Presentation Guideline

[Oral Presentations]

- PC & Connection

  ・The connection at the venue will be via HDMI. Please bring your own laptop along with any necessary adapters for your presentation.

  ・Connection checks will be available 30 minutes before the first session in the morning, as well as during coffee breaks and lunch breaks. We kindly request that you complete the connection check prior to the start of your presentation session.

- Presentation

  ・Presentations should be delivered in English.

  ・The screen in the venue supports a 16:9 aspect ratio.

  ・Time limits are as follows, with the suggested allocation for your reference. You are welcome to adjust the distribution as you see fit.

  40-min talks: Presentation 30 min, Q&A 10 min. Bell timings: 30, 35, 40 min

  25-min talks: Presentation 20 min, Q&A 5 min. Bell timings: 17, 20, 25 min

  20-min talks: Presentation 16 min, Q&A 4 min. Bell timings: 14, 16, 20 min

[Poster Presentation]

1. The display panel size is 90 cm (width) × 210 cm (height). A poster number label measuring 20 cm × 20 cm will be attached to the upper left corner of the panel, so please display your poster on the designated panel.
2. There are no specific requirements for the poster format, but please include the title, presenter name, and affiliation at the top.
3. The explanation and presentation of the poster can be in either Japanese or English; however, we request that the poster itself be created in English.
4. The schedule for poster attachment and removal is as follows:
   - Poster attachment: December 2nd (Monday) from 9:00 AM
   - Poster removal: December 4th (Wednesday) by 12:00 PM
5. During the presentation times, presenters are expected to explain and discuss their posters in front of the audience. Push pins will be provided at each poster location for your use.

Ribosome meeting in Japan 2024 Program

December 2nd (Mon)

IMSUT, International Joint Usage/Research Center-Young Researchers

Symposium: RNA Regulation in Infectious and Genetic Diseases

09:30-09:40 Opening remarks

Makoto Nakanishi (The University of Tokyo)

09:40-12:00 **Session 1**

Chairperson **Toshifumi Inada (The University of Tokyo)**

09:40-10:20 **Keynote 1 Tsutomu Suzuki**

Expanding world of tRNA modifications in health and disease

○Tsutomu Suzuki

(Department of chemistry and biotechnology, The University of Tokyo)

10:20-10:45 **O-1**

The metabolic pathway of RNA modifications and its pathophysiological impacts

○Fan-Yan Wei[1] and Akiko Ogawa[1]

([1] Institute of Development, Aging and Cancer, Tohoku University)

10:45-11:10 **O-2**

Ribosomes and the ribotoxic stress response are first-line responders to cellular stress insults

Simon Bekker-Jensen[*,1]

[1]Center for Gene Expression, Department of Cellular and Molecular Medicine, University of Copenhagen, Blegdamsvej 3B, DK-2200 Copenhagen, Denmark;

11:10-11:35 **O-3**

RNA and RNP Synthetic Biology to Program Cells

○Hirohide Saito

(Institute for Quantitative Biosciences, The University of Tokyo/ Center for iPS Cell Research and Application, Kyoto University)

11:35-12:00 **O-4**

Structural basis of collided ribosome rescue in E. coli by the RNA helicase HrpA.

○Thomas Becker[1], Hanna F. Esser[1], Annabelle Campbell[2], A. Maxwell Burroughs[3], Otto Berninghausen[1], L. Aravind[3], Rachel Green[2,4], Allen R. Buskirk[2] and Roland Beckmann[1]

([1] Gene Center and Department of Biochemistry, University of Munich; Munich, Germany. [2]Department of Molecular Biology and Genetics and [4]Howard Hughes Medical Institute, Johns Hopkins University School of Medicine; Baltimore, United States. [3]Computational Biology Branch, Intramural Research Program,

National Library of Medicine, National Institutes of Health; Bethesda, United States)

12:00-13:00 Lunch Break

13:00-14:00 **Poster Session 1 (Odd-Numbered Presenters)**

14:00-15:35 **Session 2**

Chairperson **Fan-Yan Wei (Tohoku University)**

14:00-14:25 **O-5**

Investigation of mRNA surveillance and translation-associated RNA-helicase in *Plasmodium falciparum*

Elisha Mugo[1], Jessey Erath[1], Lena Street[2], Marko Jovanovic[2], Sergej Djuranovic[1], & Slavica Pavlovic-Djuranovic[1]

[1] Cell Biology & Physiology Department, Washington University School of Medicine, Missouri, USA

[2] Department of Biological Sciences, Columbia University, New York, USA

14:25-14:50 **O-6**

Rapid isolation of ribosomes and associated translational factors for structural and functional studies

*Sergej Djuranovic[1], Jessey Erath[1], Danielle Kemper[1], Alex Jacoby[1], Courtney F. Jungers[1], Wandy L. Beatty[1], Yaser Hashem[2], Marko Jovanovic[3], Slavica Pavlovic Djuranovic[1]

[1] Washington University School of Medicine, St. Louis, USA

[2] Inserm, Université de Bordeaux, Institut Européen de Chimie et Biologie, Pessac, France

[3] Department of Biological Sciences, Columbia University, New York, NY,

USA.

