

PROGRAM

TUESDAY, April 6—7:30 PM

INTRODUCTION

David Stewart

Cold Spring Harbor Laboratory

Maoyen Chi

Cold Spring Harbor Asia

SESSION 1 OVERVIEWS

Chairperson: **S. Lowe**, Cold Spring Harbor Laboratory, USA

KEYNOTE SPEAKERS

Cancer research and public health in China—Challenge and perspective.

Zhu Chen, Minister of Health, PRC

Genome-wide scans in cancer—How will we use the results?

Bruce Ponder, Alison Dunning, Doug Easton, Paul Pharoah.

University of Cambridge, Cambridge, United Kingdom.

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WEDNESDAY, April 7—9:00 AM

SESSION 2 SIGNALING AND CANCER I

Chairperson: **B. Stillman**, Cold Spring Harbor Laboratory, USA

The Bcl-2 family in cancer development and cancer treatment

Suzanne Cory, Kirsteen J. Campbell, Cassandra J. Vandenberg, Kylie

D. Mason, Clare L. Scott, Natasha Anstee, Phillippe Bouillet, Andrew

W. Roberts, David C. Huang, Jerry M. Adams, Andreas Strasser.

Presenter affiliation: Walter and Eliza Hall Institute of Medical

Research, Parkville Victoria, Australia.

2

Regulators of Invadopodia formation and cancer cell invasion

Barbara Blouw, Matt Buschman, Pilar Cejudo-Martin, Begoña Diaz, Christine Gould, Danielle Murphy, Manuela Quintavalle, Susanne Heynen, Behrad Azimi, Jeff Price, Sara A. Courtneidge.

Presenter affiliation: The Burnham Institute for Medical Research, La Jolla, California.

3

Axes of aging—Telomeres, checkpoints and mitochondria

Ergun Sahin, Ronald A. DePinho.

Presenter affiliation: Belfer Institute for Applied Cancer Science, Boston, Massachusetts; Dana-Farber Cancer Institute and Harvard Medical School, Boston, Massachusetts.

4

TGF- β signaling for regulation of cancer

Kohei Miyazono, Hiroaki Ikushima, Yoko Katsuno, Shogo Ehata.

Presenter affiliation: University of Tokyo, Tokyo, Japan.

5

ALK fusion genes, a new target in lung cancer

Hiroyuki Mano.

Presenter affiliation: Jichi Medical University, Tochigi, Japan; Graduate School of Medicine, The University of Tokyo, Tokyo, Japan; Japan Science and Technology Agency, Saitama, Japan.

6

Requirement for the DEAD-box helicase DDX5 in cell proliferation and cell cycle control—A role in breast cancer

Anthony Mazurek, Weijun Luo, Alexander Krasnitz, Scott Powers, Bruce Stillman.

Presenter affiliation: Cold Spring Harbor Laboratory, New York, New York.

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WEDNESDAY, April 7—2:00 PM

SESSION 3 POSTER SESSION I

Naphthazarin, microtubule-destabilizing agent arrests A549 cell cycle in G2/M and induces apoptosis by inhibiting PI3K/AKT signalling and enhancing NF- κ B activation

Bipul R. Acharya, Diptiman Choudhury, Gopal Chakrabarti.

Presenter affiliation: University of Calcutta, Kolkata, India.

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The role of nutrition in the regulation of retinal stem/progenitor cells	
<u>Michalis Agathocleous</u> , Nicola Love, Nandaki Keshavan, Rebecca Lewis, William A. Harris.	
Presenter affiliation: University of Cambridge, Cambridge, United Kingdom.	9
Emerging role of Werner protein in DNA damage response in human cancer cells	
<u>Byungchan Ahn</u> , Eun-sun Kim, Sun-Young Lee.	
Presenter affiliation: University of Ulsan, Ulsan, South Korea.	10
Rapid functional dissection of genetic networks via tissue-specific transduction and RNAi in mouse embryos	
<u>Slobodan Beronja</u> , Geulah Livshits, Scott Williams, Elaine Fuchs.	
Presenter affiliation: Howard Hughes Medical Institute, New York, New York.	11
The tumor suppressor Caliban/Sdccag1 suppresses tumor formation through both p53-independent apoptosis and DNA damage repair	
Zhe Wang, Yajie Wang, Brian Stultz, Mark A. Mortin, Deborah A. Hursh, <u>Xiao-Lin Bi</u> .	
Presenter affiliation: CAS Key Laboratory for Biological Effects of Nanomaterials and Nanosafety, Beijing, China.	12
Inhibition of autophagy enhances anti-cancer effects of atorvastatin in digestive malignancies	
<u>Ching-Chow Chen</u> .	
Presenter affiliation: National Taiwan University College of Medicine, Taipei, Taiwan.	13
Phenotypic and genetic profiles of intratumoral heterogeneity in human ovarian cancer	
<u>Yoon Pyo Choi</u> , Hyo Sup Shim, Ming Qing Gao, Suki Kang, Nam Hoon Cho.	
Presenter affiliation: Yonsei University College of Medicine, Seoul, South Korea.	14
Identification and characterization of intragenic promoter of miR-101 in human hepatoma cells	
<u>Chen-Kung Chou</u> , Shu-Jen Chen, Hua-Chien Chen, Chao-Wei Chiang, Yi Huang, Ka-Wai Leong.	
Presenter affiliation: Chang Gung University, Tao Yuan, Taiwan.	15

