Abstracts of papers presented
at the 2026 Cold Spring Harbor Asia Conference

RNA BIOLOGY

November 16–November 20, 2026

Arranged by

Ling-Ling Chen, *Shanghai Institute of Biochemistry & Cell Biology, CAS*
Adrian Krainer, *Cold Spring Harbor Laboratory*
Yukihide Tomari, *The University of Tokyo*

Cold Spring Harbor Conferences Asia
Cold Spring Harbor Laboratory

RNA BIOLOGY
Monday, November 16 – Friday, November 20, 2026

Monday	7:00 pm	**1** Small Non-coding RNAs • Keynote Speaker
Tuesday	9:00 am	**2** Long Non-coding and Circular RNAs
Tuesday	2:00 pm	**Poster Session**
Tuesday	7:00 pm	**3** RNA Processing
Wednesday	9:00 am	**4** RNA Surveillance and Translation
Wednesday	1:30 pm	*Visit to Old Suzhou**
Wednesday	7:00 pm	**5** RNA in Condensates and RNA & RNP Structures
Thursday	9:00 am	**6** New Technologies in RNA Biology
Thursday	2:00 pm	**7** RNA in Disease and Therapeutics
Thursday	5:30 pm	*Cocktails and Banquet*
Friday		*Departure*

Oral presentation sessions are located in the CSHA Auditorium
Poster session is in the Lake Front Hall.
Cocktail social hour is held in the CSHA lobby
Old Suzhou visits depart from the CSHA lobby
**optional tour requires additional fee.*

Meal locations and times are as follows:
Lunch: Main Cafeteria 12:00am - 1:30pm
Dinner: Main Cafeteria 6:00pm - 7:30pm
Banquet: Suz Garden 6:00 pm

More information will be available at CSHA office.
(Map at the end of this abstract book)

PROGRAM

MONDAY, November 16—7:00 PM

SESSION 1 SMALL NONCODING RNAs

Chairperson: **Yukihide Tomari,** The University of Tokyo, Tokyo, Japan

KEYNOTE SPEAKER

Chromatin regulation via snoRNA- and snRNA-guided targeting of chromatin-associated RNAs
Chuan He. [35'+10']
Presenter affiliation: The University of Chicago/HHMI, Chicago, Illinois, United States. 1

A microRNA buffering circuit gates selective vulnerability in spinal cord aging
Jun-An Chen. [20'+10']
Presenter affiliation: Academia Sinica, Taipei 2

A quality-control pathway clears stalled PIWI–target complexes via the Tudor protein Chum
Natsuko Izumi, Keisuke Shoji, Lumi Negishi, Yukihide Tomari. [20'+10']
Presenter affiliation: The University of Tokyo, Tokyo, Japan. 3

Mechanisms of piRNA transcription in heterochromatic regions
Chengming Zhu, Yan Kuang, Xinya Huang, Yuxia Chen, Shouhong Guang. [10'+5']
Presenter affiliation: Anhui Medical University, Hefei, China. 4

THUMPD2-catalyzed methylation of U6 snRNA is important for maintaining normal splicing at the cellular and organismal levels
Anastasiia K. Veretina, Andrey I. Buyan, Olga A. Averina, Sofia S. Mariasina, Daria S. Czech, Sofya M. Stepanova, Olga Dontsova, Petr V. Sergiev. [10'+5']
Presenter affiliation: Skolkovo Institute of Science and Technology, Moscow, Russia; Lomonosov Moscow State University, Moscow, Russia. 5

SESSION 2 LONG NONCODING AND CIRCULAR RNAs

Chairperson: **Chun Kit Kwok,** City University of Hong Kong, China

Regulation of the genome by non-coding transcription
Piero Carninci. [20'+10']
Presenter affiliation: Human Technopole, Milan, Italy; RIKEN Center for Integrative Medical Sciences, Yokohama, Japan. 6

Functions and cytoplasmic biogenesis for circular RNAs derived from RNA viral genomes
Qian M. Cao, Peter Sarnow. [20'+10']
Presenter affiliation: Stanford University, Stanford, California, United States. 7

Coding or non-coding? Revealing hidden layers of gene regulation through "moonlighting" long non-coding RNAs and microproteins
Jin Chen. [10'+5']
Presenter affiliation: Altos Labs, Redwood City, California, United States. 8