14:50-15:15 **O-7**

Molecular and cellular dissection of malaria parasite in the regulation of stage-specific development

Yuki S. Tateishi[1,2,3], Tamasa Araki[1], Satoru Kawai[4], Shuhei Koide[5], Yuko Umeki[1,6], Takashi Imai[1,6], Yumiko Saito-Nakano[1,6], Masaki Kikuchi[7], Atsushi Iwama[5,8], Hajime Hisaeda[1], Cevayir Coban[2,8,9], ○ Takeshi Annoura[1*]

([1]Department of Parasitology, National Institute of Infectious Diseases (NIID), [2]Division of Malaria Immunology, The Institute of Medical Science, The University of Tokyo (IMSUT), [3]Graduate School of Frontier Sciences, Department of Computational Biology and Medical Science, The University of Tokyo, [4]Department of Tropical Medicine and Parasitology, Dokkyo Medical University, [5]Division of Stem Cell and Molecular Medicine, Center for Stem Cell Biology and Regenerative Medicine, IMUST, [6]Antimicrobial Resistance Research Center, NIID, [7]Laboratory for Epigenetics Drug Discovery, RIKEN Center for Biosystems Dynamics Research, [8]The University of Tokyo Pandemic

Preparedness, Infection and Advanced Research Center, The University of Tokyo, [9]International Vaccine Design Center, IMSUT)

15:15-15:35 **O-8**

A Novel Drug Modality Targeting *Plasmodium falciparum* Transcription Factor

Rashmi Dash[1], Hideo Negishi[2,3,4], Ken. J. Ishii[2,3,4], Shiroh Iwanaga[5], Cevayir Coban[1,3,4]

[1] Division of Malaria Immunology, Institute of Medical Science (IMSUT), The University of Tokyo

[2] Division of Vaccine Science, IMSUT, The University of Tokyo

[3] International Vaccine Design Center, IMSUT, The University of Tokyo

[4] The University of Tokyo Pandemic Preparedness, Infection and Advanced Research Center (UTOPIA), The University of Tokyo

[5] Department of Molecular Protozoology, Research Institute for Microbial Diseases (RIMD), Osaka University

15:35-15:50 **Break**

15:50-16:55 **Session 3**

Chairperson **Thomas Becker (University of Munich)**

15:50-16:10 **O-9**

Structure of a Gcn2 dimer in complex with the large 60S ribosomal subunit

○Lyudmila Dimitrova-Paternoga[1#], Xia Lu[2#], Helge Paternoga[1#], Sihan Li[2#], Liewei L Yan[3], Malte Oestereich[1], Sergo Kasvandik[4], Bertrand Beckert[5], Tanel Tenson[4], Hani Zaher[3], Toshifumi Inada[2]*, Daniel N. Wilson[1]*

[1] Institute for Biochemistry and Molecular Biology, University of Hamburg, Martin-Luther-King-Pl. 6, 20146 Hamburg, Germany

[2] Division of RNA and Gene Regulation, Institute of Medical Science, The University of Tokyo, Minato-Ku, Tokyo 108-8639, Japan.

[3] Department of Biology, Washington University in St. Louis, St. Louis, MO 63130, USA.

[4] University of Tartu, Institute of Technology, 50411 Tartu, Estonia

[5] Dubochet Center for Imaging (DCI) at EPFL, EPFL SB IPHYS DCI, Lausanne, Switzerland

16:10-16:30 **O-10**

Ribosome dynamics and turnover: A branching pathway regulated by stalling and collisions

○Sihan Li[1,2], Okuto Shounai[2], Toshifumi Inada[1,2]

([1] Institute of Medical Science, The University of Tokyo, [2] Graduate School of Pharmaceutical Sciences, Tohoku University)

16:30-16:55 **O-11**

RRP12 regulates the initial folding of the 40S ribosome decoding center

Yi Li[1], Benjamin Lau[2], Paulina Fischer[2], Roland Beckmann[3], Ed Hurt[2] and Jingdong Cheng[1]

[1]Minhang Hospital & Institutes of Biomedical Sciences, Shanghai Key Laboratory of Medical Epigenetics, International Co-laboratory of Medical Epigenetics and Metabolism, Fudan University, Dong'an Road 131, 200032, Shanghai, China

[2]Heidelberg University Biochemistry Center (BZH), Im Neuenheimer Feld 328, 69120 Heidelberg, Germany

[3]Gene Center, Ludwig-Maximilians-Universität München, Munich, Germany.

