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

GENOME INTEGRITY & CANCER

March 23–March 27, 2026

Arranged by

Stephen West, *Francis Crick Institute*
Kara Bernstein, *University of Pennsylvania*
Kyungjae Myung, *Institute for Basic Science*
Jian Yuan, *Tongji University*
Binghui Shen, *City of Hope*

Cold Spring Harbor Conferences Asia
Cold Spring Harbor Laboratory

GENOME INTEGRITY AND CANCER
Monday, March 23 – Friday, March 27, 2026

Monday	7:00 pm	**1** Keynote Session
Monday	8:30 pm	**2** Cutting Edge
Tuesday	9:00 am	**3** DNA Replication Machinery and Stresses
Tuesday	1:30 pm	**4** Trailblazers
Tuesday	3:00 pm	**Poster Session**
Tuesday	7:00 pm	**5** Genome Integrity and Mutagenesis
Wednesday	9:00 am	**6** Chromatin Modifications in Response to Damage
Wednesday	1:30 pm	*Visit to Old Suzhou**
Wednesday	7:00 pm	**7** DNA Damage Response and Synthetic Lethality
Thursday	9:00 am	**8** Targeting DNA Replication Stress in Cancer Therapy
Thursday	2:00 pm	**9** Systems Biology of DNA Repair
Thursday	6:00 pm	*Cocktails and Banquet*
Friday	9:00 am	***Departure***

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

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

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

PROGRAM

MONDAY, March 23—7:00 PM

SESSION 1 KEYNOTE SESSION

Introduction by: **Stephen West,** The Francis Crick Institute, London, United Kingdom

Properties of formaldehyde-DNA adducts define a new class of mutagen
KJ Patel, Felix Dingler, Christopher Millington [35'+10']
Presenter affiliation: University of Oxford, Oxford, United Kingdom. 1

Introduction by: **Kara Bernstein,** University of Pennsylvania, Philadelphia, Pennsylvania, USA

Ku in primates—From DNA repair to RNA metabolism and Immunity
Shan Zha [35'+10']
Presenter affiliation: Columbia University, New York, New York. 2

MONDAY, March 23—8:30 PM

SESSION 2 CUTTING EDGE

Chairperson: **Zhongsheng You,** Chinese Institutes for Medical Research (CIMR), Beijing, China

Reciprocal regulation of TRPV2 and STING integrates genome maintenance with immune immunity
Zhongsheng You [15'+5']
Presenter affiliation: Chinese Institutes for Medical Research (CIMR), Beijing, China. 3

Panorama of chromosomal instability in lung cancer
Lixing Yang [15'+5']
Presenter affiliation: University of Chicago, Chicago, Illinois. 4

Enhanced formaldehyde clearance ameliorates differentiation-induced genotoxicity in fanconi anemia mutant cells
Jinghang Wu, Fan Yang, Xiaotong Du, Siqian Shi, Landing Li, Zhilin Wang, Jiayi Wang, Can Yi, Yuejia Duan, Yajing Xiao, Sirui Cheng, Xianghuijun Yin, Xinxin Wang, Jiangping Jin, Shixian Lin, Liangyu Zheng, Lei Li [15'+5']
Presenter affiliation: Zhejiang University, Hangzhou, China. 5

TUESDAY, March 24—9:00 AM

SESSION 3 DNA REPLICATION MACHINERY AND STRESSES

Chairpersons: **Lee Zhou,** Duke University, Durham, North Carolina
Feng Li, The First Affiliated Hospital of Sun Yat-Sen University, Guangzhou, China

Targeting replication stress in cancer therapy
Lee Zou [20'+5"]
Presenter affiliation: Duke University, Durham, North Carolina. 6

Redox-driven ADAR1 activation promotes Okazaki fragment maturation and DNA replication integrity
Bin Chen, Guangchao Sun, Jake A. Kloeber, Huaping Xiao, Yaobin Ouyang, Fei Zhao, Min Deng, Robert W. Mutter, Zhenkun Lou [20'+5"]
Presenter affiliation: Mayo Clinic, Rochester, Minnesota. 7

Suppression of transcription-replication conflicts by concerted RNA methylation and MutLα recognition of R-loops
Arijit Ghosh, Xiaojuan Ran, Fengqi Zhang, Boya Gao, Lee Zou, Li Lan.
Presenter affiliation: Duke University, Durham, North Carolina. 8

Divergent disease mechanisms arising from MCM10 dysfunction
Ryan M. Baxley, Liangjun Wang, Kendall S. Bromley, David A. Largaespada, Bruno Reversade, Eric A. Hendrickson, Anja K. Bielinsky [20'+5"]
Presenter affiliation: University of Virginia, Charlottesville, Virginia. 9