A transcription-independent role for the lncRNA UCA1 in chemoresistance in high-grade serous ovarian carcinoma
Chenyang Huai, Ayman Suliman, Samia Idaghdour, Mi Su, Xiaoyin Zhang, Xianzhi Lin. [10'+5']
Presenter affiliation: Duke Kunshan University, Kunshan, China. 9

Break

RNA g-quadruplex structures—Key regulators in biology and promising targets for disease
Chun Kit Kwok. [20'+10']
Presenter affiliation: City University of Hong Kong, Hong Kong, China. 10

Circular RNA aptamers act as superb sub-stoichiometric chaperones to prevent cytosolic TDP-43 condensation
Ling-Ling Chen. [20'+10']
Presenter affiliation: University of Chinese Academy of Sciences, Chinese Academy of Sciences, Shanghai, China; Shanghai Academy of Natural Sciences (SANS), Shanghai, China. 11

Multivalent glycan presentation by neutrophil glycoRNAs drives cooperative P-selectin binding
Ningning Zhang, Jun Lu. [10'+5']
Presenter affiliation: Yale University School of Medicine, New Haven, Connecticut, United States. 12

TUESDAY, November 17—2:00 PM

POSTER SESSION

snRNA modification heterogeneity as a novel alternative splicing mechanism
Tim Pearson, Aykut Shen, Alper Akay.
Presenter affiliation: University of East Anglia, Norwich, United Kingdom. 13

Mapping the neuronal RNA–RNA interactome regulated by Staufen
Hanzhong Bai, Owen G. James, Cristina Militti, Ella Nightingale, Ira A. Iosub, Jernej Ule.
Presenter affiliation: Francis Crick Institute, London, United Kingdom; King's College London, London, United Kingdom. 14

Q185 methylation and K63 hydroxylation regulate distinct checkpoints of human translation termination
Nikita Biziaev, Alexey Shuvalov, Ilya Toropygin, Elizaveta Krishtopa, Tatiana Egorova, Vera Matrosova, Veronika Dorokhovich, Dmitry Yanvarev, Ekaterina Shuvalova, Alexandr Klishin, Elena Alkalaeva.
Presenter affiliation: Engelhardt Institute of Molecular Biology, the Russian Academy of Sciences, Moscow, Russia. 15

CDK12 controls transcription elongation by coordinating CSTF2-dependent mRNA 3′-end processing
Peter Manik, Anil Manavalan, Pavla Gajduskova, Jan Herudek, Petra Martinkova, David Potesil, Nicolas Blavet, Katharina Reinish, Hsu-Feng Chu, Liang Tong, Caroline Friedel, Zbynek Zdrahal, Dalibor Blazek.
Presenter affiliation: CEITEC-Masaryk University, Brno, Czech Republic. 16

IRES–cargo interplay structurally modulates circular RNA translation
Yao-Qi Chen, Youkui Huang, Si-Yu Lou, Xiang Gao, Yu-Xin Liu, Yu-Lu Zhang, Fang Nan, Ling-Ling Chen, Li Yang.
Presenter affiliation: Fudan University, Shanghai, China. 17

Distinct inhibitory mechanisms regulate protein kinase R activation to orchestrate macrophage function and polarization
Jiyoon Chung, Yerim Lee, Jimin Yoon, Yoosik Kim.
Presenter affiliation: Institute for Basic Science, Seoul, South Korea; Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea. 18

Seeing the message—Single-molecule tracing of mRNA conformation in cells
Joseph Neos C. Cruz, Thomas L. Steinacker, Claudia Blaukopf, Dmitry Mylarshchikov, Christoph C.H. Langer, Valerio Sorichetti, Vincent P. Reuter, Daniel W. Gerlich.
Presenter affiliation: Institute of Molecular Biotechnology of the Austrian Academy of Sciences (IMBA), Vienna BioCenter (VBC), Vienna, Austria; Vienna BioCenter PhD Program, Doctoral School of the University of Vienna and Medical University of Vienna, Vienna, Austria. 19

Lactate-responsive CircETFA(2,3,4) promotes cancer immune evasion through enhancing PD-L1 expression
Xiangyu Dai, Jingjia Chang, Wanglai Hu.
Presenter affiliation: Zhengzhou University, Zhengzhou, China. 20

Stuxnet balances mitochondria homeostasis by regulating uhg5 and parkin
Juan Du
Presenter affiliation: China Agricultural University, Beijing, China. 21