16:55-17:10 **Break**

17:10-18:15 **Session 4**

Chairperson **Jingdong Cheng (Minhang Hospital)**

17:10-17:35 **O-12**

Regulation of Translation Initiation by Atypical Translation Initiation Complexes Formed by RNA-Binding Proteins

○Toshinobu Fujiwara[1]

([1]Graduate School of Pharmaceutical Sciences, Kindai University)

17:35-17:55 **O-13**

Anatomy of footprint extension in ribosome profiling reveals a conformational landscape of ribosomes in bacteria

○Hirotaka Toh[1], Tomoya Fujita[1,2], Takeshi Yokoyama[3,4], Hideki Taguchi[2,5], Takuhiro Ito[6], and Shintaro Iwasaki[1,7]

([1]RNA Systems Biochemistry Laboratory, RIKEN Cluster for Pioneering Research,[2]School of Life Science and Technology, Tokyo Institute of Technology, [3]Laboratory for Protein Functional and Structural Biology, RIKEN Center for Biosystems Dynamics Research, [4]Graduate School of Life Sciences, Tohoku University, [5]Cell Biology Center, Institute of Innovative Research, Tokyo Institute of Technology, [6]Laboratory for Translation Structural Biology, RIKEN Center for Biosystems Dynamics Research, [7]Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo)

17:55-18:15 **O-14**

What we know about bacterial ribosome-associated quality control

○Hiraku Takada[1], Caillan Crowe-McAuliffe[2], Helge Paternoga[2], Keigo Fujiwara[3], Esther N Park[4], Gemma C. Atkinson[5], Allen R Buskirk[4], Shinobu Chiba[6], Daniel N. Wilson[2], Vasili Hauryliuk[5]

([1] Department of Biotechnology, Toyama Prefectural University, [2] Institute for Biochemistry and Molecular Biology, University of Hamburg, [3] National Institute of Genetics, [4] Department of Molecular Biology and Genetics, Johns Hopkins University School of Medicine, [5] Department of Experimental Medical Science,

Lund University, [6] Faculty of Life Sciences, Kyoto Sangyo University and Institute for Protein Dynamics)

December 3rd (Tue)

09:30-11:50 **Session 5**

Chairperson **Tsutomu Suzuki (The University of Tokyo)**

09:30-10:10 **Keynote 2**

Concentration matters: Regulation of ribosome homeostasis during cellular stress

Rachel Green, James A. Saba, Kate L. Schole, Frances Diehl

HHMI

Department of Molecular Biology and Genetics, Johns Hopkins University School of Medicine, Baltimore, MD 21205

10:10-10:35 **O-15**

Local translation atlas revealed by APEX-Ribo-Seq

○Shintaro Iwasaki[1,2]

([1] RIKEN, [2] The University of Tokyo)

10:35-11:00 **O-16**

Translational regulation of mineral nutrient-transport in *Arabidopsis thaliana*: specific effects of ribosome protein mutation

Arpna Kumari[1], Shuying Li[1], Yicong Chen[1], Dichao Ma[1], Hirofumi Fukuda[1], Naoyuki Sotta[1,2], Mayuki Tanaka[1,2], Satoshi Naito[3], Takehiro Kamiya[1], Kyoko Miwa[4] and ○Toru Fujiwara[1]

([1]Graduate School of Agricultural and Life Sciences, The University of Tokyo, [2]Graduate School of Agriculture, Osaka Metropolitan University, [3]Graduate School of Agriculture, Hokkaido University, [4]Graduate School of Environmental Science, Hokkaido University)

11:00-11:25 **O-17**

Structural Insights into the Role of eIF3 in Translation Mediated by the HCV IRES

○Takuhiro Ito[1], Wakana Iwasaki[1], Akinobu Matsumoto[2], Shintaro Iwasaki[3], Hiroaki Imataka[4] and Koshi Imami[5]

([1] RIKEN Center for Biosystems Dynamics Research, [2] Nagoya University, [3] RIKEN Cluster for Pioneering Research, [4] University of Hyogo, [5] RIKEN Center for Integrative Medical Sciences)

11:25-11:50 **O-18**

Human DHX29 detects non-optimal codon usage to regulate mRNA stability

○Masanori Yoshinaga[1], Fabian Hia[1], Yitong Wu[1], Sakurako Goto-Ito[2], Wakana Iwasaki[2], Koshi Imami[3], Peixun Han[4], Ting Cai[1], Yuichi Shichino[4], Takayuki Ohira[5], Masaki Takegawa[5], Akira Fukao[6], Toshinobu Fujiwara[6], Tsutomu Suzuki[5], Shintaro Iwasaki[4], Michael C. Bassik[7], Takuhiro Ito[2] and Osamu Takeuchi[1]

