

Meeting Program

Tuesday 2nd September

14.15 Opening of the meeting

KEYNOTE LECTURE

14.30 The ATM-Mediated DNA Damage Response: Branching Out
Yosef Shiloh,
Sackler Faculty of Medicine, Tel Aviv University, Israel

Session 1: DNA Damage signalling, cell cycle checkpoints and carcinogenesis

15.15 The role of NBS1 in directing the subcellular localization of the MRN complex
Patrick Concannon
Biochemistry and Molecular Genetics, University of Virginia, USA

15.45 Breast cancer susceptibility alleles in ATM-mediated signalling pathways
Thilo Dörk-Bousset,
Hannover Medical School, Germany

16:15 New functions of the NBS1 gene in cellular response networks towards ionizing irradiation
Friederike Eckardt-Schupp
Institute of Radiation Biology, Helmholtz Center Munich, Germany

16.45 **Coffee-break**

17.15 Radiosensitivity of PARG deficient cells: a consequence of poly(ADP-ribose) accumulation, repair defect and impaired mitotic progression
Jean-Christophe Amé
Intégrité du Génome, CNRS, Illkirch, France

17.35 c-Fos dependent regulation of the three prime exonuclease 1 (Trex1) by UV-C and other genotoxins
Markus Christmann
Department of Toxicology, University of Mainz, Germany

17.55 A proteomic analysis of null mutant mice indicates a significant contribution of oxidative stress to the pathophysiology of Nijmegen Breakage Syndrome.
Anna Melchers
Institut für Humangenetik, Charité - Universitätsmedizin Berlin, Germany

18.15 NBS-1 defective human cells are hypersensitive to methylating agents due to defective recognition of DNA double-strand breaks arising during the processing of O6-methylguanine and this hypersensitivity is executed via necrosis
Marcus Eich
Institut für Toxikologie, University of Mainz, Germany

19.00 **Get together with wine and brezels**
Foyer of the "Lehrgebäude" Campus Virchow-Klinikum

Wednesday 3rd September

Session 2: Double-Strand Break Repair

- 09.00 The impact of higher order chromatin structure on DNA double strand break repair.
Penny Jeggo
Genome Damage and Stability Centre, University of Sussex, United Kingdom
- 09.30 Hierarchy of non-homologous end-joining, single-strand annealing and gene conversion at site-directed DNA double-strand breaks
Jochen Dahm-Daphi
Laboratory of Radiobiology & Experimental Radiation Oncology, University Medical School Hamburg-Eppendorf, Germany
- 10.00 **Coffee-break and Poster session 1**
- 11.30 Molecular and cellular characterization of the DSB DNA repair response in plants induced by bleomycin: some plant particularities
Marie-Edith Chabouté
Institut de Biologie Moléculaire des plantes IBMP - CNRS, Strasbourg, France
- 11.50 Dynamic interactions in non-homologous end-joining complexes
Dik C. van Gent
Department of Cell Biology and Genetics, Erasmus MC, University Medical Center Rotterdam, The Netherlands.
- 12.10 The role of homologous recombination and non-homologous end joining in the protection of cells against O6-methylguanine
Wynand P. Roos
Department of Toxicology, University of Mainz, Mainz, Germany
- 12.30 Xrs2 facilitates crossovers during DNA double-strand gap repair in yeast
Sylvia Steininger
Institute of Radiation Biology, Helmholtz Center Munich, Germany
- 12.50 **Lunch and Poster session 2**

Session 3: Chromatin Structure and DNA Repair

- 14.30 Chromatin organization, DNA replication and DNA damage
Malik Lutzmann
Institut of Human Genetics, CNRS, Montpellier, France
- 15.00 Role of DNA repair on DNA demethylation
Christof Niehrs
Division of Molecular Embryology, Deutsches Krebsforschungszentrum, Heidelberg, Germany
- 15.30 **Coffee-break**

- 16.00 UVA-induced transient changes in genomic histone methylation
Rüdiger Greinert
Dermatologisches Zentrum Buxtehude, Abt. Mol. Zellbiologie, Buxtehude, Germany
- 16.20 Investigation of the DNA damage response in lymphoblastoid cell lines of MCPH1 patients
Marc Trimborn
Institut für Medizinische Genetik, Charité-Universitätsmedizin Berlin, Germany
- 16.40 XRCC4 is required for functional nuclear localization of Ligase IV
Christian Mielke
Institute of Clinical Chemistry and Laboratory Diagnostics, Heinrich-Heine-University Medical School, Düsseldorf, Germany
- 17.00 Live cell imaging reveals XRCC4 as an early acting molecule in double strand break response
Paulius Grigaravicius
Leibniz Institute for Age Research; Fritz Lipmann Institute, Jena, Germany