RNA splicing regulators for gene network and metabolic programming
Yuanli Gao.
Presenter affiliation: Zhejiang University, Hangzhou, China. 22

MYCN co-opts ARS2-dependent RNA cleavage and decay in neuroblastoma
Stefanie A. Ha, Theresa Schönrock, Dimitrios Papadopoulos.
Presenter affiliation: University of Würzburg, Würzburg, Germany. 23

Characterization of human RNA structures by transcriptome-wide SHAPE-MaP and evaluation of pseudoknot predictions
Gaeul Han, Jungwook Hwang.
Presenter affiliation: Hanyang University, Seoul, South Korea. 24

RPL41 stabilizes ribosome dynamics and supports long-protein homeostasis in mammals
Mina Hirata, Kazuya Ichihara, Akinobu Matsumoto.
Presenter affiliation: Nagoya University, Nagoya, Japan. 25

Time-resolved profiling reveals subtype-specific gene expression and post-transcriptional dynamics following IFNβ treatment in breast cancer
Bach Thanh Trung Huynh, Chong Yun Pang, Donald Yuhui Sim, Xavier Roca.
Presenter affiliation: Nanyang Technological University, Singapore. 26

CircRNA dynamics during brain aging and ds-cRNA-mediated attenuation of neuroinflammation and memory decline
Bo-Wen Jiang, Xin Feng, Si-Nan Zhai, You-Kui Huang, Chu-Xiao Liu, Hao Wu, Li Yang, Ling-Ling Chen.
Presenter affiliation: Chinese Academy of Science, Shanghai, China. 27

Effect of the number of glycine residues in the N-terminal region of eRF3a on translation termination
Alexandr Klishin, Nikita Biziaev, Alexey Shuvalov, Elena Alkalaeva.
Presenter affiliation: Engelhardt Institute of Molecular Biology, Moscow, Russia; Moscow Center for Advanced Studies, Moscow, Russia. 28

Transcriptome-wide analysis of PUM1 and PUM2 binding sites reveals shared roles in chromosome segregation and distinct regulatory circuits in stem cell maintenance and differentiation
Young-Soo Kwon, Hoseok Song.
Presenter affiliation: Sejong University, Seoul, South Korea. 29

U1 snRNP cooperates with integrator at the U1-CGI window to license productive elongation
Jingyang Li, Jiao Yang, Yunkun Dang, Lai Fan.
Presenter affiliation: School of Life Sciences, Kunming, China. 30

Discovery of nucleic acid-binding proteins via protein language model prediction and automated high-throughput screening
Kaihang Li, Wen Sun, Haoyi Wang.
Presenter affiliation: University of Chinese Academy of Sciences, Beijing, China. 31

PAPS1 restricts the accumulation of aberrantly polyadenylated RNAs to maintain proteostasis during heat stress
Xueqin Li, Yuan Long, Jingwen Liu, Jianfei Guo, Zheting Zhang, Zheng Jia, Qingbing Wu, Zhaohai Zhu, Falong Lu, Heng Zhang.
Presenter affiliation: Shanghai Jiao Tong University, Shanghai, Shanghai, China; CAS Center for Excellence in Molecular Plant Sciences, Shanghai, China. 32

RBPMS and RBPMS2 preserve adult cardiac function by orchestrating alternative splicing
Shan Lin, Christoph Dieterich, Thiago Britto-Borges, Stefan Günther, Carsten Kuenne, Maximilian Staps, Andre Schneider, Thomas Braun.
Presenter affiliation: Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany; German Centre for Cardiovascular Research (DZHK), Frankfurt am Main, Germany. 33

Single-nucleus multiomic profiling reveals a microRNA-regulated mechanism of spinal cord aging
Xin Le Yap, Ji-Dung Luo, Yan-Cheng Lu, Guan-Lin Huang, Chung-Jung Li, Mien Chang, Yu-Fu Wu, Jun-An Chen.
Presenter affiliation: Academia Sinica, Taipei 34

Circpedia v3—An interactive database for circular RNA characterization and functional exploration
Si-Nan Zhai, Yu-Yao Zhang, Mo-Han Chen, Zhi-Can Fu, Ling-Ling Chen, Xu-Kai Ma, Li Yang.
Presenter affiliation: Fudan University, Shanghai, China. 35