([1] Department of Medical Chemistry, Graduate School of Medicine, Kyoto University, [2] Laboratory for Translation Structural Biology, RIKEN Center for Biosystems Dynamics Research, [3] Proteome Homeostasis Research Unit, RIKEN Center for Integrative Medical Sciences, [4] RNA Systems Biochemistry Laboratory, RIKEN Cluster for Pioneering Research, [5] Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo, [6] Laboratory of Biochemistry, Department of Pharmacy, Faculty of Pharmacy, Kindai University, [7] Department of Genetics, Stanford University School of Medicine)

11:50-13:00 **Lunch Break**

13:00-14:00 **Poster Session 2 (Even-Numbered Presenters)**

14:00-16:05 **Session 6**

Chairperson **Takuhiro Ito (RIKEN)**

14:00-14:25 **O-19**

Targeting ribosome biogenesis to treat MYC driven cancers with the selective RNA Pol I transcription inhibitor PMR-116.

○Ross Hannan[1], Rita Ferreira[1], Konstantin Panov[2], Amee J. George[1], Eric Kusnadi[3], Alisee Huglo[3], Mitchell Lawrence[3] Mustapha Haddach[4], Denis Drygin[4], Luc Furic[3], Nadine Hein[1]

[1] John Curtin School of Medical Research, The National University of Australia

[2] School of Biological Sciences, Queen's University Belfast, UK

[3]Division of Cancer Research, Peter MacCallum Cancer Centre, Australia

[4] Pimera Therapeutics, San Diego, CA, USA

14:25-14:50 **O-20**

Structure basis of mitoribosome specific tRNA interaction and the LRPPRC-SLIRP mediated mRNA loading

Vivek Singh[1], ○Yuzuru Itoh[2] and Alexey Amunts[1,3]

([1] Department of Biochemistry and Biophysics, Stockholm University, [2] Department of Biological Sciences, Graduate School of Science, The University of Tokyo, [3] Westlake University)

14:50-15:15 **O-21**

Crosstalk Between mTORC1, mRNA Translation, and Mitochondria in Cancer

○Masahiro Morita[1], Sakie Katsumura[1], Ivan Topisirovic[2], Nahum Sonenberg[2], John Bergeron[2]

([1]Department of Molecular Medicine and Barshop Institute for Longevity and Aging Studies, University of Texas Health Science Center at San Antonio, [2]Department of Biochemistry, McGill University)

15:15-15:40 **O-22**

Impaired protein quality control in mRNA translation elicits neurodevelopmental disorders

○Motomasa Tanaka, Ryo Endo, Nayan Suryawanshi, Kai Sato, Noriko Takashima, John Burke

15:40-16:05 **O-23**

Translational quality control of zinc finger proteins in vertebrate evolution

○Yuichiro Mishima

(Faculty of Lifesciences, Kyoto Sangyo University, Japan)

16:05-16:20 **Break**

16:20-17:35 **Session 7**

Chairperson **Ross D Hannan (The National University of Australia)**

16:20-16:45 **O-24**

The Ribosome as a Small Molecule Sensor

C. Axel Innis[1]

([1] ARNA Laboratory, University of Bordeaux, INSERM U1212, CNRS UMR5320)

16:45-17:10 **O-25**

Molecular mechanisms and evolutionary diversity of toxSAS enzymes

Tatsuaki Kurata[1,2], Gemma C. Atkinson[1], Tsutomu Suzuki[3], Abel Garcia-Pino[4], ○Vasili Hauryliuk[1,5,6]

([1] Lund University, Sweden, [2] RIKEN, Japan, [3] University of Tokyo, Japan, [4] Université libre de Bruxelles, Belgium, [5] University of Tartu, Estonia, [6] Science for Life Laboratory, Sweden)

17:10-17:35 **O-26**

Universal Translation-impeding Sequences Drive Evolution of Bacterial Arrest Peptides

Keigo Fujiwara[1,2], Naoko, Tsuji[1], Karen Sakiyama[1], ○Shinobu Chiba[1]

([1]Fuculty of Life Sciences, Institute for Protein Dynamics, Kyoto Sangyo University, [2]Department of Gene Function and Phenomics, National Institute of Genetics)

18:30-20:30 **Banquet and Discussion**

December 4th (Wed)

09:30-12:15 **Session 8**

Chairperson **Rachel Green (Johns Hopkins University)**

09:30-10:10 **Keynote 3**

UFMylation orchestrates spatiotemporal coordination of RQC at the ER

Roland Beckmann[1], Ivan Penchev[1], Samantha Gumbin[2], Francesco Scavone[2], Otto Berninghausen[1], Thomas Becker[1], Ron Kopito[2]

[1] Department of Biochemistry, Gene Center, Feodor-Lynen-Str. 25, University of Munich, 81377 Munich, Germany.