- The role of HLA class I alleles in the occurrence and clinical prognosis of NPC among the Chinese**
Jing Deng, Shengping Hu.
 Presenter affiliation: Shantou University Medical College Shantou, China. 16
- RACK1, a novel component of β -catenin destruction complex, negatively regulates Wnt/ β -catenin signaling**
Yuezhen Deng, Fan Yao, Pingting Hu, Shuo Shi, Lingyun Long, Dong Xie.
 Presenter affiliation: Institute for Nutritional Science, Shanghai Institutes for Biological Science, Chinese Academy of Science, Shanghai, China. 17
- Deletion of RTEL (Regulator of Telomere Length) in neural stem cells induced the formation of medulloblastoma**
 Sumit Sandhu, Xiaoli Wu, Hao Ding.
 Presenter affiliation: University of Manitoba, Winnipeg, Canada. 18
- Depletion of APC causes multiple developmental defects and disrupts hair follicle homeostasis**
Lukas E. Dow, Prem Premisriut, Johannes Zuber, Scott W. Lowe.
 Presenter affiliation: Cold Spring Harbor Laboratory, Cold Spring Harbor, New York. 19
- Bax and Bak independent cytochrome c release and cell death induced by PTX**
 Ni Biyun, Ma Qi, Zhao Lixia, Du Lei, Chen Quan.
 Presenter affiliation: The State Key Laboratory of Biomembrane and Membrane Biotechnology, Beijing, China. 20
- Massively parallel identification of optimized RNAi triggers using an adaptive sensor assay**
Christof Fellmann, Johannes Zuber, Gregory J. Hannon, Scott W. Lowe.
 Presenter affiliation: Cold Spring Harbor Laboratory, Cold Spring Harbor, New York; University of Zurich, Zurich, Switzerland. 21
- Role of E2F1 regulated *miR-449a/b* in cell cycle control and growth regulation in breast cancer cells**
Min Feng, Xiaojing Yang, Xia Jiang, Zhenlong Wu, Zhimei Li, Qiang Yu.
 Presenter affiliation: Genome Institute of Singapore, Singapore. 22

A generic model of cell's response to IR & p53's role in determining radiosensitivity	
<u>Siting Gan</u> , Haicen Yue, Qi Ouyang, Chao Tang.	
Presenter affiliation: Peking University, Beijing, China.	23
Stromal fibroblasts from the interface zone of human breast carcinomas induce an epithelial-mesenchymal transition-like state in breast cancer cells in vitro	
<u>Ming-Qing Gao</u> , Baek Gil Kim, Suki Kang, Yoon Pyo Choi, Hangran Park, Nam Hoon Cho.	
Presenter affiliation: Yonsei University College of Medicine, Seoul, South Korea.	24
The novel angiogenesis inhibitor 151702 induces endothelial cell apoptosis by selectively interacting with integrin $\alpha v\beta 5$.	
Yong Zhang, Wei Xiang, <u>Ruowen Ge</u> .	
Presenter affiliation: National University of Singapore, Singapore.	25
Analysis of non-oncogene addiction phenotypes in IntOGen data gives insights into transition into increased malignant states	
<u>Gunes Gundem</u> , Nuria Lopez-Bigas.	
Presenter affiliation: Pompeu Fabra Univeristy, Barcelona, Spain.	26
Integration of gene-expression data with pharmacological information to reposition existing drugs for basal-like breast cancer	
<u>Sonja Hänzelmann</u> , Robert Castelo.	
Presenter affiliation: Municipal Institute for Medical Research (IMIM), Barcelona, Spain.	27
Epigenetic downregulation of Disabled-2 switches TGF-β from a tumor suppressor to a tumor promoter	
<u>Adele Hannigan</u> , Paul Smith, Gabriela Kalna, Cristiana Lo Nigro, Reshma Shah, Meghan E. Maurer, Jonathan A. Cooper, Adrian L. Harris, Linda J. Nicholson, Milena Gasco, Tim Crook, Gareth J. Inman.	
Presenter affiliation: Beatson Institute for Cancer Research, Glasgow, United Kingdom.	28
Detection of DNA polymorphism and tumor mutation via whole exome capture and massively parallel sequencing	
<u>Xueda Hu</u> .	
Presenter affiliation: Beijing Genomics Institute in Shenzhen, Shenzhen, China.	29

