Epigenetic Mechanisms and Cancer Treatment (B1)
February 4-7, 2024 • Eldorado Hotel & Spa • Santa Fe, NM, USA
Scientific Organizers: Tony Kouzarides, Rab K. Prinjha and Marisa S. Bartolomei
Supported by the Directors’ Fund

Scholarship Deadline: October 31, 2023 / Abstract Deadline: October 31, 2023 / Discounted Registration Deadline: December 5, 2023

SUNDAY, FEBRUARY 4
Arrival and Registration

MONDAY, FEBRUARY 5
Welcome and Keynote Address
Cigall Kadoch, Dana-Farber Cancer Institute, Harvard Medical School, USA
Structure and Function of Mammalian SWI/SNF Chromatin Remodeling Complexes in Health and Disease

Targeting Epigenetic Pathways in Cancer
Ali Shilatifard, Northwestern University, USA
Principles of Epigenetics and Chromatin in Development and Human Disease
Mark A. Dawson, Peter MacCallum Cancer Centre, Australia
Targeting the Epigenome for Therapeutic Gain
Tony Kouzarides, University of Cambridge, UK
Disruption of RNA Modification Pathways in Cancer
Andrew Muntean, University of Michigan, USA
Short Talk: The YEATS Domain Impacts MLL-ENL Leukemic Stem Cell Frequency through Transcriptional Target Recognition

Poster Session 1
Career Roundtable

Targeting Transcription in Cancer
Kristian Helin, Institute of Cancer Research, UK
Epigenetic Regulation of Transcription
Karen Adelman, Harvard Medical School, USA
Rewiring of Transcriptional Enhancers in Cancer and in Response to Therapeutics
Musa M. Mhlanga, Radboudumc Institute for Molecular Life Sciences, Netherlands
Compartmentalisation and Gene Interplay in Transcription
Zuzana Tothova, Dana-Farber Cancer Institute, USA
Short Talk: Cohesin Complex Regulates R-loop Resolution and Drives Development of Myeloid Malignancies
Nils Cordes, Heimholtz-Zentrum, Germany
Short Talk: Chromatin Architecture and Gene Expression are Critically Co-regulated by α7 Integrin in Head and Neck Cancer

TUESDAY, FEBRUARY 6
Chromatin Structure and Regulation
Robert E. Kingston, Massachusetts General Hospital, USA
Nucleosome Compaction and Phase Transition in Repression
Luciano Di Croce, CRG - Center for Genomic Regulation, Spain
Mechanisms of Polycomb-Mediated Silencing
Shelley L. Berger, University of Pennsylvania, USA
Epigenetic Enzymes and their Miss-Function in Disease
Anne C. Ferguson-Smith, University of Cambridge, UK
Epigenetic Switches and Dosage Control in a Stem Cell Niche

Vincent van den Boom, University Medical Center Groningen, Netherlands
Short Talk: USP7 Inhibition Impacts on PRC1.1-mediated Gene Control through Increased Ubiquitination of PRC1.1 Subunits and Reduces Primary AML Cell Viability
Adrian P. Bracken, Trinity College Dublin, Ireland
Short Talk: Specific cPRC1 Complexes are co-opted to Mediate Oncogenic Gene Repression in H3K27M-mutant Diffuse Midline Glioma

Workshop 1
Giovanni Gambi, NYU Grossman School of Medicine, USA
3D Chromatin Hubs as Regulatory Units of Identity and Survival in Human Acute Leukemia
Dorelle V. Fawwal, Emory University, USA
Characterizing the Oncogenic Impact of Novel H2B Variants
Akhay Sanghi, Stanford University, USA
Chromatin Accessibility Associates with Protein-RNA Correlation in MAPK-driven Cancer
Zhen Sun, Memorial Sloan Kettering Cancer Center, USA
Chromatin Regulation of Transcriptional Enhancers and Cell Fate by the Sotos Syndrome Gene NSD1
Kishore Raghawan Akhouri, Dana-Farber Cancer Institute, USA
Context-Dependent SOX9 Interactions with Components of BAF Complexes in Colon Neoplasia
Joanna A. Vuille, Krantz Family Center for Cancer Research, MGH, USA
DNA Hypomethylation Silences Anti-tumor Immune Genes in Early Prostate Cancer and CTCs
Diana H. Chin, Case Western Reserve University, USA
Epigenetic Drivers of Osteosarcoma Metastasis

