

Chromatin and Epigenetics: Inheritance and Design

April 1-3, 2019
Munich, Germany

Conference Program

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Monday, April 1

11:30 – 13:00 Panel discussion: Ethics in research publishing (Room 041 Building 36.20)

13:00 – 14:00 Coffee and Registration

Session 1: **Chairs: Maria Colomé-Tatché and Robert Schneider**
Reading and writing modifications

14:00 – 14:15 Welcome

14:15 – 14:45 Kristian Helin (Memorial Sloan Kettering Cancer Center, US)
Role of the Polycomb repressive complex 2 (PRC2) in transcriptional regulations and cancer

14:45 – 15:15 Karmella Haynes (Emory University, US)
Synthetic reader-effectors for epigenetic reprogramming of genes in cancer

15:15 – 15:35 Philipp Voigt (Wellcome Trust Centre for Cell Biology, UK)
Nucleosomal Asymmetry Shapes Histone Mark Binding at Bivalent Domains

15:35 – 15:55 Marc Timmers (German Cancer Research Center, Germany)
Chaperones and Transcription Complex Assembly

15:55 – 16:30 Coffee break

16:30 – 16:50 Sophie Polo (CNRS/Universite Paris Diderot, France)
Epigenome maintenance in response to DNA damage

16:50 – 17:10 Raffaella Santoro (University of Zurich, Switzerland)
NoRC complex safeguards genome architecture of ground-state pluripotent stem cells

17:10 – 17:30 Valentina Ignatova (Helmholtz Zentrum München, Germany)
Characterization of novel RNA methyltransferases

17:30 – 18:00 Tony Kouzarides (The Gurdon Institute, UK)
Modifications of RNA: their function and role in cancer

18:00 – 18:35 Poster Flash Talks

Free evening

Tuesday, April 2

Session 2:

Chairs: Manolis Papamichos-Chronakis and Poonam Bheda
Global chromatin interactions

09:00 – 09:30

Wendy Bickmore (University of Edinburgh, UK)
The remote control of gene expression

09:30 – 09:50

Sandro Baldi (Biomedical Center LMU Munich, Germany)
Principles of nucleosome phasing revealed by genome-wide mapping and *in-vitro* reconstitution

09:50 – 10:10

Magda Bienko (Karolinska Institute, Sweden)
Radial organization of the genome revealed by GPSeq

10:10 – 10:40

Bas van Steensel (The Netherlands Cancer Institute, The Netherlands)
Large-scale perturbation approaches to study chromatin and gene regulation

10:40 – 11:10

Coffee break

11:10 – 11:20

Abcam

11:20 – 11:50

Frederic Berger (Austrian Academy of Sciences, Austria)
Histone variants: architects of genome functional organization

11:50 – 12:10

Michiel Vermeulen (Radboud University Nijmegen, The Netherlands)
Deciphering chromatin biology in health and disease using integrative omics approaches

12:10 – 12:40

Beat Fierz (Ecole Polytechnique Fédérale de Lausanne, Switzerland)
Probing the dynamic interaction landscape of modified chromatin

12:40 – 13:30

Lunch

13:30 – 15:30

Poster session and coffee

Session 3:

Chairs: Thomas Cremer and Boris Pfander
Decoding the future

15:30 – 16:00

Hendrik Dietz (Technische Universität München, Germany)
DNA machines of the future

16:00 – 16:20

Tuncay Baubec (University of Zurich, Switzerland)
Engineered chromatin readers reveal the genome-wide proteome composition at key chromatin states in living cells

16:20 – 16:40

Nadine Vastenhouw (Max Planck Institute, Germany)
Transcription organizes euchromatin via microphase separation

16:40 - 17:00

Till Bartke (Helmholtz Zentrum München, Germany)
Decoding chromatin modification states using chemical biology and computational proteomics

17:00 – 17:40

Coffee break

17:40 - 18:00

Maria Elena Torres Padilla (Helmholtz Zentrum München, Germany)
Epigenetic mechanism in early development

18:00 – 19:00 **Keynote Speaker:** Azim Surani (The Gurdon Institute, UK)
From genomic imprinting to the human germline

19:15 Dinner and disco

Wednesday, April 3

Session 4: **Chairs: Stephan Hamperl and Jacqueline Mermoud**
Modelling and reprogramming chromatin

09:00 – 09:30 Eileen Furlong (EMBL, Germany)
Developmental enhancers and their function within three dimensional topologies

09:30 – 09:50 Verena Heinrich (Max Planck Institute, Germany)
CRUP: A comprehensive framework to predict condition-specific regulatory units

09:50 – 10:10 Juanma Vaquerizas (Max Planck Institute, Germany)
Transposable element-driven reorganisation of 3D chromatin during early embryonic development

10:10 – 10:40 Fabian Theis (Helmholtz Zentrum München, Germany)
Machine learning in single cell genomics

10:40 – 11:10 Coffee break

11:10 – 11:40 Gavin Kelsey (Babraham Institute, UK)
A mutation in DNMT3A enhances methylation of bivalent chromatin

11:40 – 12:00 Raffaele Tepperino (Helmholtz Zentrum München, Germany)
Paternal overweight controls transgenerational metabolic health via Polycomb

12:00 – 12:20 Maria Colomé-Tatché (Helmholtz Zentrum München, Germany)
Episcanpy: single cell epigenomics

12:20 – 12:40 Andrea Schorn (Cold Spring Harbor Laboratory, US)
tRNA-derived small RNAs support genome stability during epigenetic reprogramming

12:40 – 13:25 Lunch

13:25 – 15:30 Poster session and coffee

Session 5: **Chair: Thomas Cremer**
Epigenome maintenance

15:30 – 16:00 Rob Martienssen (Cold Spring Harbor Laboratory/Howard Hughes Medical Institute, US)
The chromosomal impacts of small RNA

16:00 – 16:20 Ana Boskovic (University of Massachusetts, US)
Molecular mechanism of paternal contribution to epigenetic inheritance in mice

16:20 – 16:40 Andreas Ladurner (Ludwig Maximilians University of Munich, Germany)
The *S. pombe* histone chaperone FACT and H2B ubiquitination maintain genic and intergenic genome architecture

16:40 – 17:10

Robin Allshire (University of Edinburgh, UK)

Establishment and maintenance of specialised chromatin domains

17:10 – 17:15

Closing remarks