Autophagic targeting of RNA-binding proteins couples proteins and RNA turnover
Chenyu Mao, Tatsuhisa Tsuboi.
Presenter affiliation: Tsinghua Shenzhen International Graduate School, Shenzhen, China. 36

Arrayed CRISPR screen reveals non-canonical dsRNA-binding regulators of innate immunity
Subin Mun, Yong-ki Lee, Minji Kim, Jaemin Jeon, Seoyeon Hong, Yoosik Kim.
Presenter affiliation: Institute for Basic Science, Seoul, South Korea; KAIST, Daejeon, South Korea. 37

Type I interferon-driven ZAP isoform switching regulates cancer cell plasticity
Chong Yun Pang, Bach Thanh Trung Huynh, Janice Wan Zhen Wong, Xavier Roca.
Presenter affiliation: Nanyang Technological University, Singapore. 38

Genome-wide R-loop and RNA profiling identifies candidate determinants of reduced cell viability in *THOC2-k*nockout cells
Chul-Sung Park, Junho K. Hur, Yun Doo Chung.
Presenter affiliation: Graduate school of Biomedical Science & Engineering, Hanyang University, Seoul, South Korea. 39

MED12 recruits SUPT6H to H2A.Z-marked +1 nucleosome for pause-release
Bangya Peng, Jingyang Li, Qin Huang, Yi Pu, Yunkun Dang, Fan Lai.
Presenter affiliation: Yunnan University, KunMing, China. 40

Co-transcriptional deposition establishes the m6A landscape before splicing
Hui Xian Poh, Gunhee Park, Luke Nicholson, Kiran Pandey, Shino Murakami, Jianheng Liu, Hyoungmin Kim, Jaehoon Kim, Wonki Cho, Samie R. Jaffrey.
Presenter affiliation: Weill Cornell Medicine, New York, New York, United States; ASTAR Infectious Diseases Labs, Singapore, Singapore. 41

Genome-wide CRISPR screening identifies non-canonical translons that influence cell proliferation primarily through translational regulation
Elizaveta A. Razumova, Nikita M. Shepelev, Aleksandr M. Makariuk, Aleksandr I. Lavrov, Renata D. Bibisheva, Olga A. Dontsova, Maria P. Rubtsova.
Presenter affiliation: Lomonosov Moscow State University, Moscow, Russia. 42

Structure-selective oxidation enables precise RNA editing, conjugation, and structural probing
Jieyi Shentu, Ziyi Jiang, Qilong Tan, Linglan Fang.
Presenter affiliation: Westlake University, Hangzhou, China. 43

Identification of an N-terminal extension of eRF1 and its impact on functional activity
Alexey Shuvalov, Alexandr Klishin, Nikita Biziaev, Dmitry Panteleev, Ekaterina Shuvalova, Peter Kolosov, Elena Alkalaeva.
Presenter affiliation: Engelhardt Institute of Molecular Biology, the Russian Academy of Sciences, Moscow, Russia. 44

Cellular localization and characterization of a novel isoform of human release factor1
Ekaterina Shuvalova, Alexey Shuvalov, Peter Kolosov, Elena Alkalaeva.
Presenter affiliation: Engelhardt Institute of Molecular Biology, the Russian Academy of Sciences, Moscow, Russia. 45

Aberrant electrical activity remodels synaptic RNA and protein homeostasis in human focal epilepsy
Zixin Sun, Songren Wei, Julie Qiaojin Lin.
Presenter affiliation: Hong Kong University of Science and Technology (Guangzhou), Guangzhou, China. 46

Ribosomal-protein heterogeneity is associated with distinct, hypoxia-remodeled ribosome-bound mRNA landscapes in human iPSCs
Xuanxuan Tang, Julie Qiaojin Lin.
Presenter affiliation: The Hong Kong University of Science and Technology (Guangzhou), Guangzhou, China. 47

Programming mRNA localization to the mitochondrial surface with organelle-selected RNA elements
Jing Zhu, Tatsuhisa Tsuboi.
Presenter affiliation: Tsinghua University, Shenzhen, China. 48

Decoding multi-layer post-transcriptional regulatory networks via scalable direct-capture perturb-seq
Zi-Li Wan, Qi-Xuan Cheng, Yangming Wang.
Presenter affiliation: Peking University, Beijing, China. 49

Benchmark current AI model for protein-RNA interaction prediction at binding interface level
Puning Wang, Alexandra Sneddon, Edurado Eyras.
Presenter affiliation: Australian National University, Canberra, Australia. 50

