

PROGRAM

MONDAY, October 22—7:00 PM

KEYNOTE SPEAKER

Yeast telomere organization and telomerase mediated extension—Getting it all together

Raymund J. Wellinger [50'+10']

Presenter affiliation: Université de Sherbrooke, Sherbrooke, Canada. 1

TUESDAY, October 23—9:00 AM

SESSION 1 FUNCTIONS OF TELOMERE PROTEINS AND
TELOMERASE

Chairpersons: **Zhou Songyang**, Baylor College of Medicine, Houston, Texas, USA

Alex Chang, Stanford University, Stanford, California, USA

Using human genetically engineered human pluripotent stem cells to elucidate the molecular principles of TERT transcriptional regulation

Kunitoshi Chiba, Franziska Lorbeer, Manraj Gill, Tina Wagner, Dirk Hockemeyer [20'+5']

Presenter affiliation: UC Berkeley, Berkeley, California. 2

Engineering a humanized telomerase reverse transcriptase (TERT) gene in mouse embryonic stem cells

De Cheng, Yuanjun Zhao, Fan Zhang, Shuwen Wang, Jiyue Zhu [12'+3']

Presenter affiliation: Washington State University, Spokane, Washington. 3

Cell type specific role of telomerase reverse transcriptase in pulmonary fibrosis

Tianju Liu, Francina Gonzalez De Los Santos, Zhe Wu, Yuyue Zhao, Sem H. Phan [12'+3']

Presenter affiliation: University of Michigan, Ann Arbor, Michigan. 4

ZBTB48 is both a telomere binding protein and a transcriptional activator

Arne Jahn, Grishma Rane, Maciej Paszkowski-Rogacz, Sergi Sayols Puig, Alina Bluhm, Vineeth Mukundan, Louis-Peter Hor, Chung-Ting Han, Irena Draškovic, Arturo Londoño, Oliver Dreesen, Frank Buchholz, Falk Butter, Dennis Kappei [12'+3']

Presenter affiliation: Cancer Science Institute, Singapore.

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TUESDAY, October 23—10:30 AM

SESSION 2 SHELTERIN AND TELOMERE FUNCTION

Chairpersons: **Raymund Wellinger**, Université de Sherbrooke, Sherbrooke, Canada
Yong Zhao, Sun Yat-sen University, Guangzhou, China

TPP1 turnover and lung fibrosis

Jun-Ping Liu [20'+5']

Presenter affiliation: Hangzhou Normal University, Hangzhou, China; Monash University, Melbourne, Australia.

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Pericentromeric instability triggered by TRF2 decline during replicative senescence

Aaron Mendez-Bermudez, Liudmyla Lototska, Serge Bauwens, Marie-Josephe Giraud-Panis, Joe Nassour, Corinne Abbadie, Stephan Koundrioukoff, Michelle Debatisse, Jing Ye, Eric Gilson [20'+5']

Presenter affiliation: University of Nice, CNRS UMR 7284 - INSERM U1081, Nice, France.

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RAP1 regulates the expression of p21 via the mTOR/p70S6K pathway

Wei-Qin Jiang, Ying Cao, Roger Reddel [20'+5']

Presenter affiliation: Children's Medical Research Institute, The University of Sydney, Westmead, Australia.

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HOT1 is a direct telomere-binding protein in vertebrates

Falk Butter, Dennis Kappei [12'+3']

Presenter affiliation: Institute of Molecular Biology, Mainz, Germany.

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TRF2 attenuates the replicative damages at heterochromatin of neural cells by recruiting PP2A

Xiuyun Zhai, Jun Xing, Peng Han, Ninan Chen, Wai Ian Leong, Yiming Lu, Eric Gilson, Jing Ye [12'+3']

Presenter affiliation: Shanghai Ruijin Hospital, Shanghai, China; 10
International Laboratory in Hematology and Cancer, Shanghai, China.

TUESDAY, October 23—2:00 PM

SESSION 3 POSTER SESSION

The effects of telomere shortening in mouse hearing

Chen Hongsai, Guangming Chen, Ming Lei

Presenter affiliation: the Ninth People's Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China. 11

Exratelomeric role of TRF2 in mouse cells

Peng Han, Yilin Ying, Jun Xing, Wai Ian Leong, Ninan Chen, Xiuyun Zhai, Kehua Chen, Yiming Lu, Eric Gilson, Jing Ye

Presenter affiliation: Shanghai Ruijin Hospital, Shanghai, China; 12
International Laboratory in Hematology and Cancer, Shanghai, China.

