

34th Ernst Klenk Symposium in Molecular Medicine

CMMC CENTER FOR
MOLECULAR MEDICINE
COLOGNE



certified with
12 CME credits

October, 04 - 06, 2018
in Cologne

Epigenetics: Basic principles and clinical applications

Program

Scientific Coordination

Roland Schüle, Medical Center University of Freiburg - Freiburg, DE

Yang Shi, Boston Children's Hospital, Harvard Medical School - Boston, US

and Michal-Ruth Schweiger - Reinhard Büttner - Cologne, DE

Cologne Ernst Klenk Symposium Committee 2018

Michal-Ruth Schweiger - Reinhard Büttner (Chairs)

Walter Doerfler - Matthias Hammerschmidt - Axel Hillmer - Michael Lammers - Margarete Odenthal - Linda Partridge - Argyris Papantonis - Alvaro Rada-Iglesias - H Christian Reinhardt - Peter Tessarz - Debora Grosskopf-Kroiher - Thomas Benzing

Organized by:

Center for Molecular Medicine Cologne (CMMC) - University of Cologne - www.cmmc-uni-koeln.de

In cooperation with

[CECAD Cologne - Cluster of Excellence](#) • [CRU 329](#) • [CRC 829](#) • [FOR 2240](#) • [CRC 670](#) • [CRC 1218](#) • [KFO 286](#) •
[Clinical Trials Centre Cologne \(ZKS Köln\)](#) • [Sybacol](#) • [Cologne Center for Genomics](#) • [Center for Integrated Oncology](#)
[Institute for Pathology](#) • [University Hospital Cologne](#) • [ORPHEUS](#) • [BioRiver - Life Science im Rheinland e.V.](#) • [Cologne Convention Bureau](#) • [VolkswagenStiftung](#)

Participation in the meeting is free of charge - free registration required.

Further information and free registration:

<https://www.cmmc-uni-koeln.de/events/ernst-klenk-symposium/ernst-klenk-symposium-2018/>

Fritz Thyssen Stiftung
für Wissenschaftsförderung

Fritz Thyssen Stiftung
für Wissenschaftsförderung

Fritz Thyssen Stiftung
für Wissenschaftsförderung

Poster Session on October 04, 2018 from 6:00 – 8:30 pm during the Welcome-Get-Together

12.50 p.m. Welcome Address

Thomas Krieg Dean - Medical Faculty, University of Cologne

Thomas Benzing Chair - Center for Molecular Medicine Cologne, University of Cologne

Roland Schüle - Yang Shi - Michal-Ruth Schweiger - Reinhard Büttner

Scientific Coordinators - Ernst Klenk Symposium 2018

Session I Nuclear architecture and chromatin remodeling

Chairs Argyris Papantonis (CMMC) - Aleksandra Trifunovic (CECAD)

1.00 - 1.30 p.m. Mechanism of chromatin regulators: lessons from the genomics of human disease and new methods

[Gerald R Crabtree](#) - Stanford University School of Medicine - Stanford, US

1.30 - 2.00 p.m. Physics of chromosome folding

[Leonid A Mirny](#) - Massachusetts Institute of Technology - Cambridge, US

2.00 - 2.30 p.m. Dynamics of chromosomal differentiation using single cell epigenomics

[Amos Tanay](#) - The Weizmann Institute, Epigenomics and Evolution - Rehovot, IL

2.30 - 3.00 p.m. *Coffee Break*

Chairs Linda Partridge (MPI Age) - Jan Riemer (Inst. for Biochemistry)

3.00 - 3.30 p.m. Genome architecture in specific neuronal cells

[Ana Pombo](#) - Max Delbrück Center for Molecular Medicine - Berlin, DE

3.30 - 4.00 p.m. 3D genome structures of single diploid human cells

[Xiaoliang Sunney Xie](#) - Dept. of Chemistry and Chemical Biology, Harvard University - Cambridge, US

4.00 - 4.30 p.m. Mechanisms of chromatin transcription

[Patrick Cramer](#) - Max Planck Institute for Biophysical Chemistry - Göttingen, DE

4.30 - 5.00 p.m. *Coffee Break*

Klenk Lecture I: Chromatin modifications, tumor cell immunogenicity and checkpoint blockade

5.00 - 6.00 p.m. Yang Shi - Harvard Medical School, Boston's Children Hospital - Boston, US

Laudation: Michal-Ruth Schweiger

6.00 - 8.30 p.m. Poster session during the Welcome Get-Together (free finger food and drinks)

Selection of three posters for the Poster Awards

Poster Presentation - Klenk Symposium 2018

The Poster Abstract book – Klenk Symposium 2018 will be available for download soon.