Sustained expression of HIF-1α promotes genetic alteration for malignant progression	
Young-Gun Yoo, David L. Gillespie, Jared Christensen, Randy L. Jensen, <u>L. Eric Huang</u> .	
Presenter affiliation: University of Utah, Salt Lake City, Utah.	30
ASK1 is inducible by PKC-δ and contributes to phorbol ester-mediated cell cycle arrest through persistent JNK activation	
<u>Juhee Jeon</u> , Young-Rae Kim, Jae-Eun Jeong, Seung Hwan Son, Hyunji Lee, Kyeong Ah Park, Minho Won, Sanghee Shin, Jang Hee Hong, Jeong Ho Seok, Gang Min Hur.	
Presenter affiliation: Chungnam National University College of Medicine, Daejeon, South Korea.	31
The role of protein arginine methyltransferases in tumorigenesis	
<u>Janet Jin</u> , Peter Jackson, Guowei Fang.	
Presenter affiliation: Genentech Inc, South San Francisco, California.	32
Inflammatory TNFα-IRF7-IL6 signaling axis promotes glioblastoma formation through acquisition of angiogenesis and glioma stem cell function	
<u>Xun Jin</u> , Sung-Hak Kim, Hye-Min Jeon, Young Chang Lim, Samuel Beck, Hyunggee Kim.	
Presenter affiliation: Korea University, Seoul, South Korea.	33
Paxilline sensitizes malignant glioma cells to TRAIL-induced apoptosis via CHOP-mediated DR5 up-regulation and proteasome-mediated survivin down-regulation	
<u>You Jung Kang</u> , In Young Kim, Mi Jin Yoon, Eun Hee Kim, Seung U Kim, Taeg Kyu Kwon, Kyeong Sook Choi.	
Presenter affiliation: Ajou University School of Medicine, Suwon, South Korea.	34
20S-Ginsenoside Rg3 sensitizes cell death induced by DNA damage agents in human hepatocellular carcinoma cells via modulation of autophagy	
<u>Dong-Gun Kim</u> , Seung-Hoon Lee, Sung Won Kwon, Soon Sun Hong, You-Sun Kim.	
Presenter affiliation: Ajou University Suwon, South Korea.	35
DNA damage signal-dependent induction of orphan nuclear receptor Is important for p53 function	
<u>Hyunkyung Kim</u> , Ji Min Lee, Keun Il Kim, Sung Hee Baek.	
Presenter affiliation: Seoul National University, Seoul, South Korea.	36

Sensitization of TRAIL-mediated apoptosis by amiodarone in malignant glioma cells	
<u>In Young Kim</u> , You Jung Kang, Mi Jin Yoon, Eun Hee Kim, Jung Shick Kwon, Seung U Kim, Taeg Kyu Kwon, Kyeong Sook Choi. Presenter affiliation: Ajou University School of Medicine, Suwon, South Korea.	37
RIP1 has a negative regulatory function in noncanonical NF-κB pathway via TRAF2 degradation	
<u>Seung-Hoon Lee</u> , Dong-Gun Kim, Michael Morgan, Zheng-gang Liu, You-Sun Kim. Presenter affiliation: Ajou University Suwon, South Korea.	38
Phosphorylation of PHF20 by PKB is required to regulate the p53 function	
<u>Yuwen Li</u> , Kyeong Ah Park, Minho Won, Md.A. Sider, JaeEun Jeon, Juhee Jeon, Jeong Ho Seok, GangMin Hur, Jongsun Park, Janghee Hong. Presenter affiliation: Medical College of Chungnam National University, Daejeon, South Korea.	39
A group of general DNA replication origins and replicators sharing homologous sequences and dispersed throughout the human genome	
Junsuo Kan, Ziyi Wang, Zheng Tu, Jingjing Zhang, Xing Wu, <u>Chun Liang</u> . Presenter affiliation: Hong Kong University of Science and Technology, China.	40
Cdc14p resets the competency of replication licensing by dephosphorylating multiple initiation proteins during mitotic exit in budding yeast	
Yuanliang Zhai, Philip Y.K. Yung, Lin Huo, <u>Chun Liang</u> . Presenter affiliation: Hong Kong University of Science and Technology, China.	41
Centromere protein H Is a novel prognostic marker for human nonsmall cell lung cancer progression and overall patient survival	
<u>Wen-Ting Liao</u> , Xi Wang, Li-Hua Xu, Qing-Li Kong, Chun-Ping Yu, Man-Zhi Li, Ling Shi, Mu-Sheng Zeng, Li-Bing Song. Presenter affiliation: State Key Laboratory of Oncology in Southern China, Guangzhou, China; SunYat-sen University, Guangzhou, China.	42

SPOP mislocation in kidney cancer enhances cells growth by the degradation of DUSP7

Jiang Liu, Weimin Ci, Guoqiang Li, Kevin White.

Presenter affiliation: Beijing Institute of Genomics, Beijing, China.

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MicroRNAs regulating breast normal stem cells, cancer stem cells and metastasis

Huiping Liu, Yohei Shimono, Jessica Bockhorn, Geoffrey L. Greene, Michael F. Clarke.

Presenter affiliation: The University of Chicago, Chicago, Illinois; Stanford University, Palo Alto, California.

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A genome-wide RNAi screen for Ras synthetic lethal interactions

Ji Luo, Michael J. Emanuele, Danan Li, Chad J. Creighton, Michael R. Schlabach, Thomas F. Westbrook, Kwok-Kin Wong, Stephen J. Elledge.

Presenter affiliation: Howard Hughes Medical Institute Harvard Medical School, Boston, Massachusetts.

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WEDNESDAY, April 7—4:30 PM

Chinese Tea Tasting

WEDNESDAY, April 7—7:30 PM

SESSION 4 METABOLISM AND CANCER

Chairperson: T. Mak, Ontario Cancer Institute, Toronto, Canada

KEYNOTE SPEAKER

Defining the metabolic barrier(s) to cell transformation

Craig B. Thompson.

Presenter affiliation: University of Pennsylvania, Philadelphia, Pennsylvania.

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Ribosome biogenesis, cell cycle checkpoints and cancer progression

S. Fumagalli, T. Teng, G. Thomas.

Presenter affiliation: University of Cincinnati College of Medicine, Cincinnati, Ohio.