KEOPS complex promotes DNA resection parallelly with MRX-Sae2

Ming-Hong He, Jia-Cheng Liu, Yi-Si Lu, Zhi-Jing Wu, Ying-Ying Liu, Jin-Qiu Zhou

Presenter affiliation: Chinese Academy of Sciences, Shanghai, China. 13

Tet1 deficiency causes telomere shortening and accelerates male reproductive aging

Guian Huang, Huasong Wang, Peng Gong, Mo Gou, Lin Liu

Presenter affiliation: Nankai University, Tianjin, China. 14

ALT mouse embryonic stem cells have unique internal templates and remodeled chromatin for telomere maintenance

Chuna Kim, Sanghyun Sung, Enkyung Kim, Dongan Kwon, Sunny Shin, Hiroyuki Niida, Daechan Park, Jongseo Kim, Junho Lee

Presenter affiliation: Seoul National University, Seoul, South Korea. 15

- Genomic and proteomic alteration upon ALT activation in mouse embryonic stem cells**
Eunkyeong Kim, Dongan Kwon, Chuna Kim, Sanghyun Sung, Hiroyuki Niida, Junho Lee
 Presenter affiliation: Seoul National University, Seoul, South Korea. 16
- SMUG1 promotes telomere maintenance through telomerase RNA end processing**
Penelope Kroustallaki, Lisa Lirussi, Ying Esbensen, Sarantis Gagos, Hilde Nilsen
 Presenter affiliation: University of Oslo, Oslo, Norway; Akershus University Hospital, Lørenskog, Norway. 17
- Shwachman-Diamond syndrome protein SBDS maintains human telomeres by regulating telomerase recruitment**
Yi Liu, Feng Liu, Yizhao Cao, Huimin Xu, Yangxiu Wu, Su Wu, Dan Liu, Yong Zhao, Zhou Songyang, Wenbin Ma
 Presenter affiliation: School of Life Sciences, Sun Yat-sen University, Guangzhou, China. 18
- Stalled fork re-modeller FANCM represses recombination-dependent replication at human telomeres**
Robert Lu, Alexander P. Sobinoff, Joshua A. Allen, Christopher Nelson, Christopher G. Tomlinson, Hilda A. Pickett
 Presenter affiliation: Children's Medical Research Institute, Sydney, Australia. 19
- Structural Insights into *S. pombe* Pot1-Tpz1 and Pot1-ssDNA Interactions**
Hong Sun, Jian Wu, Cong Chen, Jing Xue, Juan Chen, Ming Lei
 Presenter affiliation: ShanghaiTech University, Shanghai, China; National Center for Protein Science Shanghai, China. 20
- Structural and functional study of *Tetrahymena* telomerase adaptor subunits**
Ting Tang, Yuanyuan Ma, Jian Wu, Ming Lei
 Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China; ShanghaiTech University, Shanghai, China. 21
- Zscan4 confers chromatin accessibility and telomere elongation in early embryos and ESCs**
Jiao Yang, Haifeng Fu, Peng Gong, Renpeng Guo, Chun Liu, Chenglei Tian, Hua Wang, Huasong Wang, Lin Liu
 Presenter affiliation: Nankai University, Tianjin, China. 22

TERFA compromised zebrafish embryos die from neurogenesis failure

Yilin Ying, Xuefei Hu, Peng Han, Jun Xing, Ninan Chen, Yiming Lu, Eric Gilson, Jing Ye

Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China; Nice University, Nice, France.

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TRF2 attenuates the replicative damages at heterochromatin of neural cells by recruiting PP2A

Xiuyun Zhai, Jun Xing, Peng Han, Ninan Chen, Wai Ian Leong, Yiming Lu, Eric Gilson, Jing Ye

Presenter affiliation: Shanghai Ruijin Hospital, Shanghai, China; International Laboratory in Hematology and Cancer, Shanghai, China.

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Telomeric recombination induced by DNA damage results in telomere extension and length heterogeneity

Haiying Liu, Canfeng Zhang, Yong Zhao

Presenter affiliation: Sun Yat-sen University, Guangzhou, California.

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Ccq1-a scaffold for Shelterin-CLRC-SHREC

Yuanze Zhou, Jing Xue, Hongwen Chen, Jian Wu, Ming Lei

Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China; National Key Laboratory of Crop Genetic Improvement, Wuhan, China.

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TUESDAY, October 23—4:30 PM

Chinese Tea and Beer Tasting

TUESDAY, October 23—7:00 PM

KEYNOTE SPEAKER

Autophagic cell death restricts chromosomal instability during replicative crisis

Joe Nassour, Robert Radford, Adriana Correia, Brigitte Schoell, Anna Jauch, Jan Karlseder [50'+10']

Presenter affiliation: The Salk Institute for Biological Studies, La Jolla, California.

