

## PROGRAM

MONDAY, November 6—7:00 PM

### **SESSION 1**      STEM CELL AND REJUVENATION

**Chairperson:**      **Justin Cooper-White**, University of Queensland,  
St. Lucia, Australia

#### **KEYNOTE SPEAKER**

#### **Stem cell aging and rejuvenation—Dynamics of the quiescent state**

Thomas A. Rando [35'+10']

Presenter affiliation: Stanford University, Stanford, California.

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#### **Mitochondrial fitness regulates telomere dysfunction-driven cardiac aging and lifespan**

Zhenyu Ju [20'+5']

Presenter affiliation: Hangzhou Normal University, Hangzhou, China;  
Jinan University, Guangzhou, China.

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#### **Upregulation of MG53 causes metabolic disorders and accelerates aging**

Li Zhi, Peng Jiang, Lejiao Ren, Fengxiang Lv, Yan Zhang, Xinli Hu,  
Rui-ping Xiao [20'+5']

Presenter affiliation: Peking University, Beijing, China.

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TUESDAY, November 7—9:00 AM

### **SESSION 2**      LONGEVITY MECHANISMS

**Chairperson:**      **Yidong Shen**, Shanghai Institutes for Biological Sciences,  
CAS, Shanghai, China

#### **Genes that link fat, fertility, stress and aging**

Francis R. Amrit, Ramesh Ratnappan, Carter Mason, Nikki Naim,  
Arjumand Ghazi [20'+5']

Presenter affiliation: University of Pittsburgh School of Medicine,  
Pittsburgh, Pennsylvania.

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<b>RNA quality control promotes longevity in <i>C. elegans</i></b> <u>Seung-Jae V. Lee</u> [20'+5'] Presenter affiliation: POSTECH, Pohang, South Korea.	5
<b>Interplay between intestinal barrier function, intestinal microbiota and organismal aging</b> Anna Salazar, Martin Resnik-Docampo, Rebecca I. Clark, Leanne Jones, <u>David W. Walker</u> [20'+5'] Presenter affiliation: UCLA, Los Angeles, California.	6
<b>Using the CRISPR/Cas9 technology to dissect the functions and expression patterns of <i>daf-2</i> and <i>daf-16</i></b> Wen-Hong Zhang, Yan-Ping Zhang, Yue Sun, Han-Qing Zhao, Chao Zhai, Cheng Zhan, <u>Meng-Qiu Dong</u> [20'+5'] Presenter affiliation: National Institute of Biological Sciences, Beijing, China.	7
<b>Alternative splicing factor RNP-6 regulates longevity in <i>C. elegans</i></b> <u>Wenming Huang</u> , Chun Kew, Adam Antebi [10'+3'] Presenter affiliation: Max Planck Institute for Biology of Ageing, Cologne, Germany.	8
<b>A lifespan extending mutation in the essential splicing factor <i>rnp-6</i> causes immunodeficiency in <i>Caenorhabditis elegans</i></b> <u>Chun Kew</u> , Wenming Huang, Adam Antebi [10'+3'] Presenter affiliation: Max Planck Institute for Biology of Ageing, Cologne, Germany.	9
<b>Novel pipeline for discovery of compounds that alter cell cycle and extend lifespan</b> <u>Chong He</u> , Michael Polymenis, Brian Kennedy [10'+3'] Presenter affiliation: Buck Institute for Research on Aging, Novato, California.	10
<b>Heat shock factor 1 activation via inhibition of HSB-1 promotes longevity by increasing histone H4 level and chromatin compaction</b> <u>Surojit Sural</u> , Ao-Lin Hsu [10'+3'] Presenter affiliation: University of Michigan Medical School, Ann Arbor, Michigan.	11
<b>Systemic lifespan regulation by the insulin/IGF-1 signaling pathway in <i>C. elegans</i></b> <u>Masaharu Uno</u> , Yuri Tani, Ryohji Abe, Eisuke Nishida [10'+3'] Presenter affiliation: Kyoto university, Kyoto, Japan.	12

