

30th Ernst Klenk Symposium in Molecular Medicine
of the Center for Molecular Medicine Cologne (CMMC)

DNA Damage Response and Repair Mechanisms
in Aging and Disease

Sept. 21 – 23, 2014

Program

Scientific Coordinator

Jan H. J. Hoeijmakers

Dept. of Genetics, Erasmus Medical Center - Rotterdam, NL

Cologne Ernst Klenk Symposium Board 2014

Björn Schumacher (Chair) - Thomas Benzing - Michael Hallek - Thorsten Hoppe
Catherin Niemann - Carien Niessen - H. Christian Reinhardt - Bernd Wollnik

in collaboration with

CECAD Cologne • ITN CodeAge • Clinical Trials Centre Cologne (ZKS Köln)
University Hospital Cologne • CRC 829 • CRC 670
BioRiver - Life Science im Rheinland e.V.

Participation in the meeting is free of charge.

Further information and free registration:

www.zmmk.uni-koeln.de/events/ernst_klenk_symposium/klenk_2014

Venue

Main Lecture Hall of the Centers for Biochemistry and Physiology
Medical Faculty, University of Cologne
Joseph-Stelzmann-Str. 52, 50931 Cologne

Organized by

Center for Molecular Medicine Cologne (CMMC), University of Cologne
Debora Grosskopf-Kroiher and the CMMC Team
in collaboration with Cologne Convention Bureau

We gratefully acknowledge support by:

Ewald Innovationstechnik GmbH • LMS Consult

(status quo December 2013)

Sunday – Sept. 21, 2014

12.50 p.m. Welcome Address

Axel Freimuth
Rector University of Cologne

Thomas Benzing
Chair – Center for Molecular Medicine Cologne (CMMC)

Session I DNA repair mechanisms

Chair: *pending*

1.00 – 1.30 p.m. DNA-Protein Crosslink Repair

Stefan Jentsch
Max Planck Institute of Biochemistry, Martinsried - Germany

1.30 – 2.00 p.m. Responses to replication stress and DNA DSBs: Mechanisms and relevance to cancer

Jiri Bartek
The Danish Cancer Society Research Center, Copenhagen - Denmark

2.00 – 2.30 p.m. Ubiquitin-dependent degradation at the chromatin

Thorsten Hoppe
CECAD Cluster of Excellence in Aging Research (CECAD), Cologne - Germany

2.30 – 3.00 p.m. Coffee Break

3.00 – 3.30 p.m. Structural mechanisms of sensing and signaling DNA double-strand breaks

Karl-Peter Hopfner
Ludwig-Maximilians-University Munich - Germany

3.30 – 4.00 p.m. Metabolic pathways influencing the DNA damage response

Marco Foiani
Fondazione Istituto FIRC di Oncologia Molecolare, Milan - Italy

4.00 – 4.30 p.m. Coffee Break

4.30 – 5.00 p.m. Chromatin assembly from nucleosome to heterochromatin: the issue of DNA damage

Genevieve Almouzni
Institut Curie Research Centre, Paris - France

5.00 - 5.30 p.m. Mechanisms and DNA structures mediating replication of damaged chromosomes

Dana Branzei
Fondazione Istituto FIRC di Oncologia Molecolare, Milan - Italy

5.30 – 8.00 p.m. Poster Session (incl. Selection of three Posters for the Poster Awards) *Welcome Get-Together with Fingerfood for all Participants*

