Takuya Yamamoto[1,2], **Cantas Alev**[1]（[1]Institute for the Advanced Study of Human Biology (ASHBi), Kyoto University, [2]Center for iPS Cell Research and Application (CiRA), Kyoto University）

3PS-17-4 【17:05】

Synthetic pancreas organogenesis: from self-organization to understanding diabetes

Anne Grapin-Botton（Max Planck Institute of Molecular Cell Biology and Genetics）

3PS-17-5 【17:31】

A self-elongating neural tube organoid

Matthias Lutolf[1,2]（[1]Laboratory of Stem Cell Bioengineering, Institute of Bioengineering, EPFL, [2]Roche Institute for Translational Bioengineering (ITB), Roche Innovation Center Basel）

3PS-17-Conclusion 【17:57】

Mitinori Saitou, Cantas Alev（Kyoto University）