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Regulation of intermediary metabolic enzymes in normal and cancer cells

Yue Xiong, Wei Xu, Wenqing Jiang, Yan Lin, Tenfei Zhang, Pu Wang, Zhengyu Zha, Wei Yu, Qunying Lei, Shimin Zhao, Kun-Liang Guan.

Presenter affiliation: Fudan University, Shanghai, China; University of North Carolina, Chapel Hill, North Carolina.

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mTOR and the control of growth

David M. Sabatini.

Presenter affiliation: Howard Hughes Medical Institute/Whitehead Institute for Biomedical Research, Cambridge, Massachusetts; Massachusetts Institute of Technology, Cambridge, Massachusetts; Broad Institute, Cambridge, Massachusetts; Koch Institute for Integrative Cancer Research, Cambridge, Massachusetts.

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AMPK mediates quiescence and opposes the Warburg effect in Anchorage independent cell growth

Jiyong Liang, Zhiyong Ding, Jae-Ho Cheong, Yiling Lu, Gordon B. Mills.

Presenter affiliation: University of Texas M.D. Anderson Cancer Center, Houston, Texas.

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Tumour cell survival Under metabolic stress

Tak W. Mak.

Presenter affiliation: Campbell Family Institute, Toronto, Canada.

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THURSDAY, April 8—9:00 AM

SESSION 5 CANCER GENOMICS / EPIGENOMICS

Chairperson: **Y. Nakamura**, University of Tokyo, Japan

Evolution of the cancer genome

Michael Stratton.

Presenter affiliation: Wellcome Trust Sanger Institute, Cambridge, United Kingdom.

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Genomic and epigenomic alterations in liver cancer <u>Hiroyuki Aburatani.</u> Presenter affiliation: The University of Tokyo, Tokyo, Japan.	53
The cancer epigenome meets the cancer genome <u>Stephen B. Baylin.</u> Presenter affiliation: The Johns Hopkins Hopkins Medical Institutions, Baltimore, Maryland.	54
Evolution of the population of cancer cells in one case of hepatocellular carcinoma (HCC) <u>Weiwei Zhai,</u> Xuemei lu, Jue Ruan, Yong Tao, Yu Wang, Jun Cai, Shaoping Ling, Shiou-Hwei Yeh, Pei-Jer Chen, Chung-I Wu. Presenter affiliation: Beijing Institute of Genomics, Beijing, China.	55
Constructing and deconstructing cancer using mouse models and RNAi <u>Scott W. Lowe.</u> Presenter affiliation: Howard Hughes Medical Institute/Cold Spring Harbor Laboratory, Cold Spring Harbor, New York.	56
Functionalizing the cancer genome <u>Lynda Chin.</u> Presenter affiliation: Dana-Farber Cancer Institute and Harvard Medical School, Boston, Massachusetts; Broad Institute of MIT and Harvard, Cambridge, Massachusetts.	57
Development of therapeutic cancer vaccine and construction of clinical research network in Japan <u>Yusuke Nakamura.</u> Presenter affiliation: The University of Tokyo, Tokyo, Japan.	58

THURSDAY, April 8—1:30 PM

Suzhuo Garden Visit

THURSDAY, April 8—7:30 PM

SESSION 6 STEM CELLS AND CANCER

Chairperson: **L. Parada**, University of Texas Southwestern Medical Center, Dallas, USA

KEYNOTE SPEAKER

Lgr5 stem cells in self-renewal and cancer

Hans Clevers.

Presenter affiliation: Hubrecht Institute, Utrecht, Netherlands.

59

The cancer stem cell model applies to some cancers but not others

Elsa Quintana, Mark Shackleton, Sean Morrison.

Presenter affiliation: Howard Hughes Medical Institute, University of Michigan, Ann Arbor, Michigan.

60

P53 deletion induces liver cancer associated with increased self renewal and chromosomal instability of liver stem cells

Sarah-Fee Katz, André Lechel, Anna C. Obenauf, Yvonne Begus-Nahrmann, Daniel Hartmann, Peter Schirmacher, Michael R. Speicher, K. Lenhard Rudolph.

Presenter affiliation: University of Ulm, Ulm, Germany.

61

Selective targeting of radiation-resistant tumor-initiating cells

Mei Zhang, Jason I. Herschkowitz, Rachel L. Atkinson, Wei Zhao, George Murrow, David G. Edwards, Jana Knezevic, Stephanie B. Greene, Daniel Medina, Charles M. Perou, Jeffrey M. Rosen.

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

62

A complex of hTERT, Brg1 and the nucleolar GTP-binding proteins GNL3L and nucleostemin regulates tumor initiating cell behavior

Naoko Okamoto, Mami Yasukawa, Christine Nguyen, Richard Possemato, Kiyoko Fukami, William C. Hahn, Kenkichi Masutomi.

Presenter affiliation: National Cancer Center Research Institute, Chuo-ku Tokyo, Japan; Tokyo University of Pharmacy and Life Science, Hachioji Tokyo, Japan.

63

Incorporation of developmental and metabolic cues into DNA damage response

Baojie Li.

Presenter affiliation: Institute of Molecular and Cell Biology, Singapore, Singapore.

64

Neural stem cells and cancer stem cells

Luis F. Parada.

Presenter affiliation: University of Texas Southwestern Medical Center, Dallas, Texas.

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FRIDAY, April 9—9:00 AM

SESSION 7 TUMOR SUPPRESSOR GENE NETWORKS

Chairperson: **K. Vousden**, Beatson Institute for Cancer Research, Glasgow, United Kingdom

Drug discovery in the p53 pathway

David P. Lane.