Break

TUESDAY, March 24—1:30 PM

SESSION 4 TRAILBLAZERS

Chairperson: **Hailin Wang,** Research Center For Eco-environmental Sciences, CAS, Beijing, China

TUESDAY, March 24—3:00 PM

POSTER SESSION

TUESDAY, March 24—7:00 PM

SESSION 5 GENOME INTEGRITY AND MUTAGENESIS

Chairpersons: **Petr Cejka,** Institute for Research in Biomedicine, Bellinzona, Switzerland
Jing Zhang, Tongji University, Shanghai, China

SESSION 6 CHROMATIN MODIFICATIONS IN RESPONSE TO DAMAGE

Chairpersons: **Hyunsook Lee,** Seoul National University, Seoul, South Korea
Jia-min Zhang, Tongji University, Shanghai, China

Microprotein RSMC enhances Sororin's function in sister chromatid cohesion
Meiqian Jiang, Jiaxin Zhang, Huiqiang Lou, Wenya Hou [10'+5']
Presenter affiliation: Shenzhen University, Shenzhen, China. 66

Epigenetic factor condensate regulates MYC activity
Yulong Qiang, Jiachen Fan, Feng Li [10'+5']
Presenter affiliation: Wuhan University, Wuhan, China. 67

PARG enforces p21 degradation via dePARylation to promote gastric cancer progression
Yangchan Hu, Qimei Bao, Xiangdong Cheng, Ji Jing, Zu Ye [10'+5']
Presenter affiliation: Zhejiang Cancer Hospital, Hangzhou, China. 68

WEDNESDAY, March 25—1:30 PM

Visit to Old Suzhou

WEDNESDAY, March 25—7:00 PM

SESSION 7 DNA DAMAGE RESPONSE AND SYNTHETIC LETHALITY

Chairpersons: **Ulrich Rass,** University of Sussex, Brighton, United Kingdom
Chao Dong, Shandong University, Jinan, China

DNA2 enables growth by restricting homologous recombination-restarted replication (HoRReR) with implications for cancer
Jessica R. Hudson, Rowin Appanah, David Jones, Kathryn Davidson, Alice M. Budden, Alina Vaitsiankova, Kok-Lung Chan, Keith W. Caldecott, Antony M. Carr, Ulrich Rass [20'+5"]
Presenter affiliation: University of Sussex, Brighton, United Kingdom. 69

Metabolic mediated homologous recombination regulation contributes to the chemosensitivity in cancer
Zhe Wang, Yuping Chen, Jian Yuan [20'+5"]
Presenter affiliation: Tongji University School of Medicine, Shanghai, China. 70

THURSDAY, March 26—9:00 AM

SESSION 8 TARGETING DNA REPLICATION STRESS IN CANCER THERAPY

Chairpersons: **Dipanjan Chowdhury,** Harvard Medical School, Boston, Massachusetts, USA
Ting Liu, Zhejiang University School of Medicine, Hangzhou, China

THURSDAY, March 26—2:00 PM

SESSION 9 SYSTEMS BIOLOGY OF DNA REPAIR

Chairpersons: **Stephen West,** The Francis Crick Institute, London, United Kingdom
Irene Chiolo, University of Southern California, Los Angeles, California, USA

Break

Deep multi-omics reconstruction of the DDR network reveals non-canonical regulators of DSB repair
Xin Xu, Jiajian Hu, Zhenkun Lou, Min Deng [10'+5']
Presenter affiliation: Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing, China. 88

Single-molecule insights into AID-mediated control of antibody class switch recombination
Di Liu, Bailin Zhao [10'+5']
Presenter affiliation: School of Basic Medical Sciences, Xi'an Jiaotong University Health Science Center, Xi'an, China; The Second Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China. 89

Carcinogenesis of long-term low dose rate exposure and the regulatory functions of lncRNAs
Yongduo Yu, Weiwei Pei, Wanshi Li, Guang Hu, Hailong Pei, Guangming Zhou [10'+5']
Presenter affiliation: Soochow University, Suzhou, China. 90

R-loop processing through REXO4-RNaseH1-mediated endo- and exo-cleavage coupling mode prevents genome instability and anti-tumor immunity activation
Weibin Wang [10'+5']
Presenter affiliation: Peking University Health Science Center, Beijing, China. 91

the ssDNA-binding protein RADX regulates EXO1-mediated DNA end resection to drive chemotherapy resistance
Xiaorong Wang, Miaomiao Xiao, Junhong Guan [10'+5']
Presenter affiliation: Lanzhou University Second Hospital, Lanzhou, China. 92

THURSDAY, March 26—6:00 PM

COCKTAILS and BANQUET

FRIDAY, March 27

Departure