An endogenous screen reveals context-dependent RNA motifs controlling mRNA stability
Qiuyi Wang, Yongfeng Jin, Yuanhui Mao.
Presenter affiliation: Zhejiang University, Hangzhou, China. 51

Scalable co-profiling of transcriptomes and translatomes at single-cell and isoform resolution in mammalian tissues
Gang Xie, Qixuan Cheng, Zili Wan, Yangming Wang.
Presenter affiliation: Peking University, College of Future Technology, Beijing, China; Peking University, Beijing Advanced Center of RNA Biology (BEACON), Beijing, China. 52

Alternative splicing dysregulation drives malignant evolution of lung adenocarcinoma
Deyu Wang, Yueren Yan, Ning Wang, Yufang Bao, Zefeng Wang, Yongbo Wang.
Presenter affiliation: Fudan University, School of Basic Medical Sciences, Shanghai, China. 53

RNA-binding proteins and noncoding RNAs promote neuroblastoma tumorigenesis and can be targeted therapeutically by small-molecule compounds
Caiyun Wu, Tengfei Qi, Siyue Wang, Lei Jin, Tao Liu.
Presenter affiliation: Zhengzhou University, Zhengzhou, China. 54

Integrating long-read RNA sequencing with genomics and phenomics in a birth defects cohort to discover disease-relevant splicing variations
David W. Wu, Feng Wang, Quan Sun, Xinjun Ji, Robert Wang, Joseph Park, Ryan Park, Stacy Woyciechowski, Lan Lin, William Gaynor, Yi Xing.
Presenter affiliation: Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, United States; University of Pennsylvania, Philadelphia, Pennsylvania, United States. 55

NAT10-mediated ac4C acetylation across multiple RNA substrates rewires the cellular translatome and reveals a therapeutic vulnerability in hepatocellular carcinoma
Mengjie Wu, Chun-Ming Wong.
Presenter affiliation: The University of Hong Kong, Hong Kong, China. 56

VIRMA couples m6A-dependent RNA turnover to purine-driven bioenergetics in cancer
Fu Xu, Michaela Frye.
Presenter affiliation: German Cancer Research Center (DKFZ), Heidelberg, Germany. 57

RPS9 decodes a cis-acting RNA motif to license selective lncRNA nuclear export
Liang Xu, Bing Li, Man Tong, Lei Jin.
Presenter affiliation: The Chinese University of Hong Kong, Hong Kong, China. 58

An epitranscriptomic–heterochromatin axis underlies motor neuron degeneration in ALS
Ya-Ping Yen, Chuan-Che Wu, Guan-Lin Huang, Ting-Hsiang Lung, Yiyi Ji, Chuan He, Jun-An Chen.
Presenter affiliation: Academia Sinica, Taipei 59

Study on HNF1α mRNA-LNP in the treatment of APAP-induced drug-induced liver injury
Hai-Liang Yuan, Wei-Fen Xie.
Presenter affiliation: Tongji University School of Medicine, Shanghai, China. 60

Context-aware prediction of RNA-centric interactions using deep learning
Yaojia Chen, Bin Zhang.
Presenter affiliation: Mohamed bin Zayed University of Artificial Intelligence, Abu Dhabi, United Arab Emirates. 61

Exosome-mediated miR-183-5p regulation of AKAP12 expression promoted angiogenesis and metastasis in small cell lung cancer
Lanlin Zhang, Jing Wu, Zhirui Tao, Hong Jiang.
Presenter affiliation: Tongji Hospital, Shanghai, China. 62

Crosstalk between RNA transcription and splicing
Suyang Zhang.
Presenter affiliation: MRC Laboratory of Molecular Biology, Cambridge, United Kingdom. 63

Phase separation of ALYREF promotes RNA transport in HCC
Xiaodan Zhang, Qidong Li, Chunming Wong.
Presenter affiliation: University of Hong Kong, HongKong, China. 64

From RNA cleavage to RNA restoration—Engineering DNAzymes for endogenous mRNA regulation
Ze Zhang, Zutao Yu, Hanyang Yu.
Presenter affiliation: A-STAR, Singapore, Singapore. 65

Developmental reprogramming of mRNA 3′-end processing in *Arabidopsis roo*ts
Danhui Zhao, Qingshun Quin. Li, Juncheng Lin, Congting Ye.
Presenter affiliation: Xiamen University, Xiamen, China. 66