We are pleased to announce that we received 87 poster abstracts related to the topics:

- A01 - A13 Nuclear architecture and chromatin remodeling
- B01 Phase separation in transcriptional regulation
- C01 - C26 Transcriptional and posttranscriptional control
- D01 - D17 Epigenetic strategies for therapeutic intervention
- E01 - E30 Regulation of development and disease

Poster Award

The Klenk Poster Award 2018 of the Center for Molecular Medicine Cologne (CMMC) will be awarded to the presenting author of the three most outstanding poster contributions. The awardees of the poster prizes are invited to give a short presentation (10 min.) during the last session on Saturday, Oct. 06, 2018.

Friday - Oct. 05, 2018

Session II Phase separation in transcriptional regulation

Chairs Axel Hillmer (Inst. of Pathology) - Andreas Beyer (CECAD)

9.00 - 9.30 a.m. Phase separation and transcriptional control

[Richard A Young](#) - Whitehead Institute for Biomedical Research - Cambridge, US

9.30 - 10.00 a.m. A solid state conceptualization of information transfer from gene to message to protein

[Steven L McKnight](#) - UT Southwestern Medical Center - Dallas, US

10.00 - 10.30 a.m. Is chromatin just a phase?

[Gary H Karpen](#) - Dept. of Genome Biology, University of California, Berkeley - Berkeley, US

10.30 - 11.00 a.m. *Coffee Break*

Session III Transcriptional and posttranscriptional control

Chairs Tim Hucho (Dept. of Anaesthesiology & Intensive Care Medicine) - Argyris Papanonis (CMMC)

11.00 - 11.30 a.m. Epigenetics: one genome, multiple phenotypes

[Danny Reinberg](#) - Howard Hughes Medical Institute - New York, US

11.30 - 12.00 p.m. Epigenetic regulation by histone acetylation

[Asifa Akhtar](#) - Max Planck Institute of Immunobiology and Epigenetics - Freiburg, DE

12.00 - 12.30 p.m. Transcription and remodeling produce asymmetrically unwrapped nucleosomes

[Steven Henikoff](#) - Howard Hughes Medical Institute, Fred Hutchinson Cancer Research Center - Seattle, US

12.30 - 2.00 p.m. *Lunch Break with Poster Presentation (free soup for all participants)*

Chairs Peter Tessarz (MPI Age) - Achim Tresch (Inst. of Med. Statistics & Computational Biology)

2.00 - 2.30 p.m. Principles of nuclear organization in developmentally controlled gene expression

[Susan M Gasser](#) - Friedrich Miescher Institute for Biomedical Research - Basel, CH

2.30 - 3.00 p.m. RNA methylation in gene expression regulation

[Chuan He](#) - The University of Chicago, Dept. of Chemistry and Institute for Biophysical Dynamics - Chicago, US

3.00 - 3.30 p.m. Epigenetic mechanisms in early mammalian development

[María Elena Torres-Padilla](#) - Institute of Epigenetics and Stem Cells (IES), Helmholtz Zentrum München - Munich, DE

3.30 - 3.50 p.m. *Coffee Break*

3.50 - 4.00 p.m. **Announcement of the Poster Awards** - Michal-Ruth Schweiger and Reinhard Büttner

Session IV-1 Epigenetic strategies for therapeutic intervention

Chairs Margarete Odenthal (Inst. of Pathology) – Martin Sos (Inst. of Pathology)

4.00 - 4.30 p.m. Awakening endogenous retroviruses for cancer therapy

[Peter A Jones](#) - Van Andel Research Institute – Grand Rapids, US

4.30 - 5.00 p.m. Uncovering the role of Sirtuin ADPribosylation: The link between SirT7, macroH2A and glucose starvation

[Alejandro Vaquero](#) - IDIBELL Cancer Epigenetics and Biology Program - Barcelona, ES