[2] Department of Biology, Stanford University, Stanford, CA, United States

10:10-10:35 **O-27**

Different strategies for rescuing stalled ribosomes in bacteria

○ Allen R. Buskirk[1], Kazuki Saito[1], Annabelle Campbell[1], Esther Park[1], Hanna Kratzat[2], Timur Mackens-Kiani[2], Hanna F. Esser[2], Thomas Becker[2], A. Maxwell Burroughs[3], L. Aravind[3], Roland Beckmann[2], Rachel Green[1,4]

[1]Johns Hopkins University School of Medicine

[2]University of Munich

[3]National Library of Medicine, National Institutes of Health

[4]Howard Hughes Medical Institute

10:35-11:00 **O-28**

Risk during translation of acidic-rich amino acid sequences and the counteraction mechanisms

○Hideki Taguchi[1], Yuhei Chadani[2]

([1] Cell Biology Center, Institute of Integrated Research, Institute of Science Tokyo, [2] Faculty of Environmental, Life, Natural Science and Technology, Okayama University)

11:00-11:25 **O-29**

Identification and Regulatory Mechanisms of Noncanonical Initiation Codons

○Akinobu Matsumoto

(Graduate school of Science, Nagoya University)

11:25-11:50 **O-30**

Molecular mechanism of stress-dependent co-translational protein degradation on the ER membrane.

○Hisae Kadowaki[1]

([1] Department of Medical Sciences, University of Miyazaki)

11:50-12:15 **O-31**

Implication of ribosome collision and ribotoxic stress responses in human diseases

○Chunghun Lim[1]

([1] Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon 34141, Republic of Korea)

12:15-14:00 **Lunch Break**

14:00-12:15 **Session 9**

Chairperson **Roland Beckmann(University of Munich)**

14:00-14:25 **O-32**

Pelota-Mediated Ribosome-Associated Quality Control Counteracts Aging in Multiple Species

Seung-Jae V. Lee[1]

[1]Department of Biological Sciences, Korea Advanced Institute of Science and Technology (KAIST), 291 Daehak-ro, Yuseong-gu, Daejeon, 34141, South Korea

14:25-14:50 **O-33**

Direct visualization of antibiotic action on the ribosome in a molecular crowding cell-free translation system

○Takeshi Yokoyama[1,2]

([1] Graduate School of Life Sciences, Tohoku University, [2] The advanced center for innovations in next-generation medicine (INGEM))

14:50-15:15 **O-34**

Mechanism of activation of tRNase toxins by cofactors in the bacterial competition system

Kozo Tomita

Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo, Kashiwa, Chiba, 277-8562, Japan.

15:15-15:35 **O-35**

Molecular basis for decoding non-universal start codons and stop codons in mammalian mitochondria

○Nono Takeuchi-Tomita[1]

([1] Graduate School of Frontier Sciences, The University of Tokyo)

15:35-16:00 **O-36**

Ribosome dynamics determines the stability and abundance of the ribosomal subunits

Toshifumi Inada[1]

([1] Institute of Medical Science, The University of Tokyo)

16:00-16:10 **Awards Ceremony**

16:10-16:20 **Closing Remark**

Organizer Toshifumi Inada (The University of Tokyo)

Poster Program

Poster Session 1 Odd-numbered presentations: December 2nd (Monday) 13:00-14:00
Poster Session 2 Even-numbered presentations: December 3rd (Tuesday) 13:00-14:00
We have a poster award for the most excellent presentation.

P-01

Harnessing RNA Mechanisms and Antibody Therapy: A Breakthrough in Combatting Dengue Virus

Teoh Ee Ping[1], Ng Mah Lee [2], Paul A MacAry [2].
([1] ATELO Labs, Japan [2] Department of Microbiology, The National University of Singapore)

P-02

Cellular localization of multi-tRNA synthetase complex is regulated by ER protein Kinectin 1 in a variant-specific manner

○Masaki Hosogane[1], Sue Yi Siao[2], Atsushi Hatano[3], Masaki Matsumoto[3] and Keiko Nakayama[1]
([1] Division of Cell Proliferation, Graduate School of Medicine, Tohoku University, [2] Graduate School of Life Sciences, Tohoku University, [3] Department of Omics and Systems Biology, Niigata University,)

P-03

Detection of bona fide translation initiation sites without the use of translation inhibitors

○Kazuya Ichihara[1], Taichi Shiraishi[1], Atsushi Hatano[2], Masaki Matsumoto[2] and Akinobu Matsumoto[1]
([1] Graduate school of Science, Nagoya University, [2] Graduate school of Medical and Dental Sciences, Niigata University)

P-04

Ribosome collision is a targetable vulnerability in glioma

Sherif Rashad, Tianxiang Zhang, Abdulrahman Mousa, Kuniyasu Niizuma
(Graduate School of Biomedical Engineering, Tohoku University, Japan. (Graduate School of Medicine, Tohoku University, Japan.)