**SESSION 3**      POSTER SESSION

**Loss of heterochromatin stability in enterocytes causes intestinal stem cell aging in *Drosophila***

Ho-Jun Jeon, Jung-Hoon Pyo, Joung-Sun Park, Mi-Ae Yoo  
Presenter affiliation: Pusan National University, Busan, South Korea.      13

**A Golgi protein MON-2 mediates longevity conferred by reduced mitochondrial respiration in *C. elegans***

Murat Artan, Jeonghun Yeom, Ara B. Hwang, Dae-Eun Jeong, Seong Kyu Han, Ozlem Altintas, Keunhee Seo, Mihwa Seo, Dongyeop Lee, Wooseon Hwang, Hyun-jun Nam, Youngjae Ryu, Yujin Lee, Chang Man Ha, Sanguk Kim, Cheolju Lee, Seung-Jae V. Lee  
Presenter affiliation: Pohang University of Science and Technology, Pohang, South Korea.      14

**RNAi screens for genes that mediate life-shortening effects of dietary glucose in *C. elegans***

Yoonji Jung, Dongyeop Lee, Hae-Eun H. Park, Dae-Eun Jeong, Murat Artan, Ozlem Altintas, Sangsoon Park, Wooseon Hwang, Yujin Lee, Heehwa G. Son, Seon Woo A. An, Sujeong Kwon, Eun Ji Kim, Mihwa Seo, Seung-Jae V. Lee  
Presenter affiliation: Pohang University of Science and Technology, Pohang, Gyeongbuk, South Korea.      15

**CD9 regulates migration and invasion of senescent human primary cells**

Eok-Cheon Kim, Min-Ah Choi, Youlim Son, Eun-Ji Jo, Jae-Ryong Kim  
Presenter affiliation: Department of Biochemistry and Molecular Biology, Daegu, South Korea.      16

**Activation of FOXO and HSF-1 promotes immunocompetence in old *C. elegans* via overriding p38 MAPK-dependent immunosenescence**

Yujin Lee, Dae-Eun Jeong, Wooseon Hwang, Seung-Jae V. Lee  
Presenter affiliation: Pohang University of Science and Technology, Pohang, South Korea.      17

- Suppression of autophagic activity by Rubicon is a hallmark of aging**  
Shuhei Nakamura, Atsushi Takahashi, Mari Fujiwara, Kensuke Ikenaka, Tadashi Yamamuro, Satoshi Minami, Namine Tabata, Sayaka Kubo, Kanako Akamatsu, Yumi Miyazaki, Maho Hamasaki, Yoshitsugu Takabatake, Tomoya Kitajima, Hideki Mochizuki, Yoshitaka Isaka, Adam Antebi, Tamotsu Yoshimori  
 Presenter affiliation: Osaka University, Suita, Japan. 18
- A *PTEN* variant uncouples longevity from impaired development in insulin/IGF-1 receptor mutant *C. elegans***  
 Wooseon Hwang, Hae-Eun H. Park, Ozlem Altintas, Seung-Jae V. Lee  
 Presenter affiliation: Pohang University of Science and Technology, Pohang, South Korea. 19
- Diacetyl-mediated sensory neural activation shortens *C. elegans* lifespan via CAMK/CREB/insulin-like peptide signaling axis**  
 Murat Artan, Sangsoo Park, Dae-Eun Jeong, Seung-Jae V. Lee  
 Presenter affiliation: Pohang University of Science and Technology, Pohang, South Korea. 20
- Prefoldin 6 extends lifespan in *daf-2*/insulin/IGF-1 receptor mutant *C. elegans* via relaying longevity signals from HSF-1 to FOXO**  
Heehwa G. Son, Keunhee Seo, Mihwa Seo, Haeshim Baek, Eunseok Choi, Sangsoo Park, Eunju Kim, G-One Ahn, Ao-Lin Hsu, Hong Gil Nam, Sung Key Jang, Seung-Jae V. Lee  
 Presenter affiliation: POSTECH, Pohang, South Korea. 21
- Aging research in Australia**  
Shaoyu Wang  
 Presenter affiliation: Charles Sturt University, Orange, NSW, Australia. 22
- The role of chromatin modifications on aging and DNA damage response of *C. elegans***  
Siyao Wang, Bjoern Schumacher  
 Presenter affiliation: Cologne Cluster of Excellence in Cellular Stress Responses in Aging-Associated Diseases (CECAD), University of Cologne, Germany. 23

**Early-life adversity disrupts intestinal homeostasis through NGF/TrkA signaling**

Hoi Leong Xavier Wong, Hongyan Qin, Xiao Zuo, Sijia Che, Zhaoxiang Bian

Presenter affiliation: School of Chinese Medicine, Hong Kong Baptist University, Hong Kong, China.