Presenter affiliation: A* STAR, Singapore.

66

The Axin/p53 pathway in tumor suppression

Sheng-Cai Lin.

Presenter affiliation: Xiamen University, Xiamen, China.

67

Bcl-2 and the mitochondrial pathway of apoptosis

Douglas R. Green.

Presenter affiliation: St. Jude Children's Research Hospital, Memphis, Tennessee.

68

Leukocyte apoptosis is critical for γ -irradiation-induced thymic lymphoma development

Ewa M. Michalak, Cassandra J. Vandenberg, Alex Delbridge, Li Wu, Clare L. Scott, Jerry M. Adams, Andreas Strasser.

Presenter affiliation: Walter & Eliza Hall Institute, Melbourne, Australia.

69

Role of autophagy in cancer and therapy

Eileen P. White.

Presenter affiliation: Rutgers University, New Brunswick, New Jersey.

70

Rb regulates fate choice during normal development and tumor formation

Eliezer Calo, Paul S. Danielian, Jose A. Quintero, Seth D. Berman, Jacqueline A. Lees.

Presenter affiliation: David H. Koch Institute for Integrative Cancer Research, MIT, Cambridge, Massachusetts.

71

BRCA1 regulates Nlp, an oncogenic centrosomal protein that is deregulated in human tumors

Shujuan Shao, Rong Liu, Yang Wang, Yongmei Yong, Qimin Zhan.

Presenter affiliation: Chinese Academy of Medical Sciences Cancer Institute, Beijing, China.

72

REgY promotes cancer development by inactivating the tumor suppressor p53

Jiang Liu, Guowu Yu, Pan Zhao, Xiaotao Li.

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

73

Functions of wild type and mutant p53

Patricia Muller, Patricia Roxburgh, Andreas Hock, Patrick Caswell, Jim Norman, Karen Vousden.

Presenter affiliation: The Beatson Institute for Cancer Research, Glasgow, United Kingdom.

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FRIDAY, April 9—2:00 PM

SESSION 8 POSTER SESSION II

Superoxide flashes trigger oxidative stress-induced apoptosis

Qi Ma, Huaqiang Fang, Wei Shang, Lei Liu, Quan Chen, Heping Cheng.

Presenter affiliation: Chinese Academy of Sciences, Beijing, China.

75

Systemic signals regulate aging and rejuvenation of blood stem cell niches

Shane R. Mayack, Jennifer L. Shadrach, Francis S. Kim, Amy J. Wagers.

Presenter affiliation: Howard Hughes Medical Institute, Harvard University, Harvard Stem Cell Institute, and Joslin Diabetes Center, Boston, Massachusetts.

76

Tumor progression revealed by sequencing 100 single cells in a heterogeneous breast carcinoma

Nicholas E. Navin, Jude Kendall, Kerry Cook, Jennifer Troge, James Hicks, Michael Wigler.

Presenter affiliation: Cold Spring Harbor Laboratory, Cold Spring Harbor, New York; Stony Brook University, Stony Brook, New York.

77

The highly homologous T-box transcription factors, TBX2 and TBX3, have distinct roles in the oncogenic process

Jade Peres, Emily Davis, Shaheen Mowla, Jarod A. Li, Sabina Wansleben, Sharon Prince.

Presenter affiliation: University of Cape Town, Cape Town, South Africa.

78

U.S.-China cancer research cooperation and the U.S. National Cancer Institute

Julie A. Schneider, Roger I. Glass, Anna D. Barker.

Presenter affiliation: U.S. National Cancer Institute, Beijing, China.

79

Negative regulation of hypoxic responses via reptin chromatin-remodeling complex in breast cancer

Hi-Jai R. Shin, Jason S. Lee, Sung Hee Baek.

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

80

The oncogenic transcription factor TBX2 is regulated by transforming growth factor β 1

James Smith, Huajian Teng, Sharon Prince.

Presenter affiliation: University of Cape Town, Cape Town, South Africa.

81

Reverse expression of inhibitor of differentiation 3 by EGF and bFGF influences brain tumor plasticity

Xun Jin, Young-Woo Sohn, Jinlong Yin, Sung-Hak Kim, Young-Chang Lim, Hyunggee Kim.

Presenter affiliation: Korea University, Seoul, South Korea.

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Impact of NAD(P)H:Quinone oxidoreductase-1 on pigmentation

Kyung-Cheol Sohn, Tae-Young Choi, Jeung-Hoon Lee, Tae-Jin Yoon, Chang Deok Kim.

Presenter affiliation: College of Medicine, Chungnam National University, Daejeon, South Korea.