5.00 - 5.30 p.m. Transforming chromatin: oncogenic activity of mutant histone H3

[Suzanne J Baker](#) - St. Jude Children's Research Hospital, Developmental Neurobiology - Memphis, US

5.30 - 6.00 p.m. *Coffee Break*

Klenk Lecture II: The novel histone methyltransferase KMT9 writes the histone mark H4K12me1 and controls castration-resistant prostate cancer

[Roland Schüle](#) - Medical Center University of Freiburg - Freiburg, DE

Laudation: Reinhard Büttner

Saturday - Oct. 06, 2018

Session IV-2 Epigenetic strategies for therapeutic intervention

Chairs Christian Reinhardt (Dept. I for Internal Medicine) - Reinhard Büttner (Inst. of Pathology)

9.00 - 9.30 a.m. Transcriptional vulnerabilities of cancer cells

[Christopher R Vakoc](#) - Cold Spring Harbor Laboratory - Cold Spring Harbor, US

9.30 - 10.00 a.m. Targeting of acetyl-lysine reader domains by small molecules

[Stefan Knapp](#) - Institute for Pharmaceutical Chemistry, Goethe-University - Frankfurt, DE

10.00 - 10.30 a.m. **Short presentation
given by the three poster awardees (3 x 10 min. short talk)**

10.30 - 11.00 a.m. *Coffee Break*

Session V Regulation of development and disease

Chairs Martin Peifer (Dept. of Translational Genomics) - Matthias Fischer (Dept. for Exp. Pediatric Oncology)

11.00 - 11.30 a.m. Mutation induced changes

[Stefan Mundlos](#) - Institute of Medical Genetics and Human Genetics, Charité - Berlin, DE

11.30 - 12.00 p.m. Long range gene regulation in mammalian development and disease

[Denis Duboule](#) - School of Life Sciences, Federal Institute of Technology EPFL - Lausanne, CH

12.00 - 12.30 p.m. TET methylcytosine oxidases, immune responses and cancer

[Anjana Rao](#) - La Jolla Institute for Allergy and Immunology - La Jolla, US

12.30 - 1.30 p.m. *Lunch Break (free sandwiches for all participants)*

Chairs Michal-R Schweiger (Translational Epigenetics & Tumor Genetics) - Walter Dörfler (Inst. for Genetics)

1.30 - 2.00 p.m. The role of DNA methylation in development and disease

[Alexander Meissner](#) - Max Planck Institute for Molecular Genetics - Berlin, DE

2.00 - 2.30 p.m. Single cell epigenome landscape of development and ageing

[Wolf Reik](#) - Babraham Institute - Cambridge, UK

2.30 - 3.00 p.m. Evolution and cellular origin of the CLL methylome

[Christoph Plass](#) - German Cancer Research Center (DKFZ) - Heidelberg, DE

3.00 - 3.15 p.m. Summary, open questions, concluding remarks

Roland Schüle - Yang Shi - Michal-Ruth Schweiger - Reinhard Büttner

General Information

The meeting is open and no registration or attendance fee is required.

Participation is free of charge - free registration is required.

Childcare is provided by Spielland, University Hospital Cologne.

If you require an official invitation letter for travel refunding or visa issues, please contact

Debora Grosskopf-Kroiher - debora.grosskopf-kroiher@uni-koeln.de

Center for Molecular Medicine Cologne (CMMC), Univ. of Cologne

CMMC Research Building, Robert-Koch-Str. 21, 50931 Cologne, Germany

Venue

Main Lecture Hall, Faculty of Medicine, University of Cologne

Access only possible from Joseph-Stelzmann-Str. 26 - please follow the yellow Klenk signs.

<https://www.cmmc-uni-koeln.de/events/ernst-klenk-symposium/ernst-klenk-symposium-2018/venue/>

We gratefully acknowledge support by following partners:

[Miltenyi Biotec](#) • [Bio-Rad](#) • [PHCbi](#) • [ACTIVE MOTIF](#) • [Analytik Jena](#) • [PerkinElmer](#) • [Proteintech](#)
[Charles River](#) • [Covaris](#) • [LMS Consult](#) • [Promega](#) • [EWALD Innovationstechnik](#)