Accelerated *In vivo* evolution of RNA aptamers targeting the mitochondrial surface in yeast
Minghui Zhao, Tatsuhisa Tsuboi.
Presenter affiliation: Tsinghua Shenzhen International Graduate School, Shenzhen, China. 67

Exploring determinants of transcriptional adaptation trigger sequence efficiency
Qimeng Zhao, Kuan-Lun Hsu, Didier Y.R. Stainier.
Presenter affiliation: Max Planck Institute for Heart and Lung Research, Bad Nauheim, Germany. 68

Human exitrons—From systematic characterization to regulatory insights
Yashu Zhen, Donald Yuhui Sim, Yun Wutt Yi Oo, Divyasree Ragavan, Cai Ping Tia, Xavier Roca.
Presenter affiliation: Nanyang Technological University, Singapore. 69

Lnc-DZANK1 promotes BRCA1 transcription and homologous recombination through triplex-mediated PURA recruitment
Zhipu Zhu, Xiang Huang, Liang Xu, Ruijie Fan, Man Tong, Wanglai Hu, Lei Jin.
Presenter affiliation: Zhengzhou University, Zhengzhou, China. 70

SESSION 3 RNA PROCESSING

Chairperson: **Jernej Ule,** King's College London, London, United Kingdom

Capping of RNA by cellular metabolites
Hao Hu, Qiyue Zhang, Xufeng Wang, Xuan Ma, Xing Li, Liang Tong, Xuemei Chen. [20'+10']
Presenter affiliation: Peking University, Beijing, China. 71

mRNA handoff from splicing to packaging machineries
Clemens Plaschka. [20'+10']
Presenter affiliation: Research Institute of Molecular Pathology, Vienna, Austria. 72

A 5′-end licensing axis enables transcription elongation and splicing across long first introns
Hao Yun, Suying Wang, Kang Wang, Lin Xu, Yanan Chang, Haichao Zhou, Peixuan Jia, Xiujuan Qu, Hong Cheng. [10'+5']
Presenter affiliation: University of Chinese Academy of Sciences, Shanghai, China; University of Chinese Academy of Sciences, Hangzhou, China. 73

Illuminating the principles of combinatorial RNP assembly and function
Charlotte Capitanchik, Michael Jones, Hannah Jones, Syed Shah, Johnathan Ellis, Sam Ireland, Alex Harston, Martin Husbyn, Leo Wilkinson, Karen Irawan, Ira Iosub, Benjamin J. Blencowe, Jernej Ule. [20'+10']
Presenter affiliation: The Francis Crick Institute, London, United Kingdom; King's College London, London, United Kingdom. 74

Enhancer RNA pruning safeguards developmental timing
Fei Xavier Chen. [20'+10']
Presenter affiliation: State Key Laboratory of RNA Innovation, Science and Engineering (RISE), Shanghai, China. 75

SESSION 4 RNA SURVEILLANCE AND TRANSLATION

Chairperson: **Sika Zheng,** University of California, Riverside, Riverside, California, USA

Cap-specific second nucleotide ribose methylase CMTR2 ensures meiotic transcriptome transition
Ramesh S. Pillai, Harsha Raheja. [20'+10']
Presenter affiliation: University of Geneva, Geneva, Switzerland. 76

Primate-specific adaptation of Ku protects transcriptomic integrity by suppressing Alu-mediated alternative splicing
Chaolin Zhang. [20'+10']
Presenter affiliation: Columbia University, Vagelos College of Physicians & Surgeons, New York, New York, United States. 77

RNA-mediated translational mechanisms underlying light-regulated chloroplast development
Danmeng Zhu. [10'+5']
Presenter affiliation: State Key Laboratory of Protein and Plant Gene Research, Beijing, China; Beijing Advanced Center of RNA Biology (BEACON), Beijing, China. 78

A spatially confined epitranscriptomic switch safeguards nucleolar condensate architecture and early embryogenesis
Liuming Wang, Liyuan Zhang, Rongfei Wei, Xubo Zhang, Lei Yang, Yun Liu, Yawei Gao, Li Dong, Jie Ren. [10'+5']
Presenter affiliation: CAS Center for Excellence in Molecular Cell Science, Shanghai, China. 79