83

Extracellular Hsp90α regulates the processing of matrix metalloproteinase-2 and promotes tumor angiogenesis <u>Xiaomin Song</u> , Xiaofeng Wang, Wei Zhuo, Hubing Shi, Yan Fu, Yongzhang Luo. Presenter affiliation: Tsinghua University, Beijing, China.	84
Overexpression of the type II transmembrane serine protease TMPRSS2 alters prostatic basement membrane constituents in vivo and may influence prostate cancer progression and metastasis <u>Yu Sun</u> , Jared Lucas, Susana Hernandez, Peter Nelson. Presenter affiliation: Fred Hutchinson Cancer Research Center, Seattle, Washington.	85
Epigenome analysis identifies differentiation regulator HAND1 as a tumor suppressor in colon cancer and is inactivated by both DNA and histone methylations <u>Jing Tan</u> , Qiang Yu. Presenter affiliation: Genome Institute of Singapore, Singapore.	86
The glucose-responsive transcription factor ChREBP contributes to reprogramming glucose metabolism in support of anabolic synthesis, cell proliferation and tumor growth <u>Xuemei Tong</u> , Fangping Zhao, Anthony Mancuso, Joshua J. Gruber, Craig B. Thompson. Presenter affiliation: University of Pennsylvania, Philadelphia, Pennsylvania.	87
HIF-dependent regulation of endocytosis <u>Yi Wang</u> , Olga Roche, Julie Metcalf, Meredith Irwin, Michael Ohh. Presenter affiliation: University of Toronto, Toronto, Canada.	88
Induction of autophagy by Hsp90 inhibitors <u>Suiguan Wang</u> , Carole Sourbier, Guofeng Zhang, Len Neckers. Presenter affiliation: National Cancer Institute, Bethesda, Maryland.	89
LAT3 regulates prostate cancer cell proliferation through the mTOR signalling pathway <u>Qian Wang</u> , John E. Rasko, Jeff Holst. Presenter affiliation: University of Sydney, Sydney, Australia.	90
Targeting mitochondrial glutaminase activity blocks oncogenic transformation <u>Jianbin Wang</u> , Jon W. Erickson, Reina Fuji, Sekar Ramachandran, Xu Peng, Richard A. Cerione. Presenter affiliation: Cornell University, Ithaca, New York.	91

Rac1 is crucial for skin tumor formation by controlling Pak1-Mek-Erk hyperactivation and hyperproliferation in vivo

Zhipeng Wang, Qibing Mei, Cord Brakebusch.

Presenter affiliation: University of Copenhagen, Copenhagen, Denmark; Fourth Military Medical University, Xi'an, China.

92

A20 is a key element in the NF- κ B-mediated control of the JNK cascade through targeting ASK1

Minho Won, Kyung-Cheol Sohn, Kyeong Ah Park, Juhee Junn, Hyunji Lee, Jae-Eun Jeong, Seung Hwan Son, Jang Hee Hong, Gang Min Hur.

Presenter affiliation: Chungnam National University College of Medicine, Daejeon, South Korea.

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TLS polymerases play an important roles in chemotherapy resistance

Kun Xie, Jason Doles, Graham Walker, Michael Hemann.

Presenter affiliation: Massachusetts Institute of Technology, Cambridge, Massachusetts.

94

Interferon pathway is activated in BRCA mutants and suppresses DNA damage induced apoptosis

Hong Xu, Samuel Aparicio.

Presenter affiliation: BC Cancer Research Center, Vancouver, Canada.

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Identification of driver mutations in evolution of a colorectal tumor at single nucleotide resolution

Liu Yang, Weiting Ge, Yanqing Huang, Dong'er Zhou, Jinghong Xu, Liangtao Zheng, Rui Bai, Dan Li, Qi Dong, Huanming Yang, Suzhan Zhang, Shu Zheng.

Presenter affiliation: Cancer Institute, Hangzhou, China.

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Next generation sequencing to reveal new sight into cancer research

Xu Yang.

Presenter affiliation: BGI Shenzhen, Shenzhen, China.

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The telomeric proteins TRF2 and Apollo are upregulated at early stages of colon carcinogenesis and cooperate with Topoisomerase 2 to protect human telomeres

Jing Ye, Christelle Lenain, Serge Bauwens, Yunlin Wu, Eric Gilson.

Presenter affiliation: Shanghai Jiaotong University, Shanghai, China; Ecole Normale Supérieure de Lyon, Lyon, France.

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- Association of NF- κ B activity and single nucleotide polymorphic alleles of TNFAIP3 (A20) SNP in Rheumatoid arthritis patients**
Hyun Kyung Yoon, Jae-Eun Jeong, Jang Hee Hong, Gang Min Hur, Won Hyung Lee.
 Presenter affiliation: Chungnam National University Hospital, Daejeon, South Korea. 99
- Photodynamic therapy (PDT) – initiation of apoptosis via activation of stress-activated p38 MAPK and JNK signal pathway in 2 human carcinoma cells (H460/Bcl-2 and H460/neo)**
C.M.N. Yow, R.W.K. Wu.
 Presenter affiliation: Hong Kong Polytechnic University, Hong Kong, China. 100
- Bovine papillomaviruse type 1 (BPV-1) transforms equine fibroblast cells and induces invasion**
ZhengQiang Yuan, Margeret Finlay, Elizabeth A. Gault, Iain Morgan, M Saveria Campo, Lubna Nasir.
 Presenter affiliation: University of Glasgow, Glasgow, United Kingdom. 101
- Single cell analysis reveals heterogeneous activation of PI3K in cell populations that is regulated by PI3K protein levels and altered in tumor cells bearing *PIK3CA* mutations**
Tina L. Yuan, Lewis C. Cantley.
 Presenter affiliation: Harvard University, Boston, Massachusetts. 102
- Targeted therapy with attenuated *Salmonella typhimurium* carrying Stat3-shRNA-expressing vectors cures orthotopic transplantation hepatocellular carcinoma in mouse models**
Ling Zhang, Yong Tian, Baofeng Guo, Huijie Jia, Xuejian Zhao, Deqi Xu.
 Presenter affiliation: Jilin University, Changchun, China. 103
- Two phases of p53 response to DNA damage: pulses and bistability**
Xiao-Peng Zhang, Feng Liu, Wei Wang.
 Presenter affiliation: Nanjing University, Nanjing, China. 104
- Apoptotic response of human melanoma cells to inhibition of mutant B-RAF^{V600E} involves preferential splicing of Bim_s**
 Chen Chen Jiang, Fritz Lai, Kwang Hong Tay, Rick F. Thorne, Peter Hersey, Xu Dong Zhang.
 Presenter affiliation: Calvary Mater Newcastle Hospital, Newcastle, Australia. 105