Mechanisms of RNA and DNA Modulation in Cancer
Ramin Shiekhattar, University of Miami, USA
RNA Processing by the Integrator-Complex and Its Role in Cancer
François Fuks, Université Libre de Bruxelles, Belgium
Mapping and Function of RNA Modifications in Cancer
Salvador Aznar Benitah, ICREA and Institute for Research in Biomedicine, Spain
Lipid Metabolism in Cancer Metastasis
Marisa S. Bartolomei, University of Pennsylvania Perelman School of Medicine, USA
DNA Methylation in Reprogramming
Andrea Plunti, University of Chicago, USA
Short Talk: CATACOMB Prevents PRC2 Mediated Transcriptional Repression Upon DNA hypomethylation

Poster Session 2
WEDNESDAY, FEBRUARY 7
Epigenetic Drug Discovery in Cancer
Rab K. Prinjha, GlaxoSmithKline, UK
Translating Novel Epigenetic Drugs into the Clinic
Helal P. Mohammad, Proteovant Therapeutics, USA
Degradation of Epigenetic Machinery for the Treatment of Cancer

* Session Chair † Invited but not yet accepted     Program current as of January 14, 2024. Meal formats are based on meeting venue.
For the most up-to-date details, visit https://www.keystonesymposia.org.
**THURSDAY, FEBRUARY 8**

**Departure**

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**Workshop 2**

**Isaac F. López-Moyado**, La Jolla Institute for Immunology, USA
*Exacerbated Accumulation of R-loops Impairs the Proliferation of TET-deficient Cells*

**Samah W. Awwad**, University of Cambridge, UK
*KLF5 Loss Sensitizes to ATR Inhibition and is Synthetic Lethal with ARID1A-deficiency*

**Gregory I. Marshall**, Rutgers University, USA
*Loss of KDM5C Promotes Immune Escape in Kidney Cancer*

**Darko Barisic**, Weill Cornell Medicine, USA
*Mammalian SWI/SNF Chromatin Remodeling Complex Orchestrates Sequential Binding of Transcription Factors and Restricts Malignant Transformation*

**Rebecca Starble†**, Yale University, USA
*METTL7A Promotes Osimertinib Resistance by Regulating Chromatin Architecture and Driving Oncogene Amplification*

**Joseph Hsieh**, University of Colorado Anschutz, USA
*Regulation and Targeting of PAX3-FOXO1 Chromatin Complexes in Fusion-Positive Rhabdomyosarcoma*

**Qi Jiang**, University of Pittsburgh, USA
*Synergistic Targeting of NuRD Complex and Proteostasis to Eradicate Quiescent Ovarian Cancer Cells*

**Ilaria Panzeri**, Van Andel Research Insitute, USA
*Developmental Priming of Cancer Risk*

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**Epigenetics in Diagnosis and Treatment of Cancer**

**Kimberly Stegmaier**, Dana-Farber Cancer Institute, USA
*Treatments in Pediatric Oncology*

**Dan A. Landau**, Weill Cornell Medicine, USA
*Clonal Evolution in Cancer Care*

**Yael David**, Memorial Sloan Kettering Cancer Center, USA
*Short Talk: Thinking Outside the Chromosome: Interrogating Epigenetic Mechanisms in Non-Canonical Chromatin Species*

**Huijue Lyu**, Northwestern University, USA
*Short Talk: GATA6 is a Novel Regulator of Gene Expression and 3D Genome in Colorectal Cancer*

**H. Courtney Hodges**, Baylor College of Medicine, USA
*Short Talk: Reactivation of the G1 Enhancer Landscape Underlies Core Circuitry Addiction to SWI/SNF*

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**Meeting Wrap-Up: Outcomes and Future Directions (Organizers)**

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