Public Lecture

- 18.00 Stem Cell Aging: the Role of DNA Repair
Stanton L. Gerson
University Hospitals Case Medical Center, Case Western Reserve University, Cleveland, USA

Thursday 4th September

Session 4: Telomeres and DNA Repair

- 09.00 Rapid control of telomere length by the poly(ADP-ribosyl)ation system
Sascha Beneke
University of Konstanz, Germany
- 09.30 Telomeres and DNA damage response mechanisms
Predrag Slijepcevic
Brunel Institute of Cancer Genetics & Pharmacogenomics, Brunel University, United Kingdom
- 10.00 **Coffee-break and Poster session 3**
- 11.30 hSNM1B/Apollo acts early in the DNA damage response
Ilja Demuth
Institut für Humangenetik, Charité-Universitätsmedizin Berlin, Germany
- 11.50 Telomere/Centromere Fluorescence in-situ Hybridization (T/C-FISH) in patients with different subtypes of myelodysplastic syndrome (MDS)
Kathrin Lange
Institute of Cell and Molecular Pathology, Hannover Medical School, Germany

12.10 DNA double-strand break repair of blood lymphocytes and normal tissues analysed in a perclinical mouse model: implications for radiosensitivity testing
Claudia E. Rube
Department of Radiation Oncology, Saarland University, Homburg/Saar, Germany

12.30 XRCC4 expression is dependent on the neurotrophin receptor status and influences genomic stability and differentiation of human SY5Y Neuroblastoma cells
Steffi Kuhfittig-Kulle
University Children's Hospital Essen, Germany

12.50 **Lunch and Poster session 4**

Session 5: Excision Repair

14.30 SUMO Modifications Regulate Mammalian Base Excision Repair
Primo Schär
Institute of Biochemistry and Genetics, Department of Biomedicine, University of Basel, Switzerland

15.00 Influence of oxidative stress on base excision repair
Bernd Epe
Institut für Pharmazie, University of Mainz, Germany

15.30 **Coffee-break**

16.00 New Insights into nucleotide excision repair - Crystal structure of the FeS cluster containing nucleotide excision repair helicase XPD
Caroline Kisker
Rudolf Virchow Center for Experimental Biomedicine, Institute for Structural Biology, University of Würzburg, Germany

16.20 Investigations on the role of p53 in nucleotide excision repair
Gunnar Jahnke
Institute of Food Technology and Food Chemistry, Technische Universität Berlin, Germany

16.40 Is ERCC1-XPF a determinant for cisplatin sensitivity in testis tumor cells?
Svetlana Usanova
Institut für Toxikologie, University of Mainz, Germany

17.00 Sensitivity to alkylating genotoxins changes during the maturation of human monocytes, which exhibit a defect in base excision repair
Martina Bauer
Institut für Toxikologie, University of Mainz, Germany

18.00 **DGDR Members Assembly**
Hörsaal 3 of the "Lehrgebäude" Campus Virchow-Klinikum

20.00 **DNA Repair Conference Party**

Friday 5th September

Session 6: Replication Fork Arrest

- 09.00 The BLM Complex Acts As A DNA Structure-Specific 'Dissolvasome'
Ian Hickson
Weatherall Institute of Molecular Medicine, University of Oxford, United Kingdom
- 09.30 Faithful DNA synthesis by human DNA polymerases over 8-oxo-
guanine
Ulrich Hübscher
*Institute of Veterinary Biochemistry and Molecular Biology, University of Zürich-Irchel,
Switzerland*
- 10.00 **Coffee-break**
- 10.30 Genotoxin-induced DNA damage contributes to early activation of stress activated protein
kinases (SAPK/JNK)
Gerhard Fritz
Institut für Toxikologie, University of Mainz, Germany
- 10.50 Overexpression of RAD51 causes a Fanconi-like phenotype
Kerstin Borgmann
*Laboratory of Radiobiology & Experimental Radiooncology, University Hospital
Hamburg-Eppendorf, Germany*
- 11.10 Biochemical characterisation of the ATPase domain of Fanconi Anaemia complementation
group M protein
K. Anke Schürer
Weatherall Institute of Molecular Medicine, University of Oxford, United Kingdom
- 11.30 Repair of covalent dead-end topoisomerase I-DNA complexes: Tyrosyl-DNA
phosphodiesterase (Tdp1) and neurodegenerative disease (SCAN1)
Heidrun Interthal
Institute of Cell Biology, University of Edinburgh, UK
- 12.00 - 13:00 **Closing session**