Cross-talk between the LKB1-AMPK and BRAF-MEK-ERK signaling pathways

Bin Zheng, Lewis Cantley.

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

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Multi-omics analysis of renal cell carcinoma

Zhou Guangyu.

Presenter affiliation: Beijing Genomics Institute, Shenzhen, Guangdong, China.

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Beclin 1 cleavage by caspase-3 inactivates autophagy and promotes apoptosis

Yushan Zhu, Quan Chen.

Presenter affiliation: Nankai University, Tianjin, China.

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Novel anticancer agent of SPRC in vitro: inducing apoptosis through regulating the expression of Bax, Bcl-2 and p53

Y.Z. Zhu.

Presenter affiliation: Fudan University School of Pharmacy, Shanghai, China.

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FRIDAY, April 9—4:30 PM

CONCERT

FRIDAY, April 9—7:30 PM

SESSION 9 TUMOR MICROENVIRONMENT AND CANCER IMMUNOLOGY

Chairperson: **M. Karin**, University of California-San Diego, USA

KEYNOTE SPEAKER

Immunity and cancer—From the dawn of cytokine molecular biology to IRFs and regulation of innate immune responses

Tadatsugu Taniguchi.

Presenter affiliation: University of Tokyo, Tokyo, Japan.

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Immune checkpoint blockade in cancer therapy

James P. Allison.

Presenter affiliation: Memorial Sloan-Kettering Cancer Center, New York, New York.

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“Senescence surveillance” suppresses carcinogenesis in the liver and involves an adaptive immune response against premalignant senescent hepatocytes

Tae-Won Kang, Tetyana Yevsa, Norman Woller, Lisa Hoenicke, Torsten Wuestefeld, Peter Schirmacher, Stefan Kubicka, Lars Zender.

Presenter affiliation: Helmholtz Centre for Infection Research, Braunschweig, Germany; Hannover Medical School, Hannover, Germany.

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TRF2 controls a cell-extrinsic anti-cancer barrier via activation of natural killer cells

Annamaria Biroccio, Sebastien Pinte, Carlo Leonetti, Jing Ye, Eric Vivier, Eric Gilson.

Presenter affiliation: University of Nice, Nice, France.

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Epithelial-mesenchymal transition at the margins—A new concept of the tumor-microenvironment interface as a dynamic tissue zone vital for tumor progression

Baek Gil Kim, Hee Jung Ahn, Suki Kang, Yoon Pyo Choi, Ming-Qing Gao, Nam Hoon Cho.

Presenter affiliation: Yonsei University College of Medicine, Seoul, South Korea.

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Endostatin inhibits tumor lymphangiogenesis and lymphatic metastasis via cell surface nucleolin on lymphangiogenic endothelial cells

Wei Zhuo, Chong Luo, Xiaofeng Wang, Xiaomin Song, Yan Fu, Yongzhang Luo.

Presenter affiliation: Tsinghua University, Beijing, China.

115

The molecular pathogenesis of hepatocellular carcinoma and its progression

Michael Karin.

Presenter affiliation: University of California, San Diego, California.

SATURDAY, April 10—9:00 AM

SESSION 10 SIGNALING AND CANCER II

Chairperson: **Y. Luo**, Tsinghua University, Beijing, China

MicroRNA-directed regulation of cell growth and death

Narry Kim.

Presenter affiliation: Seoul National University, Seoul, South Korea. 116

Supercomputing for cancer systems biology

Satoru Miyano.

Presenter affiliation: University of Tokyo, Tokyo, Japan. 117

Inhibition of a Myc synthetic lethal gene linked to Wnt blocks tumor growth in mice

M. Toyoshima, Carla Grandori.

Presenter affiliation: Fred Hutchinson Cancer Research Center, Seattle, Washington; University of Washington, Seattle, Washington. 118

Stem-like cancer cells are identified and inducible by increasing genomic instability in human nasopharyngeal carcinoma cells

Yi Liang, Jing Wang, Zhendong Zhong, Yijun Huang, Wen Deng, Junxia Cao, George Tsao, Quentin Liu, Duanqing Pei, Tiebang Kang, Yi-Xin Zeng.

Presenter affiliation: Sun Yat-Sen University, Guangzhou, China. 119

Hyperactive mTOR impairs cell differentiation through the STAT3-p63-Notch signaling cascade

Jianhui Ma, Huangxuan Shen, Haiyong Peng, Qian Sun, Xiaojun Zha, Fang Wang, Ying Wang, Yanling Jing, Shu Zhang, Rongrong Chen, Xinxin Chen, Hongbing Zhang.

Presenter affiliation: Peking Union Medical College, Chinese Academy of Medical Sciences, Beijing, China. 120

The critical role of Mediator Med23 in Ras-active lung cancer

Yang Xu, Meng Zhao, Jing-wen Yin, Gang Wang.