Break

Evolutionary adaptation of NMD for brain size control and cortical lamination in mammals
Lin Lin, Jingrong Zhao, Naoto Kubota, Yi-Li Lam, Gene Yeo, Chun-Wei Chen, Liang Chen, Sika Zheng. [20'+10']
Presenter affiliation: University of California Riverside, Riverside, California, United States. 80

A new conserved translation factor sustains protein biosynthesis across three domains of life
Sounak Saha, Aryaman Bhattacharya, Christopher Hawk, Hong Jin. [10'+5']
Presenter affiliation: University of Illinois at Urbana-Champaign, Urbana, Illinois, United States. 81

Translocon recruitment principles at the ER—Insights from selective ribosome profiling
Zhe Ji. [10'+5']
Presenter affiliation: Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China. 82

Genome-wide survey of intracellular and intercellular RNA trafficking by TransitRNA-seq
Shintaro Iwasaki. [20'+10']
Presenter affiliation: RIKEN, Wako, Japan; The University of Tokyo, Kashiwa, Japan. 83

WEDNESDAY, November 18—1:30 PM

Visit to Old Suzhou

WEDNESDAY, November 18—7:00 PM

SESSION 5 RNA IN CONDENSATES AND RNA & RNP STRUCTURES

Chairperson: **Yiliang Ding,** John Innes Centre, Norwich, United Kingdom

GC content as a major determinant of RNA splicing
Xavier Roca. [20'+10']
Presenter affiliation: Nanyang Technological University, Singapore, Singapore. 84

The kinetics of ribonucleoprotein clusters
Yuchen Li, Xiangting Li, Mengmeng Xu, Zhi Qi. [10'+5']
Presenter affiliation: Peking University, Beijing, China. 85

Novel architectural tandem repeat containing RNA seeds nuclear condensate formation via selective RBP recruitment and delayed 3'-end cleavage
Alla Krasikova, Tatiana Kulikova, Anna Zlotina, Veit Schubert, Anton Fedorov. [10'+5']
Presenter affiliation: Saint-Petersburg State University, Saint-Petersburg, Russia. 86

Structural basis of native exon junction complex assembly during human pre- mRNA splicing
Patricia Rothe, Anthony Ciancone, Andre Müller, Matthias Vorländer, Alexander Phillips, Laura Fin, Kitaik Lee, Daria Riabov-Bassat, Ulla Schellhaas, Ulrich Hohmann, Nuša Kos-Thaler, Judey T. DaRos, Jordan L. Meier, Svenja Meier, Jan-Wilm Lackmann, Niels Gehring, Francis O'Reilly, Clemens Plaschka. [10'+5']
Presenter affiliation: Research Institute of Molecular Pathology (IMP), Vienna BioCenter (VBC), Vienna, Austria. 87

NEAT1-paraspeckle buffers innate immunity through mRNA nuclear sequestration
Jaemin Jeon, Hyeonjung Lee, Jiyoon Chung, Jimin Yoon, Yejun Cho, Young-suk Lee, Yoosik Kim. [10'+5']
Presenter affiliation: Institute for Basic Science, Seoul, South Korea; Korea Advanced Institute of Science and Technology (KAIST), Daejeon, South Korea. 88

Decoding RNA language in plants
Yiliang Ding. [20'+10']
Presenter affiliation: John Innes Centre, Norwich, United Kingdom. 89

Turning on the rixosome—Structural activation during ribosome biogenesis
Matthias Thoms, Jingyi Zhu, Roland Roland Beckmann, Jingdong Cheng. [10'+5']
Presenter affiliation: Fudan University, Shanghai, China. 90

THURSDAY, November 19—9:00 AM

SESSION 6 NEW TECHNOLOGIES IN RNA BIOLOGY

Chairperson: **Hirohide Saito,** The University of Tokyo and Kyoto University, Kyoto, Japan

Mitochondria-mimetic lipid interfaces program mRNA conformation for enhanced translation
Jiayun Ma, Jing Zhu, Tatsuhisa Tsuboi. [10'+5']
Presenter affiliation: Tsinghua University, Shenzhen, China. 91

Dynamic imaging of genomic DNA–DNA interactions using fluorogenic RNA-engineered single-tag CRISPR
Xing Li. [20'+10']
Presenter affiliation: Institute of Zoology, Chinese Academy of Sciences, Beijing, China. 92

Engineering RNA and RNP functions to program cellular behaviors
Hirohide Saito. [20'+10']
Presenter affiliation: The University of Tokyo, Tokyo, Japan; Kyoto University, Kyoto, Japan. 93