P-05

Pervasive expression and characteristics of truncated protein isoforms in yeast

○Naohiro Kuwayama[1], Zach Pracher[1], Gloria Brar[1]
([1] University of California, Berkeley)

P-06

Avoiding tRNA modification enables translation initiation with a quadruplet codon-anticodon interaction

○Asuteka Nagao[1], Masahiro Muto1, Takahiro Yokoyama[1], Yuriko Sakaguchi[1], Shungo Adachi[2], Shintaro Iwasaki[3], Takeshi Yokoyama[4], Kensuke Ishiguro[1], and Tsutomu Suzuki[1]
([1]Graduate School of Engineering, The University of Tokyo, [2]National Cancer Center Research Institute, [3]RIKEN Cluster for Pioneering Research, [4]Graduate School of Life Sciences, Tohoku University)

P-07

Interaction between eRF3 and ABCE1 for translation termination to ribosome recycling ―The GTPase and the ATPase kissing―

○Miki Wada[1], Koichi Ito[1]
([1] Graduate School of Frontier Sciences, The University of Tokyo)

P-08

Unusual ribosome biogenesis in Candidate phyla radiation (CPR) bacteria

○Kazuaki Amikura1, Shun'ichi Ishii2, Yoshihiro Shimizu1, and Shino Suzuki1,2,3
(1 RIKEN, 2 Japan Agency for Marine-Earth Science and Technology (JAMSTEC), 3 Japan Aerospace Exploration Agency (JAXA))

P-09

Transcriptomics in P-bodies reveals the selective mRNA release to modulate translation

○Yuichi Shichino[1], Mari Mito[1], Shintaro Iwasaki[1,2]
([1]RIKEN CPR, [2]Dept. Comp. Biol. Med. Sci., Grad. Sch, Front. Sci., Univ. Tokyo)

P-10

Visualizing co-translational assembly of translation factor eIF2B subunits in live cells

○Hayato Ito[1], Timothy Stasevich[2], Hideki Taguchi1,[3]
([1]School of Life Science and Technology, Institute of Science Tokyo, [2]Biochemistry & Molecular Biology, Colorado State University, [3] Institute of Integrated Research, Institute of Science Tokyo)

P-11

SARS-CoV-2 nsp1 binds stalled ribosomes and promotes translational stall read-through

○Malvin Leonardo Pardi[1,2], Wakana Iwasaki[3], Mari Mito[4], Yuichi Shichino[4], Mio Iwasaki[2], Takuhiro Ito[3], Shintaro Iwasaki[4,5], and Hirohide Saito[1,2]
([1]Graduate School of Medicine, Kyoto University, [2]Center for iPS Cell Research and Application, Kyoto University, [3]RIKEN Center for Biodynamics Systems Research, [4]RIKEN Cluster for Pioneering Research, [5]Graduate School of Frontier Sciences, The University of Tokyo)

P-12

The complexity and dynamics of *in organello* translation assessed by high-resolution mitochondrial ribosome profiling

○Taisei Wakigawa[1,2], Mari Mito[1], Yushin Ando[3], Haruna Yamashiro[1], Kotaro Tomuro[1,2], Haruna Tani[4], Kazuhito Tomizawa[5], Takeshi Chujo[5], Asuteka Nagao[6], Takeo Suzuki[6,7], Osamu Nureki[3], Fan-Yan Wei[4], Yuichi Shichino[1], Yuzuru Itoh[3], Tsutomu Suzuki[6], and Shintaro Iwasaki[1,2]
([1]RIKEN Cluster for Pioneering Research, [2]Graduate School of Frontier Sciences, The University of Tokyo, [3]Graduate School of Science, The University of Tokyo, [4]Institute of Development, Aging and Cancer, Tohoku University, [5]Faculty of Life Sciences, Kumamoto University, [6]Graduate School of Engineering, The University of Tokyo, [7]Graduate School of Medicine, University of the Ryukyus)

P-13

Hidden Neuronal-Activity-Responsive uORFs regulate a Novel Pathway of Synaptic Plasticity

Nayan Suryawanshi

P-14

mRNA translation dynamics in excitatory neurons of mice under chronic social defeat stress-induced depression

