

## Tuesday, 20 September

12:00 - 13:00 *Registration (Welcome Coffee & Snacks)*

### Welcome Address

13:00 - 13:15 Helle Ulrich

### Keynote Lecture

Chair: Brian Luke

13:15 - 14:00 Karlene Cimprich Stanford University, Palo Alto, US *Mechanisms for RNA-mediated genome instability*

### Session 1: Keeping RNA in check

Chair: Brian Luke

14:00 - 14:30 Natalia Gromak University of Oxford, UK *Beyond the R-loop proteome: the expanding roles of the R-loop interactors*

14:30 - 15:00 Madalena Tarsounas University of Oxford, UK *Mitotic DNA synthesis is caused by transcription-replication conflicts in BRCA2-deficient cells*

15:00 - 15:15 Henriette Stoy University of Zurich, CH *Direct visualization of transcription-replication conflicts reveals postreplicative DNA:RNA hybrids*

15:15 - 15:30 Thorsten Mosler SFB 1361, IMB Mainz, DE *R-loop proximity proteomics identifies a role of DDX41 in transcription-associated genomic instability*

15:30 - 16:00 *Coffee Break*

### Session 2: Controlling gene expression

Chair: Andriy Khobta

16:00 - 16:30 Petra Hajkova MRC London Institute of Medical Sciences, UK *Stability, turnover and erasure of epigenetic information in vivo*

16:30 - 17:00 Cynthia Burrows University of Utah, Salt Lake City, US *Base excision repair in G-quadruplexes impacts gene expression*

17:00 - 17:15 Jan Grosser Karolinska Institute, Solna, SE *Inhibition of TOP1 and BRD4 selectively kills tumours by inducing read-through transcription*

17:15 - 17:30 Michael Musheev SFB 1361, IMB Mainz, DE *Mammalian N1-adenosine PARylation is a reversible DNA modification*

17:30 - 20:30 *Welcome Reception & Poster Session 1*

## Wednesday, 21 September

### Session 3: Promoting genome replication

Chair: Cristina Cardoso

09:00 - 09:30 Sarah Lambert Institute Curie, University Paris-Saclay, Orsay, FR *Nuclear positioning and SUMOylation functions in recombination-mediated replication fork integrity and restart*

09:30 - 10:00 Dana Branzei IFOM, Milan, IT *Dealing with replication damage at the fork and in its wake*

10:00 - 10:15 Vincent Pagès CRCM, CNRS, Marseille, FR *Lesion bypass in yeast: at the fork or behind the fork?*

10:15 - 10:30 Félix Prado CABIMER, Seville, ES *Parental histone distribution and location of the replicative block at nascent strands control homologous recombination*

10:30 - 10:45 Ronald Wong SFB 1361, IMB Mainz, DE *Functions of the chromatin remodeller INO80 in DNA damage bypass*

10:45 - 11:15	<i>Coffee Break</i>		
11:15 - 11:45	<u>Julian Sale</u>	MRC Laboratory of Molecular Biology, Cambridge, UK	<i>The mutagenic footprint of DNA replication origins</i>
11:45 - 12:00	Boris Pfander	MPI Martinsried, CECAD, DLR & University of Cologne, DE	<i>Unscheduled DNA replication in G1 causes genome instability and damage signatures indicative of replication collision</i>
12:00 - 12:15	Juan de Dios Barba Tena	IGMM, CNRS, Montpellier, FR	<i>DNA polymerase <math>\alpha</math> phosphorylation allows slow-replicating cells to complete genome replication by MiDAS</i>
12:15 - 12:30	Natalie Schindler	SFB 1361, University of Mainz, DE	<i>Genetic requirements for repair of lesions caused by single genomic ribonucleotides in S phase</i>
12:30 - 13:15	<i>Lunch</i>		
13:15 - 13:45	<u>Roger Greenberg</u>	University of Pennsylvania, Philadelphia, US	<i>A new AAA+ unfoldase complex in replication protein quality control</i>
13:45 - 14:00	Uddipta Biswas	University of Zurich, CH	<i>Interferon/ISG15 restores replication fork stability, cell viability and chemoresistance in BRCA-defective cells</i>
14:00 - 14:15	Paulina Prorok	SFB 1361, University of Technology Darmstadt, DE	<i>Role of the Timeless/Tipin complex in the replisome response to stress</i>
14:30 - 22:00	<i>Excursion &amp; Dinner</i>		