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**A microRNA switch controls dietary restriction-induced longevity through Wnt signaling**

Yunpeng Xu, Mengjiao Song, Yidong Shen

Presenter affiliation: Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China.

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**The intrafagellar transportation of sensory cilia is impaired in aged *C. elegans***

Yincong Zhang, Yidong Shen

Presenter affiliation: Shanghai Institute of Biochemistry and Cell Biology, Shanghai, China.

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TUESDAY, November 7—4:30 PM

**Chinese Tea and Beer Tasting**

TUESDAY, November 7—7:00 PM

**SESSION 4** GEROSCIENCE AND PREMATURE AGING

**Chairperson:** **Ernst Wolvetang**, University of Queensland, St. Lucia, Australia

**KEYNOTE SPEAKER**

**Geroscience—Addressing aging, the major risk factor for most chronic diseases**

Felipe Sierra [35'+10']

Presenter affiliation: National Institute on Aging, NIH, Bethesda, Maryland.

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**Programming and reprogramming of aging**

Guang-Hui Liu [20'+5']

Presenter affiliation: Institute of Biophysics, CAS, Beijing, China. 28

**Dissecting mTOR pathway contributions to aging and disease**

Brian K. Kennedy [20'+5']

Presenter affiliation: National University Health System, Singapore. 29

**Free Open Bar**  
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WEDNESDAY, November 8—9:00 AM

**SESSION 5**      STEM CELL AND AGING REGULATION

**Chairperson:**    **Arjumand Ghazi**, University of Pittsburgh, Pittsburgh, Pennsylvania, USA

**Hyaluronan and stem cell maintenance in the longest-lived rodent, the naked mole rat**

Zhonghe Ke, Stephan Emmrich, Andrei Seluanov, Vera Gorbunova [20'+5']

Presenter affiliation: University of Rochester, Rochester, New York. 30

**Age-related stem cell dysfunction—Causes and consequences**

Heinrich Jasper [20'+5']

Presenter affiliation: Buck Institute, Novato, California; Genentech Inc, South San Francisco, California. 31

**Alerting stem cells to improve tissue repair**

Joseph T. Rodgers [20'+5']

Presenter affiliation: University of Southern California, Keck School of Medicine, Los Angeles, California. 32

Emmanuelle Passegué [20'+5']

Presenter affiliation: Columbia University Medical Center, New York, New York.

**Probing effectors of stem cell and niche ageing for targeted rejuvenation**

Justin Cooper-White [10'+3']

Presenter affiliation: University of Queensland, Brisbane, Australia. 33

**Activation of oxidative stress response via SIRT1 is required for successful adipogenic differentiation in mesenchymal stem cells**

An Yu, Weiwei Dang [10'+3']

Presenter affiliation: Baylor College of Medicine, Houston, Texas. 34

**A rapid-differentiated neuronal model from human embryonic stem cells**

Xi Shi, Congyi Lu, Andrew Allen, Neville E. Sanjana, Jen Pan [10'+3']

Presenter affiliation: Broad Institute of MIT and Harvard, Cambridge, Massachusetts; Massachusetts Institute of Technology, Cambridge, Massachusetts. 35

Brian Dranka [20'+5']

Presenter affiliation: Agilent Technologies.