○Kai Sato[1], Noriko Takashima[1], Nayan Suryawanshi[1], Chen Yi-kai[1], Motomasa Tanaka[1]

([1] Laboratory for Protein Conformation Diseases, RIKEN Center for Brain Science)

P-15

Common translational arrest mechanism for diverse genes in *Alteromonas macleodii*

○Naoko Tsuji[1], Keigo Fujiwara[2,1], Hiraku Takada[3,1], Shinobu Chiba[1]

([1] Faculty of Life Sciences, Institute for Protein Dynamics, Kyoto Sangyo University, Japan, [2]National Institute of Genetics, Japan, [3]Department of Biotechnology, Toyama Prefectural University, Japan)

P-16

Phenotypes of ribosomal protein mutants in response to nitrate deficiency and phosphate deficiency in *Arabidopsis thaliana*

○Shuying LI[1], Hirofumi Fukuda[1], Naoyuki Sotta[1,2] and Toru Fujiwara[1]

([1] Graduate School of Agricultural and Life Science, The University of Tokyo,
[2] Graduate School of Agriculture, Osaka Metropolitan University)

P-17

Ribosome Heterogeneity in Neural Stem Cells

○Yusuke Kihara[1,3], Toshifumi Inada[2], Yasushi Saeki[1], Taeko Kobayashi[1]

([1] The Institute of Medical Science, The University of Tokyo, Division of Protein Metabolism, [2] The Institute of Medical Science, The University of Tokyo, Division of RNA and Gene Regulation, [3] Graduate School of Biostudies, Kyoto University)

P-18

Mutation of a ribosomal protein (UL13X) mediated root growth defects under calcium conditions in *Arabidopsis thaliana*

Arpna Kumari, Yicong Chen, Hirofumi Fukuda, Naoyuki Sotta, Dichao Ma, Toru Fujiwara*

(Graduate School of Agricultural and Life Sciences, The University of Tokyo)

P-19

Landscape of circadian translation rhythms in plants

○Naohiro Kawamoto[1], Mari Mito[1], Sumie Ohbu[2], and Shintaro Iwasaki[1,3]
([1]RIKEN Cluster for Pioneering Research, [2]RIKEN Ion Beam Breedding Group, RNC, [3] Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo, Japan)

P-20

Molecular basis of codon recognition mediated by glycosylated queuosine tRNA modification

○K. Ishiguro[1,2], T. Yokoyama[2,3], M. Shirouzu[2], T. Suzuki[1]
([1]Graduate School of Engineering, University of Tokyo, [2]Center for Biosystems Dynamics Research, Riken, [3]Graduate School of Life Sciences, Tohoku University)

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Paip1 functions as a negative regulator in cap-dependent translation

○Kanae Miyazaki[1], Takumi Tomohiro[1], Akira Fukao[1], Tomohiko Aoyama[1] Yuichi Shichino[2], Shintaro Iwasaki[2], Toshinobu Fujiwara[1]
([1] Kindai University, [2] RIKEN)

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Targeted inhibitors of cap-dependent translation

○ Akari Ikeda, Takamine Nakada, Takumi Tomohiro, Akira Fukao, and Toshinobu Fujiwara
(Lab. of Biochem., Fac. of Pharm., Kindai University)

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Distinct Functions of eIF4B and eIF4H in eIF4A-Dependent Translation Initiation

○Mai Miyao[1], Takumi Tomohiro[1], Akira Fukao[1], Mari Takahashi[2], Kodai Machida3, Hiroaki Imataka[3], Kent E Duncan[4,5], Takuhiro Ito[2], Toshinobu Fujiwara1 ([1] Kindai University, [2] RIKEN, [3] University of Hyogo, [4] Center for Molecular Neurobiology Hamburg, [5] Evotec SE)

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A new class of antibiotics, Cycloimidamicins inhibit tRNA translocation by targeting a novel site formed by translation components transiently

○Atsushi Tsugita[1], Tatsuaki Kurata[2], Yoshimasa Ishizaki[1], Yoshikazu Tanaka[3,4], Shintaro Iwasaki[2,5], Masayuki Igarashi[1] and Takeshi Yokoyama[3,4]
([1] Laboratory of Microbiology, Institute of Microbial Chemistry, [2] RIKEN Cluster for Pioneering Research, [3] Graduate School of Life Sciences, Tohoku University, [4] The advanced center for innovations in next-generation medicine (INGEM), Tohoku University, [5]Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo)

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tRNA recognition mechanism for CCA end pyrophosphorylation by toxSAS enzymes

