

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Cancer Stem Cells: Advances in Biology and Clinical Translation (EK46)

May 19-21, 2021 • Virtual at your computer

Scientific Organizers: Irene Oi Lin Ng, Xin Wei Wang and Dean G. Tang

Supported by the Directors' Fund

WEDNESDAY, MAY 19

Stem Cells and Cancer (6:10am Denver/Mountain Time Start)

***Irene Oi Lin Ng**, University of Hong Kong, Hong Kong
Session Chair

Duanqing Pei, Guangzhou Institutes of Biomedicine and Health, China
Chemical Induction of Pluripotency

Lola McAdams Reid, University of North Carolina at Chapel Hill, USA
Patch Grafting of Endodermal Stem/Progenitor Organoids Enable Hepatic and Pancreatic Cell Therapies

***Xin Wei Wang**, NCI, National Institutes of Health, USA
Cancer Stemness and Its Clinical Impact in Hepatobiliary Cancers

Sonam Bhatia, Cold Spring Harbor Laboratory, USA
Short Talk: Patient-Derived Breast Tumor Organoids as Model Systems to Study Tumorigenesis and Tumor Heterogeneity

Panagiotis Karras, VIB Center for Cancer Biology, Belgium
Short Talk: A Developmental Cellular Hierarchy in Melanoma Uncouples Growth and Metastatic Phenotypes

Cancer Stem Cells, Tumor Microenvironment and Immunity (8:10am Denver/Mountain Time Start)

***Irene Oi Lin Ng**, University of Hong Kong, Hong Kong
Session Chair

***Xin Wei Wang**, NCI, National Institutes of Health, USA
Session Chair

Jan Joseph Melenhorst, University of Pennsylvania, USA
Decade-Long Remission and Persistence of Chimeric Antigen Receptor T Cells in Leukemia: Lessons Learned from Exceptional Performers

Markus Grompe, Oregon Health & Science University, USA
The Role of Polyploid Hepatocytes during Liver Regeneration and Cancer

Justin D. Lathia, Lerner Research Institute, Cleveland Clinic, USA
Targeting Cancer Stem Cell Immune Cell Interactions in Glioblastoma

Erwei Song, Sun-Yat-Sen Memorial Hospital, China
Targeting Tumor Microenvironment to Eradicate Cancer Stem Cells

Bauer LeSavage, Stanford University, USA
Short Talk: Engineered Matrices Promote Stiffness-Dependent Enrichment of Cancer Stem Cells and Chemoresistance in Human Pancreatic Ductal Adenocarcinoma Organoids

Career Roundtable (11am Denver/Mountain Time Start)

Irving L. Weissman, Stanford University, USA

Wolf Ruprecht Wiedemeyer, AbbVie, Inc., USA

Shaheen Sikandar, University of California - Santa Cruz, USA

Poster Session (12:30pm Denver/Mountain Time Start)

THURSDAY, MAY 20

Cancer Stem Cells and Cancer Heterogeneity (6am Denver/Mountain Time Start)

***Irene Oi Lin Ng**, University of Hong Kong, Hong Kong
Session Chair

***Dean G. Tang**, Roswell Park Cancer Institute, USA
Session Chair

Calvin Kuo, Stanford University, USA
Organoid Modeling of the Tumor Microenvironment

Ning Zhang, Peking University, China
Single Cell Analysis on Liver Cancer

Richard White, Oxford, UK
Zebrafish Modeling of Melanoma Cell Fate

Stephanie K.Y. Ma, University of Hong Kong, Hong Kong
Non-Cellular Components of the Tumor Microenvironment in Maintenance of Liver Cancer Stemness

Lichun Ma, National Institutes of Health, USA
Short Talk: Single-Cell Atlas of Tumor Clonal Evolution in Liver Cancer

Rebecca Chin, City University of Hong Kong, Hong Kong
Short Talk: Clustering of Super-Enhancers for Characterizing Subtype Identity in Breast Cancer

Cancer Stem Cells and Cancer Biology (8:30am Denver/Mountain Time Start)

***Dean G. Tang**, Roswell Park Cancer Institute, USA
Session Chair

Michael M. Shen, Columbia University, USA
Investigating Lineage Plasticity in Organoid Models of Prostate and Bladder Cancer

***Irene Oi Lin Ng**, University of Hong Kong, Hong Kong
Functional Genomics and Single Cell Analysis to Uncover Biomarkers in Hepatocellular Carcinoma

Klaus H. Kaestner, University of Pennsylvania School of Medicine, USA
Genetic Screens for Drivers and Modifiers of Liver Cancer

Lei Zhou, University of Hong Kong, Hong Kong
Short Talk: Lineage Tracing and Single-Cell Analysis Reveal Prom1+ Transit-Amplifying Tumor Cells and Their Dynamic Cellular Transition during Liver Cancer Progression

Shaheen Sikandar, University of California - Santa Cruz, USA
Short Talk: Identification of a Minority Population in Breast Cancer that Integrates into the Vasculature and Initiates Metastasis

Meet the Editors (11:30am Denver/Mountain Time Start)

Sara Hamilton, Cell Press, USA

Sarah Seton-Rogers, Nature Reviews Cancer, UK

Daniel Klimmeck, EMBO Journal, Germany

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FRIDAY, MAY 21

Cancer Stem Cells: Modeling and Regulation (6am Denver/Mountain Time Start)

***Xin Wei Wang**, NCI, National Institutes of Health, USA
Session Chair

***Dean G. Tang**, Roswell Park Cancer Institute, USA
Session Chair

Clemens A. Schmitt, Max Delbrück Center for Molecular Medicine, Germany
Senescence Associated Stemness as a Mechanism of Treatment Failure in Cancer

Wei Guo, University of Pennsylvania, USA
Tumor-Derived Exosomes in Immune Suppression

Carmen Chak-Lui Wong, University of Hong Kong, Hong Kong
Hypoxia, Cancer and Cancer Stemness

Junfang Ji, Zhejiang University, China
miRNAs and Hepatic Cancer Stem Cells

Cancer Stem Cells: Clinical Translation (7:50am Denver/Mountain Time Start)

***Xin Wei Wang**, NCI, National Institutes of Health, USA
Session Chair

***Dean G. Tang**, Roswell Park Cancer Institute, USA
Molecular Understanding and Therapeutic Targeting of Prostate Cancer Cell Heterogeneity

Anna Dubrovska, University Hospital Carl Gustav Carus, Germany
Cancer Stem Cells as Biomarkers for Radiotherapy Outcome and Targets for Combined Treatments

Chunzhang Yang, NCI, National Institutes of Health, USA
IDH1 Mutation Predisposes Distinctive Therapeutic Vulnerabilities in Glioma Stem Cells

Wolf Ruprecht Wiedemeyer, AbbVie, Inc., USA
Characterization and Targeting of Distinct Subpopulations Driving Tumor Progression and Drug Resistance in Advanced Solid Tumors

Keynote Address and Closing Remarks (9:30am Denver/Mountain Time Start)

***Irene Oi Lin Ng**, University of Hong Kong, Hong Kong
Session Chair

***Dean G. Tang**, Roswell Park Cancer Institute, USA
Session Chair

***Xin Wei Wang**, NCI, National Institutes of Health, USA
Session Chair

Irving L. Weissman, Stanford University, USA
Normal and Neoplastic Stem Cells

Networking Lounge (10:10am Denver/Mountain Time Start)