WEDNESDAY, November 8—1:30 PM

**Visit to Old Suzhou**

WEDNESDAY, November 8—7:00 PM

**SESSION 6** SENESCENCE

**Chairperson:** **Sean Curran**, University of Southern California, Los Angeles, California, USA

**KEYNOTE SPEAKER**

**Epigenetic changes and somatic retrotransposition in cellular senescence and aging**

John M. Sedivy [35'+10']

Presenter affiliation: Brown University, Providence, Rhode Island. 36

**An integrated view of senescence and reprogramming**

Manuel Serrano [20'+5']

Presenter affiliation: Institute for Research in Biomedicine (IRB),  
Barcelona, Spain; ICREA, Barcelona, Spain.

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**Enhancer and epigenetic regulation of replicative senescence**

Cagdas Tazearslan, Tom Suter, Yizhou Zhu, Michael G. Rosenfeld,  
Yousin Suh [10'+3']

Presenter affiliation: Albert Einstein College of Medicine, Bronx, New  
York.

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**Cooperation between p21 and Akt is required for p53-dependent  
cellular senescence**

Young Yeon Kim, Jee-Hyun Um, Jeanho Yun [10'+3']

Presenter affiliation: College of Medicine, Dong-A University, Busan,  
South Korea.

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THURSDAY, November 9—9:00 AM

**SESSION 7** GENOME INSTABILITY, IMMUNOSENESCENCE AND  
AGE-ASSOCIATED DISEASES

**Chairperson:** **Zhenyu Ju**, Jinan University, Guangzhou, China

**Genomic drift and the limits to human life span**

Jan Vijg [20'+5']

Presenter affiliation: Albert Einstein College of Medicine, Bronx, New  
York.

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**SHPRH regulates rRNA transcription by recognizing the histone  
code in an mTOR-dependent manner**

Deokjae Lee, Jungeun An, Young-Un Park, Hungjiun Liaw, Roger  
Woodgate, Jun Hong Park, Kyungjae Myung [20'+5']

Presenter affiliation: NIH, Bethesda, Maryland; Institute for Basic  
Science, Ulsan, South Korea.

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**Genome stability in aging and disease**

Biörn Schumacher [20'+5']

Presenter affiliation: University of Cologne, Cologne, Germany.

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**How to tailor cancer immunotherapy to the aged**

Claudia GraveKamp [20'+5']

Presenter affiliation: Albert Einstein College of Medicine, Bronx, New York.

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**Life span extension by a mucosal TLR5 stimulating vaccine**

Jae Sung Lim, Da Young Lee, Sansartsetseg Tsendjav, Kyung A Cho [10'+3']

Presenter affiliation: Chonnam National University Medical School, Hwasun-gun, South Korea.

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**RRM domain of ALS/FTD-causing FUS characteristic of irreversible unfolding spontaneously self-assembles into amyloid fibrils**

Yimei Lu, Liangzhong Lim, Jianxing Song [10'+3']

Presenter affiliation: National University of Singapore, Singapore.

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**Down syndrome iPSC derived neurons and brain organoids to study the functional genomics of brain ageing**

Ernst Wolvetang [10'+3']

Presenter affiliation: University of Queensland, Brisbane, Australia.

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**Aortic valve stenosis—An elderly heart disease involves developmental defect and postnatal inflammation**

Bingruo Wu, Feng Xiao, Yidong Wang, Yongfeng Shao, Bin Zhou [10'+3']

Presenter affiliation: Albert Einstein College of Medicine, Bronx, New York; The First Affiliated Hospital of Nanjing Medical University, Nanjing, China.

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THURSDAY, November 9—2:00 PM

**SESSION 8** METABOLISM, STRESS, HEALTHSPAN AND REPLICATIVE AGING

**Chairperson:** **Meng-Qiu Dong**, National Institute of Biological Sciences, Beijing, China

**Convergent mechanisms of longevity**

Adam Antebi [20'+5']

Presenter affiliation: Max Planck Institute for Biology of Ageing, Cologne, Germany; University of Cologne, Cologne, Germany.

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**The role of neurosensory systems in the control of cellular stress responses**

Veena Prahlad, Felicia Ooi, Srijit Das [20'+5']

Presenter affiliation: University of Iowa, Iowa City, Iowa. 49

**Inferring regulatory events on aging and dietary interventions**

Jing-dong Han [20'+5']

Presenter affiliation: Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China. 50

Baohua Liu [20'+5']

Presenter affiliation: Shenzhen University, Shenzhen, China.