Break

A universal tool for precise and efficient epitranscriptomic editing
Rui Zhang. [20'+10']
Presenter affiliation: Sun Yat-Sen University, Guangzhou, China. 94

RNA-guided diagnostics for rare diseases
Yi Xing. [20'+10']
Presenter affiliation: The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, United States; University of Pennsylvania, Philadelphia, Pennsylvania, United States. 95

Chimeric archaeal BHB-human pre-tRNA scaffold HARBOR system enables versatile production of functional circular RNA modalities
Shi-Meng Cao, Xin Feng, Keqiong Ye, Ling-Ling Chen. [10'+5']
Presenter affiliation: State Key Laboratory of RNA Innovation, Science and Engineering, New Cornerstone Science Laboratory, Shanghai, China; CAS Center for Excellence in Molecular Cell Science, Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China. 96

THURSDAY, November 19—2:00 PM

SESSION 7 RNA IN DISEASE AND THERAPEUTICS

Chairperson: **Rui Zhao,** University of Colorado Anschutz Medical Campus, Aurora, Colorado, USA

Splice-switching ASOs targeting the *AURKA 5′* UTR collapse an oncogenic circuit in pancreatic cancer
Adrian R. Krainer. [20'+10']
Presenter affiliation: Cold Spring Harbor Laboratory, Cold Spring Harbor, New York, United States. 97

RNA toxicity in short tandem repeat expansion disease
Jodi L. Bubenik, Mackenzie L. Davenport, Benjamin M. Kidd, Tamanna A. Prami, Gloria Montoya Vazquez, Marcelo Febo, Maurice S. Swanson. [20'+10']
Presenter affiliation: University of Florida, Gainesville, Florida, United States. 98

An RNA-first strategy to rare disease diagnosis
Nicole DeBruyne, Robert Wang, Joey Jee-Hwan Park, Feng Wang, Matthew Sullenberger, Mariko Bennett, Marni Falk, Adeline Vanderver, Kathleen Sullivan, Rebecca Ganetzky, Lan Lin, Yi Xing. [10'+5']
Presenter affiliation: University of Pennsylvania, Philadelphia, Pennsylvania, United States; Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, United States. 99

Endogenous metabolic gating enables tumour-selective RNA-directed therapy
Jiangbo Wei. [10'+5']
Presenter affiliation: National University of Singapore, Singapore. 100

Break

How do small molecules modulate 5' ss recognition?
Zhiling Kuang, Brian Kosmyna, Da Cui, Shasha Shi, Xueni Li, Karoline Lambert, Zhichao Tang, Collette Wright, Jingxin Wang, Chris Trotta, Rui Zhao. [20'+10']
Presenter affiliation: University of Colorado Anschutz Medical Campus, Aurora, Colorado, United States. 101

RNA modifications in neural development, functions, disorders, and aging
Sheng-Jian Ji. [10'+5']
Presenter affiliation: Southern University of Science and Technology, Shenzhen, China. 102

Unfolded proteins drive m6A-Dependent paraspeckle collapse to facilitate RNA export
Xiang Sun, Jingwen Shao, Zehong Wu, Xiaojun Ma, Zhijun Ren, Xi Wan, Xiang Huang, Wenbing Guo, Yan Chen, Wenrui Jiang, Zhengyin Wang, Qingping Jiang, Song Gao, Yixian Cun, Jinkai Wang. [10'+5']
Presenter affiliation: Sun Yat-sen University, Guangzhou, China. 103

RNA surveillance buffers oncogenic fusion-product dosage in t(8;21) leukemia
Min Zhang, Yisheng Li, Bin Zhang, Chen Cai, Shuyi Li, Zhijie He, Xiangyu Meng, Chengguang Wang, Weichao Ding, Xiaoqi Wang, Xingli Dong, Yonghui Li, Li Yu. [10'+5']
Presenter affiliation: Shenzhen University, Shenzhen, China. 104

Pseudouridine synthase-mediated translational control orchestrates vertebrate hematopoiesis and leukemic vulnerability
Chunlin He, Xiangke Chen, Alvin, Chun Hang Ma. [10'+5']
Presenter affiliation: The Hong Kong Polytechnic University, Hong Kong, China. 105

THURSDAY, November 19—5:30 PM

COCKTAILS and BANQUET

FRIDAY, November 20

Departure