Monday – Sept. 22, 2014

Session II DNA Damage Repair in aging and cancer

Chair *pending*

- 9.00 – 9.30 a.m. **The Multifaceted Mismatch Repair**
Josef Jiricny
University of Zurich - Switzerland
- 9.30 – 10.00 a.m. **Genomic instability and altered DNA damage responses in progeria syndromes**
Bernd Wollnik
Center for Molecular Medicine Cologne, Univ. of Cologne - Germany
- 10.00 – 10.30 a.m. **Exploring the role of replicative stress in cancer and aging**
Óscar Fernández-Capetillo
Spanish National Research Cancer Centre, Madrid - Spain
- 10.30 – 11.00 a.m. **Coffee Break**
- 11.00 – 11.30 a.m. **Delineating DNA damage pathways in telomere shortening induced aging**
Karl Lenhard Rudolph
Leibniz Institute for Age Research, Fritz Lipmann Institute, Jena - Germany
- 11.30 – 12.00 p.m. **title pending**
Carlos Lopez-Otin
Universidad de Oviedo - Spain
- 12.00 – 12.30 p.m. **TORC2 controls genome stability following zeocin- or ionizing radiation-induced damage**
Susan M. Gasser
Friedrich Miescher Institute for Biomedical Research, Basel - Switzerland
- 12.30 – 2.00 p.m. **Lunch Break (Soup and Sausages for all participants at the venue)**

Session III Systemic DNA response and immunity

Chair *Pending*

- 2.00 – 2.30 p.m. **Starvation, nutrient signaling, and DNA damage**
Valter Longo
University of Southern California, Los Angeles - USA
- 2.30 – 3.00 p.m. **title pending**
Michael T. Hemann
The Koch Institute Kendall Square, Cambridge - USA
- 3.00 – 3.30 p.m. **title pending**
Lars Zender
University Hospital Tuebingen - Germany
- 3.30 – 3.50 p.m. **Coffee Break**
- 3.50 – 4.00 p.m. **Presentation of the Poster Awards**
- 4.00 – 4.30 p.m. **Systemic DNA damage responses**
Björn Schumacher
CECAD Cluster of Excellence in Aging Research (CECAD), Cologne - Germany
- 4.30 – 5.00 p.m. **Control of innate immune homeostasis and regeneration by stress signaling**
Heinrich Jasper
Buck Institute for Research on Aging, Novato - USA
- 5.00 – 5.30 p.m. **DNA-damage induced differentiation as an anti-cancer barrier**
Andre Nussenzweig
Laboratory of Genome Integrity, National Institute of Health, Bethesda - USA
- 5.30 – 6.00 p.m. **Coffee Break with Snacks**
- 6.00 – 7.00 p.m. **Laudation: Björn Schumacher - CMMC & CECAD Cologne, Univ. of Cologne**
Ernst Klenk Lecture **DNA damage and its impact on aging: getting aging in mice largely under control**
Jan H. J. Hoeijmakers - Erasmus MC, Rotterdam, NL

Tuesday – Sept. 23, 2014

Session IV Targeting DNA repair and cancer therapy

Chair *pending*

- 9.00 – 9.30 a.m. **Exploiting Synthetic lethality approaches in treating cancer**
Christopher J. Lord
Institute of Cancer Research, London - UK
- 9.30 – 10.00 a.m. **Targeting the Fanconi Anemia/BRCA Pathway in cancer therapy**
Alan D'Andrea
Dana-Farber Cancer Institute, Boston - USA
- 10.00 – 10.30 a.m. **Breaking bad: Causes and consequences of genomic instability**
Steven Elledge
Harvard Medical School, Boston - USA
- 10.30 – 11.00 a.m. **Coffee Break**
- 11.00 – 11.30 a.m. **Unraveling therapy response and resistance in mouse models of BRCA1-deficient breast cancer**
Jos Jonkers
The Netherlands Cancer Institute, Amsterdam - The Netherlands
- 11.30 – 12.00 p.m. **Sanitizing the damaged dNTP pool for replication fidelity, basic science to cancer treatment**
Thomas Helleday
Karolinska Institutet, Stockholm - Sweden
- 12.00 – 12.30 p.m. **Targeting defects in the DNA damage response for personalized cancer therapy**
H. Christian Reinhardt
CECAD Cluster of Excellence in Aging Research (CECAD), Cologne - Germany
- 12.30 – 12.45 p.m. **Summary, open questions, concluding remarks**
Jan H. J. Hoeijmakers and Björn Schumacher

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Contact

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Childcare is provided by Spielland, University of Cologne.

Registration is required, please contact Debora Grosskopf-Kroiher.

For directions please visit: <http://www.medizin.uni-koeln.de/zb/zik/anfahrt>

status quo: Feb. 11, 2014

