

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

DNA Replication and Genome Instability: From Mechanism to Disease (A1)

January 13-17, 2019 • Snowbird Resort • Snowbird, Utah, USA

Scientific Organizers: Karlene A. Cimprich, Mark J. O'Connor and Johannes C. Walter

Supported by the Directors' Fund

Abstract & Scholarship Deadline: September 20, 2018 / Abstract Deadline: October 16, 2018 / Discounted Registration Deadline: November 13, 2018

SUNDAY, JANUARY 13

Arrival and Registration

MONDAY, JANUARY 14

Welcome and Keynote Session

David Cortez, Vanderbilt University School of Medicine, USA
New Players in Modulating Replication Fork Stability

Eric C. Greene, Columbia University, USA
Single Molecule Analysis of Recombination

The Influence of Chromatin on Replication and Repair

Iestyn Whitehouse, Memorial Sloan Kettering Cancer Center, USA
Interplay of Chromatin and Replication

Gaëlle Legube, Center for Integrative Biology, France
Effect of Chromatin Structure on Recombination/Repair

Short Talk(s) Chosen from Abstracts

Workshop 1: Basic Mechanisms of Replication

***Antoine M. van Oijen**, University of Wollongong, Australia
Single Molecule Studies of Replication

Short Talks Chosen from Abstracts

Workshop 2: Basic Mechanisms of Recombination

***Wolf-Dietrich Heyer**, University of California, Davis, USA
Mechanisms of Recombination

Short Talks Chosen from Abstracts

Mechanisms of DNA Replication

John F.X. Diffley, Francis Crick Institute, UK
Mechanisms of DNA Replication Initiation and Progression

Karim Labib, University of Dundee, UK
Mechanism of DNA Replication Termination and Replisome Disassembly

Speaker to be Announced

Short Talk Chosen from Abstracts

Poster Session 1

TUESDAY, JANUARY 15

Mechanisms of Recombination and Repair

Stephen C. West, Francis Crick Institute, UK
Mechanisms of Replication/Recombination Intermediate Resolution

Anna Malkova, University of Iowa, USA
Mechanism of Break-Induced Replication

Agnel Sfeir, New York University School of Medicine, USA
Mechanism of Alternative End-Joining

Daniel Durocher, Lunenfeld-Tanenbaum Research Institute, Canada
Cell Cycle Regulation of Double-Strand Break Repair

Short Talk(s) Chosen from Abstracts

Understanding and Exploiting Replication Stress

Sarah AE Lambert, Institute Curie, France
Spatial Organization of Replication Fork Processing

Massimo Lopes, University of Zürich, Switzerland
Replication Fork Remodeling upon Cancer-relevant Replication Stress

Mark J. O'Connor, AstraZeneca, UK
Targeting Replication Stress in Cancer

Short Talk Chosen from Abstracts

Poster Session 2

WEDNESDAY, JANUARY 16

Overcoming Replication Fork Obstacles

Johannes C. Walter, Harvard Medical School, USA
Mechanisms of Cross-Link Repair

Ralph Scully, Beth Israel Deaconess Medical Center, USA
Recombination and Repair at Stalled Mammalian Replication Forks

Dana Brnzei, FIRC Institute of Molecular Oncology, Italy
Rewiring of DNA Damage Tolerance at the Replication Fork

Ketan J. Patel, MRC Laboratory of Molecular Biology, UK
Endogenous Sources of Inter-Strand Crosslinks and Fanconi Anemia

Short Talk(s) Chosen from Abstracts

Workshop/Panel Discussion 3: Translating Basic Science to the Clinic

***Mark J. O'Connor**, AstraZeneca, UK

***Daniel Durocher**, Lunenfeld-Tanenbaum Research Institute, Canada

Yves G. Pommier, NCI, National Institutes of Health, USA

Alan D. D'Andrea, Dana-Farber Cancer Institute, USA

Lauren A. Byers, University of Texas MD Anderson Cancer Center, USA

Targeting DNA Damage Response (DDR) in Lung Cancer

RNA-Induced Genome Instability

Karlene A. Cimprich, Stanford University, USA
R-Loops and Transcription-Replication Collisions

Speaker to be Announced

Speaker to be Announced

Short Talk Chosen from Abstracts

Poster Session 3

THURSDAY, JANUARY 17

Genomic Drivers of Tumorigenesis and Drug Resistance

Titia de Lange, Rockefeller University, USA
Telomeres and the DNA Damage Response

Serena Nik-Zainal, University of Cambridge, UK
Mutational Signatures associated with Replication and Genome Instability

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Christopher Lord, Institute of Cancer Research, UK
Using Genetics to Understand Synthetic Lethal Sensitivity and Resistance to DDR Inhibitors

Stephen P. Jackson, University of Cambridge, UK
Resistance to Molecularly-Targeted Anti-Cancer Therapeutics
Short Talk(s) Chosen from Abstracts

Workshop 4: Chromatin, Replication and Repair

***Evi Soutoglou**, Institute of Genetics and Molecular and Cellular Biology, France
Double Strand Break Repair in Heterochromatin
Short Talks Chosen from Abstracts

Workshop 5: Replication Stress and DNA Damage Signaling

***Niels Mailand**, University of Copenhagen, Denmark
Ubiquitin- and SUMO-Mediated Responses to Replication Stress
Short Talks Chosen from Abstracts

Linking DNA Damage Response to the Immune Response

Roger A. Greenberg, University of Pennsylvania Perelman School of Medicine, USA
DNA Damage Response Kinases and the Immune Response

Alberto Bardelli, University of Torino, Italy
Inactivation of DNA Repair to Improve Immune Surveillance

Sophie Postel-Vinay, Gustave Roussy Cancer Campus, France
The Next Step-Change in Cancer Therapy? Combining DDR Inhibitors with Immunotherapy

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

FRIDAY, JANUARY 18

Departure