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WEDNESDAY, October 24—10:30 AM

SESSION 5 **TELOMERE RECOMBINATION AND ALT II**

Chairpersons: **Fuyuki Ishikawa**, Kyoto University, Kyoto, Japan
Shang Li, Duke-NUS Medical School, Singapore

Maintenance of telomeres without telomerase using internal genomic regions in worms and mammals

Chuna Kim, Sanghyun Sung, Eunbyeong Kim, Dongan Kwon, BeomSeok Seo, Sunny Shin, Hiroyuki Niida, Jongseo Kim, Daechan Park, Junho Lee [20'+5']

Presenter affiliation: Seoul National University, Seoul, South Korea. 33

Two RNase H enzymes contribute to the dynamic regulation of R-loops at telomeres

Arianna Lockhart, Vaness Borges Pires, Stefano Misino, Brian Luke [20'+5']

Presenter affiliation: Johannes Gutenberg University, Mainz, Germany; IMB-Mainz, Mainz, Germany. 34

FANCM suppresses ALT activity by modulating BLM-TOP3A-RMI complex activity at telomeres

Robert Lu, Julianne O'Rourke, Alexander P. Sobinoff, Joshua A. Allen, Christopher B. Nelson, Andrew J. Deans, Hilda A. Pickett [20'+5']

Presenter affiliation: Children's Medical Research Institute, NSW, Australia. 35

Strand break-induced replication fork collapse leads to C-circles, C-overhang and telomeric recombination

Tianpeng Zhang, Zepeng Zhang, Yong Zhao [20'+5']

Presenter affiliation: Sun Yat-sen University, Guangzhou, China. 36

WEDNESDAY, October 24—1:30 PM

Visit to Old Suzhou

Free Evening

SESSION 6 **TELOMERE REPLICATION AND LENGTH REGULATION**

Chairpersons: **Jerome Dejardin**, Institute of Human Genetics,
Montpellier, France
Yie Liu, National Institute on Aging, Baltimore, Maryland,
USA

T-ALL-associated NAP1L1-MLLT10 fusion protein promotes telomere elongation by telomerase

Jing Wang, Alice Cheung, LaiFong Poon, Jonathan Bond, XueZhi Bi,
Shang Li [20'+5']
Presenter affiliation: Duke-NUS Medical School, Singapore. 37

Fission yeast Taz1 and Rap1 suppress GCR (Gross chromosomal rearrangement) through two distinct mechanisms

Hiroyuki Irie, Kurt W. Runge, Fuyuki Ishikawa [20'+5']
Presenter affiliation: Kyoto University, Kyoto, Japan. 38

Structural basis for reactivation of -146C>T mutant TERT promoter

Vinay Tergaonkar [20'+5']
Presenter affiliation: Institute of Molecular and Cell Biology, Singapore. 39

A coding-independent role for histone 1C mRNA in the regulation of telomere homeostasis

Roland Ivanyi-Nagy, Syed Moiz Ahmed, Sabrina Peter, Ramani Priya
Dharshana, Peh Fern Ong, Oliver Dreesen, Peter Droge [12'+3']
Presenter affiliation: Nanyang Technological University, Singapore. 40

SESSION 7 **TELOMERE ANCHORING**

Chairpersons: **Sandy Chang**, Yale University School of Medicine,
New Haven, Connecticut, USA
 Hilda Pickett, Children’s Medical Research Institute,
Westmead, Australia

Structural insights into chromosome attachment to the nuclear envelope by an inner nuclear membrane protein Bqt4 in fission yeast

Chunyi Hu, Haruna Inoue Inoue, Wenqi Sun, Yumiko Takeshita, Junko Kanoh, Yong Chen [25’]
Presenter affiliation: Shanghai Institute of Biochemistry and Cell Biology, Chinese Academy of Sciences, Shanghai, China; Shanghai Tech University, Shanghai, China.

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The meiotic TERB1-TERB2-MAJIN complex tethers telomeres to the nuclear envelope

Yan Wang, Yanyan Chen, Chenhui Huang, Ming Lei [12’+3’]
Presenter affiliation: Institute of Biochemistry and Cell Biology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China; Shanghai Research Center, Chinese Academy of Sciences, Shanghai, China.

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SUN1-Speedy A complex regulates telomere movements on the NE

Yanyan Chen, Yan Wang, Chenhui Huang, Ming Lei [12’+3’]
Presenter affiliation: Shanghai Research Center, Shanghai, China.