**Declining proteostasis robustness gives rise to the Gompertz law of mortality**

Adam de Graff, Mantu Santra, Ken Dill [10'+3']

Presenter affiliation: Stony Brook University, Stony Brook, New York. 51

**Memory of dietary stress early in life drives somatic lipid depletion during reproduction**

James Nhan, Christian Turner, Chia-An Yen, Hans Dalton, Dana Lynn,

Sean Curran [10'+3']

Presenter affiliation: University of Southern California, Los Angeles, California. 52

**Homeostatic regulation of lipid composition by MDT-15/mediator 15 licenses *C. elegans* to live long at low temperatures**

Dongyeop Lee, Seon Woo A. An, Yasuyo Yamaoka, Youngsook Lee, Seung-Jae V. Lee [10'+3']

Presenter affiliation: Pohang University of Science and Technology, Pohang, Gyeongbuk, South Korea. 53

**An age-regulated microRNA is responsible for the decline of autophagy with ageing in *C. elegans***

Yifei Zhou, Adam Antebi, Yidong Shen [10'+3']

Presenter affiliation: Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China. 54

**Budding yeast sense and respond to aging signals via start repressor *Whi5* in normal replicative aging**

Jing Yang, Ziwei Wang, Xili Liu, Hao Li, Qi Ouyang [10'+3']

Presenter affiliation: University of Electronic Science and Technology of China, Chengdu, China; Peking University, Beijing, China. 55

THURSDAY, November 9—6:00 PM

**COCKTAILS and BANQUET**

FRIDAY, November 10—9:00 AM

**SESSION 9**      MUSCLE AGING AND ANTI-AGING MEDICINE

**Chairperson:**    **Weimei Dang**, Baylor College of Medicine, Houston, Texas, USA

**Skeletal muscle mitochondrial remodeling and diseases**

Zhenji Gan [20'+5']

Presenter affiliation: Nanjing University, Nanjing, China.

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**Dkk3 dependent transcriptional regulation controls ageing induced skeletal muscle atrophy**

Ping Hu, Lele Yang, Jie Yin, Lin Chen, Yangli Xie, Hongbin Ji, Yan Liu, Sheng Li, Wenjun Yang [20'+5']

Presenter affiliation: Shanghai Institute of Biochemistry and Cell Biology, CAS, Shanghai, China.

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**MicroRNA expression in skeletal muscle during aging**

Yeo Jin Shin, Kwang-Pyo Lee, Yousin Suh, Jae-Young Lim, Ki-Sun Kwon [20'+5']

Presenter affiliation: Korea Research Institute of Bioscience and Biotechnology, Daejeon, South Korea; Korea University of Science and Technology, Daejeon, Sout Korea.

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**The regulation of mTOR signalling in skeletal muscle growth and sarcopenia**

Nolan Stimple, Stuart Adamson, Andrew S. Amaladass, Shih-Yin Tsai [20'+5']

Presenter affiliation: National University of Singapore, Yong Loo Lin School of Medicine, Singapore.

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**Extract of Fructus cannabis ameliorates murine cognitive impairment induced by D-galactose**

Ning-yuan Chen, Cheng-Wu Liu, Jun-Hua Peng, Shang-Ling Pan [10'+3']

Presenter affiliation: Guangxi Medical University, Nanning, China.

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**New strategy for Rapamycin administration is to prolonging ovarian lifespan**

Xiaowei Dou, Jing Li [10'+3']

Presenter affiliation: Nanjing Medical University, Nanjing, China.

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**Epigenomic and chromatin changes in aging skeletal muscle stem cells**

Ling Liu, Jamie O. Brett, Thomas A. Rando [10'+3']

Presenter affiliation: Stanford University, Stanford, California.

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**Quantitative inhibiting of histone acetyltransferase extends replicative lifespan**

Dandan Zhong, Weiwei Dang, Baoxue Yang, Zhengwei Xie [10'+3']

Presenter affiliation: Peking University, Beijing, China.

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