#### Thursday, 22 September

##### Session 4: Ensuring healthy ageing

Chair: Thomas Hofmann

09:00 - 09:30	<u>Laura Niedernhofer</u>	University of Minnesota, Minneapolis, US	<i>Cellular and organismal outcomes of endogenous DNA damage</i>
09:30 - 10:00	<u>KJ Patel</u>	MRC Laboratory of Molecular Biology, Cambridge, UK	<i>Formaldehyde-induced endogenous DNA damage disrupts blood regeneration, nutritional homeostasis and promotes ageing</i>
10:00 - 10:30	<u>Philippe Pasero</u>	University of Montpellier, CNRS, FR	<i>Signaling replication stress beyond cell boundaries</i>
10:30 - 11:00	<i>Coffee Break</i>		
11:00 - 11:30	<u>Björn Schumacher</u>	CECAD, University of Cologne, DE	<i>The DNA damage response in ageing, disease and inheritance: new insights from <i>C. elegans</i></i>
11:30 - 11:45	Markus Christmann	SFB 1361, University Medical Center Mainz, DE	<i>p21-dependent CDK4 silencing and activation of the DREAM complex is sufficient to mediate B[a]P and IR-induced cellular senescence</i>
11:45 - 12:00	Hans-Peter Wollscheid	SFB 1361, IMB Mainz, DE	<i>Walking in actin's footsteps: The role of myosin VI in DSB repair and DNA replication stress</i>
12:00 - 12:15	Lili Pan	SFB 1361, University of Mainz, DE	<i>Specific vulnerability of long telomeres to undergo end fusions revealed by mutational analysis of Rap1</i>
12:15 - 13:00	<i>Lunch</i>		

##### Session 5: Maintaining the chemistry of DNA

Chair: Andriy Khobta

13:00 - 13:30	<u>Ben van Houten</u>	University of Pittsburgh, US	<i>Novel role of nucleotide excision repair proteins in the removal of base damage</i>
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13:30 - 14:00	<u>Puck Knipscheer</u>	Hubrecht Institute, University Medical Center Utrecht, NL	<i>RNA transcripts suppress G-quadruplex structures through G-loop formation</i>
14:00 - 14:30	<u>Yves Pommier</u>	Center for Cancer Research, NIH, Bethesda, US	<i>Repair of topoisomerase cleavage complexes</i>
14:30 - 14:45	Hannes Lans	Erasmus University Medical Center, Rotterdam, NL	<i>Persistent TFIIH binding to DNA damage impairs in vivo neuron functionality</i>
14:45 - 15:00	Chris Carnie	University of Cambridge, UK	<i>Using genome-wide CRISPR screens to explore DNA-protein crosslink repair</i>

15:00 - 18:00 *Coffee Break & Poster Session 2*

**Outreach Lecture**

Chair: Helle Ulrich

18:00 - 18:45	<u>Björn Schumacher</u>	CECAD, University of Cologne, DE	<i>Das Geheimnis des menschlichen Alterns: Neue Erkenntnisse aus der Biologie des Alterns</i>
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18:45 *Free evening // Dinner & Get-Together for Invited Speakers & SFB 1361 Pls*

**Friday, 23 September**

**Keynote Lecture**

Chair: Helle Ulrich

09:00 - 09:45	<u>John Diffley</u>	The Francis Crick Institute, London, UK	<i>How DNA replication initiates and what happens when it goes wrong</i>
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**Session 6: Taking care of breaks & ends**

Chair: Karl-Peter Hopfner

09:45 - 10:15	<u>Zuzana Storchova</u>	Technical University of Kaiserslautern, DE	<i>Replication stress as a consequence of aberrant mitosis</i>
10:15 - 10:45	<u>Wolf-Dietrich Heyer</u>	University of California, Davis, US	<i>Double-strand break repair by homologous recombination</i>
10:45 - 11:00	Rebekka Karbstein	Karlsruhe Institute of Technology, DE	<i>Crucial role of WSS1A in DPC repair and maintenance of genome integrity in plants</i>

11:00 - 11:30 *Coffee Break*

11:30 - 12:00	<u>Evi Soutoglou</u>	University of Sussex, Brighton, UK	<i>Pol <math>\theta</math>-dependent compromised DNA repair fidelity in embryonic stem cells</i>
12:00 - 12:15	Jean-Baptiste Charbonnier	I2BC, Institute Joliot, University of Paris-Saclay, CNRS, FR	<i>PAXX binding to Ku70 provides functional redundancy to XLF in NHEJ</i>
12:15 - 12:30	Michael Ensminger	SFB 1361, University of Technology Darmstadt, DE	<i>POL<math>\theta</math>-mediated end-joining is restricted by RAD52 and BRCA2 until the onset of mitosis</i>

**Closing Remarks & Prizes**

12:30 - 12:45 Organisers