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SESSION 8 **TELOMERE MAINTENANCE, AGING AND DISEASE I**

Chairpersons: **Jan Karlseder**, The Salk Institute for Biological Studies, La Jolla, California, USA
Alison Bertuch, Baylor College of Medicine, Houston, Texas, USA

Telomere length and telomerase activity in stimulated human T-cells are biomarkers of high performing centenarians

Jerry W. Shay [20'+5']

Presenter affiliation: UT Southwestern Medical Center, Dallas, Texas. 44

Accelerated aging in lethal dilated cardiomyopathy

Alex Chia Yu Chang, Gaspard Pardon, Andrew Chia Hao Chang, John W. Day, Joseph C. Wu, Beth Pruitt, Helen M. Blau [20'+5']

Presenter affiliation: Stanford University, Stanford, California. 45

Mechanisms of telomere regulation in human cells

Zhou Songyang, Yi Liu, Feng Li, Guang Shi, Tingting Deng [20'+5']

Presenter affiliation: Sun Yat-sen University, Guangzhou, China; Baylor College of Medicine, Houston, Texas. 46

Telomere maintenance in single chromosome yeasts

Zhijing Wu, Chen Cai, Yangyang Shao, Ning Lu, Jia-Cheng Liu, Ming-Hong He, Xiaoli Xue, Zhongjun Qin, Jin-Qiu Zhou [12'+3']

Presenter affiliation: University of Chinese Academy of Sciences, Chinese Academy of Sciences, Shanghai, China; Shanghai Institute of Biochemistry and Cell Biology, CAS, Shanghai, China. 47

THURSDAY, October 25—4:00 PM

SESSION 9 TELOMERE MAINTENANCE, AGING AND DISEASE II

Chairpersons: **Dirk Hockmeyer**, University of California, Berkeley,
Berkeley, California, USA
 Lin Liu, Nankai University, Tianjin, China

Conditional expression of telomerase under the control of the p21 promoter as a model of senescence bypass

Marielle Breau, Dmitri Churikov, Serge Bauwens, Frederic Jourquin, Remy Catellano, Giovanna Giovanazzo, Carlota Sanchez-Ferrer, Eric Gilson, Ignacio Flores, Serge Adnot, Vincent Geli [20'+5']

Presenter affiliation: Marseille Cancer Research Center, Marseille, France.

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SMUG1 promotes telomere maintenance through telomerase RNA end-processing

Penelope Kroustallaki, Lisa Lirussi, Sergio Carracedo, Alexandra Götz, Ying Q. Esbensen, Lene Alsøe, Pål Sætrom, Sarantis Gagos, Hilde Nilsen [12'+3']

Presenter affiliation: University of Oslo, Lørenskog, Norway.

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Evidence supporting a telomere gestational clock that determines the length of pregnancy

Mark Phillippe, Michala R. Sawyer [12'+3']

Presenter affiliation: Massachusetts General Hospital, Boston, Massachusetts.

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THURSDAY, October 25—6:00 PM

COCKTAILS and BANQUET

FRIDAY, October 26—9:00 AM

SESSION 10 MECHANISMS OF TELOMERE PROTECTION

Chairpersons: **Roger Reddel**, Children's Medical Research Institute, Westmead, Australia
Junho Lee, Seoul National University, Seoul, Korea

The Ku heterodimer at human telomeres

Ann Sukumar, Alessandro Baldan, Celina Jones, Elif Asik, Christopher Williams, Sandra Indiviglio, Alison Bertuch [20'+5']

Presenter affiliation: Baylor College of Medicine, Houston, Texas. 51

Mammalian CST averts replication failure by preventing G-quadruplex accumulation

Feng Wang [20'+5']

Presenter affiliation: Tianjin Medical University, Tianjin, China. 52

Structural insights into telomerase inhibition and telomere capping by the CST complex in budding yeast

Yunhui Ge, Zhenfang Wu, Hongwen Chen, Jian Wu, Ming Lei [12'+3']

Presenter affiliation: Shanghai Jiao Tong University School of Medicine, Shanghai, China; Shanghai Institute of Biochemistry and Cell Biology, University of Chinese Academy of Sciences, Shanghai, China. 53

FRIDAY, October 26—10:30 AM

SESSION 11 TELOMERE AND CHROMOSOME STABILITY

Chairpersons: **Eric Gilson**, University of Nice, Nice, France
Vinay Tergaonkar, Institute of Molecular and Cell Biology, Singapore

The MRN complex is dispensable for the repair of dysfunctional telomeres lacking POT1-TPP1

Rekha Rai, Sandy Chang [20'+5']

Presenter affiliation: Yale University School of Medicine, New Haven, Connecticut. 54

Novel role of telomeres in regulating retrotransposable elements

Lin Liu, Xinyi Lu, Rengeng Guo, Jian Mao, Hua Wang [20'+5']

Presenter affiliation: Nankai University, Tianjin, China.

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Studying the function of BRCA2 and MRE11 in replication stress at telomere

Junyeop Lee, SoYoung Joo, Hyunsook Lee [12'+3']

Presenter affiliation: Seoul National University, Seoul, South Korea.

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