Presenter affiliation: Shanghai Institutes for Biological Sciences, Shanghai, China. 121

Identification of a subpopulation of cells that display mesenchymal features and resistance to erlotinib within lung tumor cells prior to treatment

Zhan Yao, Ding Cheng Gao, Matthew Camiolo, Brendon Stiles, Trine Lindsted, Silvia Fenoglio, Nasser Altorki, Vivek Mittal, Raffaella Sordella.

Presenter affiliation: Cold Spring Harbor Laboratory, New York. 122

Targeting tumor angiogenesis and metastasis

Yongzhang Luo.

Presenter affiliation: Tsinghua University, Beijing, China. 123

SATURDAY, April 10—2:00 PM

SESSION 11 METABOLISM AND CELL SURVIVAL

Chairperson: **X. Wang**, University of Texas Southwestern Medical Center, Dallas, USA

PI 3-kinase and cancer cell metabolism

Lewis C. Cantley.

Presenter affiliation: Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, Massachusetts. 124

2-Oxoglutarate-dependent dioxygenases as therapeutic targets for the treatment of cancer

William G. Kaelin, Jr..

Presenter affiliation: HHMI and Dana-Farber Cancer Institute, Boston, Massachusetts. 125

Deconstructing oncogenesis and tumour suppression

Gerard I. Evan.

Presenter affiliation: UCSF, San Francisco, California; University of Cambridge, Cambridge, United Kingdom. 126

Mechanisms of programmed cell death—From apoptosis to necroptosis

Caroline Yi, Junichi Hitomi, Dana Christofferson, Wen Zhou, Junying Yuan.

Presenter affiliation: Harvard Medical School, Boston, Massachusetts. 127

- A soluble form of the pilus protein FimA targets VDAC-hexokinase at mitochondria to suppress host cell apoptosis**
 Sunil K. Sukumaran, Nai Yang Fu, Victor C. Yu.
 Presenter affiliation: National University of Singapore, Singapore,;
 Institute of Molecular and Cell Biology, Singapore, Singapore. 128
- Liver tumorigenesis—c-Jun antagonizes c-Fos-dependent apoptosis in tumor initiation**
Lijian Hui.
 Presenter affiliation: Shanghai Institutes for Biological Sciences,
 Shanghai, China. 129
- Structure of the CED-4 apoptosome—Insights into its assembly and function**
Yigong Shi.
 Presenter affiliation: Tsinghua University, Beijing, China. 130
- Sense and sensibility of cancer cells' response to Smac mimetics**
 Sean L. Petersen, Lai Wang, Michael Peyton, John Minna, Patrick Harran, Xiaodong Wang.
 Presenter affiliation: University of Texas Southwestern Medical Center,
 Dallas, Texas. 131

SATURDAY, April 10

BANQUET

Cocktails 6:00 PM

Dinner 6:45 PM

SUNDAY, April 11—9:00 AM

SESSION 12 TARGETED THERAPEUTICS / PERSONALIZED
MEDICINE

Chairperson: **T. Tlsty**, University of California School of Medicine,
San Francisco, USA

Biomarker opportunities—Turning theory into practice

Pearl S. Huang, James Watters, Andrey Loboda, Misha Nebozhyn,
Theresa Zhang, Jannik Anderson, Kumuko Nagashima, Joel
Klappenbach, Alexi Podtelevnikov, Keith Tannis, Samuel Blackman,
Donald Bergstrom.

Presenter affiliation: Merck & Co., North Wales, Pennsylvania. 132

The two faces of p27/KIP1 in cancer

Christopher J. Kemp, Susan Tilton, Karen S. Spratt, Kay E. Gurley.

Presenter affiliation: FHRC, Seattle, Washington. 133

**A functional genetic approach to anti-cancer drug
characterization**

Hai Jiang, Justin Pritchard, Douglas A. Lauffenburger, Michael T.
Hemann.

Presenter affiliation: MIT, Cambridge, Massachusetts. 134

Synthetic lethal approaches to cancer therapy

Alan Ashworth.

Presenter affiliation: The Breakthrough Breast Cancer Research
Centre, London, United Kingdom. 135

**Antibody against the Csf-1 receptor targets tumour macrophages
*in vivo***

James S. Palmer, Stephen L. Cronau, Elke Seppanen, Kelli P.
MacDonald, Geoffrey R. Hill, Brandon J. Wainwright, Lynn Bonham,
David A. Hume.

Presenter affiliation: University of Queensland, Brisbane, Australia. 136

**The impact of human wild type EGFR on lung tumorigenesis and
in vivo sensitivity to EGFR-targeted therapies**

Liang Chen, Dalia Ercan, Jeonghee Cho, Pasi A. Janne, Matthew L.
Meyerson, Kwok-Kin Wong.

Presenter affiliation: Dana-Farber Cancer Institute, Boston,
Massachusetts. 137

Gene expression in human hepatocellular carcinoma and prognostic signatures in tumor-and-nontumor tissues predicting survivals of patients with liver cancer

John M. Luk.

Presenter affiliation: Hong Kong University, Hong Kong, China;
National University of Singapore, Singapore, Singapore.

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Molecular alterations that predict malignancy

Thea D. Tlsty.

Presenter affiliation: University of California San Francisco, San Francisco, California.

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