○Tatsuaki Kurata[1,2], Gemma Atkinson[1], Vasili Hauryliul[1,3,4]
([1] Department of Experimental Medical Science, Lund University, Sweden, [2] Cluster for Pioneering Research, RIKEN, Japan, [3] Institute of Technology, University of Tartu, Estonia, [4] Science for Life Laboratory, Sweden)

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Unique base pairing geometries in codon-anticodon interactions mediated by tRNA uridine modification

○Taito Nishio[1], Asuteka Nagao[1], Kensuke Ishiguro[1], & Tsutomu Suzuki[1]
([1]Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo)

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Atomic structures of human mitochondrial tRNAs toward understanding molecular pathogenesis of mitochondrial diseases

○Sena Niwa[1], Asuteka Nagao[1], Naho Akiyama[1], Nono Tomita[3], Mikako Shirouzu[2], Kensuke Ishiguro[1,2] and Tsutomu Suzuki[1]
([1] Department of Chemistry and Biotechnology, Graduate School of Engineering, The University of Tokyo, [2] Laboratory for Protein Functional and Structural Biology, RIKEN Center for Biosystem Dynamics Research, [3] Department of Computational Biology and Medical Sciences, Graduate School of Frontier Sciences, The University of Tokyo)

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Therapeutic tyrosine kinase inhibitors induce ribosome collisions to activate ZAK-dependent ribotoxic stress and apoptosis in chronic myeloid leukemia

Jumin Park[1], Soo-Hyun Kim[2], Hongtae Kim[1*], Dong-Wook Kim[2,3*], Chunghun Lim[4*]
([1]Department of Biological Sciences, Ulsan National Institute of Science and Technology, Ulsan 44919, Republic of Korea, [2]Leukemia Omics Research Institute, Eulji University, Uijeongbu-si, Gyeonggi-Do, Republic of Korea, [3]Hematology Department, Eulji Medical Center, Eulji University, Uijeongbu-si, Gyeonggi-Do, Republic of Korea, [4]Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon 34141, Republic of Korea.)

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Ribosomal chaperone DNAJC2 titrates ZNF598-dependent RQC pathway to sustain nucleolar integrity and suppress cellular senescence

○Jongmin Park[1,4], ○Youngim Yu[1,4], Dongkeun Park[1], Heeju Park[1], Hyunwoo Bang[1], Jongbin Lee[2], and Chunghun Lim[2,3,*]
([1]Department of Biological Sciences, Ulsan National Institute of Science and Technology, Ulsan 44919, Republic of Korea, [2]Research Center for Cellular Identity, Korea Advanced Institute of Science and Technology, Daejeon 34141, Republic of Korea, [3]Department of Biological Sciences, Korea Advanced Institute of Science and Technology, Daejeon 34141, Republic of Korea, [4]Co-first author)

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Structural insights into efficient AUA decoding by cytidine modifications in $tRNA^{Ile2}$ across species

○Naho Akiyama[1,2], Kensuke Ishiguro[1,2], Kenjyo Miyauchi[1], Asuteka Nagao[1], Mikako Shirouzu[2], Tsutomu Suzuki[1]
([1] School of Engineering, The University of Tokyo, [2] Laboratory for Protein Functional and Structural Biology, RIKEN BDR)

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Ribosome stalling induces uS3 ubiquitination and stress responses-mediated regulation of ribosomal subunit abundance

○Alexander Landis[1], Toru Suzuki[1], Sihan Li[1], Sota Ito[1], Momoko Narita[1], Natsumi Mukaihara[1], Chisato Kikuguchi[1], Miho Hoshi[1], Satoshi Hashimoto[1], Yoshitaka Matsuo[1], Atsushi Iwama[2], Toshifumi Inada[1]

([1]Division of RNA and Gene Regulation, [2]Division of Stem Cell and Molecular Medicine, Institute of Medical Science, The University of Tokyo)

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Mechanistics insights of UFM1 E3 ligase complex in ufmylation and ribosome-associated protein quality control

○Sota Ito[1], Ryosuke Ishimura[2], Gaoxin Mao[2], Satoko Komatsu-Hirota[2], Noda N Noda[3], Masaaki Komatsu[2], and Toshifumi Inada[1]
([1]The Institute of Medical Science, The University of Tokyo, IMSUT [2]Department of Physiology Juntendo University,Graduate School of Medicine [3]Institute for Genetic Medicine Hokkaido University)

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Grr1-mediated Ubp3 degradation is crucial for HAC1 mRNA translation and unfolded stress response in yeast

○Nichika Sato[1], Yu Nakano[2], Yasuko Matsuki[2], Yoshitaka Matsuo[1], Toshifumi Inada[1,2*]
([1]Division of RNA and gene regulation, Institute of Medical Science, The University of Tokyo, Minato-Ku 108-8639, Japan, [2]Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai 980-8578, Japan.)