

# Mechanisms of Recombination 2018

May 20-22, 2018  
The Francis Crick Institute, London, UK

## Conference Program

### Sunday, May 20

08.00 – 09.00 Registration

09.00 – 09.05 Welcome

09.05 – 09.40 **Keynote:** Jim Haber (Brandeis University, US)  
**Stability and instability in the repair of a broken chromosome**

#### Session 1 **Chair: Sue Jinks-Robertson**

09.40 – 10.05 Neil Hunter (University of California - Davis, US)  
**Joint molecule metabolism during meiotic recombination**

10.05 – 10.30 Kathy Niakan (The Francis Crick Institute, UK)  
**Gene editing in human embryos**

10.30 – 10.50 Short Talk 1

Break

11.20 – 11.45 Roland Kanaar (Erasmus MC, The Netherlands)  
**Pathways of illegitimate recombination**

11.45 – 12.10 Dale Wigley (Imperial College London, UK)  
**Structure and mechanism of the Ino80 chromatin remodelling complex**

12.10 – 12.35 Boris Pfander (Max Planck Institute of Biochemistry, Germany)  
**Cell cycle control of JM resolution**

12.35 – 12.55 Short Talk 2

Lunch

14.00 – 16.30 Poster Session 1

#### Session 2 **Chair: Scott Keeney**

16.30 – 16.55 Michael Lichten (National Cancer Institute, US)  
**Meiotic recombination intermediate metabolism**

16.55 – 17.20 Joao Matos (ETH Zurich, Switzerland)  
**Regulation of structure-selective endonucleases during meiosis: implications for crossover maturation and patterning**

17.20 – 17.45 Dana Brnzei (IFOM, the FIRC Institute of Molecular Oncology, Italy)  
**Rewiring of DNA damage tolerance mechanisms at the replication fork**

17.45 – 18.10 Pierre-Henri Gaillard (Marseilles Cancer Research Center, France)  
**SLX in the City**

18.10 – 18.30 Short Talk 3

Dinner

### **Monday, May 21**

08.00 – 09.00 Open poster session

#### **Session 3 Chair: Jim Haber**

09.00 – 09.25 Patrick Sung (Yale University, US)  
**Roles of BRCA complexes in homology-directed DNA repair**

09.25 – 09.50 Wolf-Dietrich Heyer (University of California - Davis, US)  
**Homologous recombination and chromosomal rearrangements**

09.50 – 10.15 Akira Shinohara (Osaka University, Japan)  
**Assembly and disassembly of two RecA homologs Rad51 and Dmc1 recombination complexes**

10.15 – 10.35 Selected Talk 4

Break

11.00 – 11.25 Steve Kowalczykowski (University of California - Davis, US)  
**Molecular functions of BRCA1 and RAD51 paralogs in homologous recombination**

11.25 – 11.50 Susan Lovett (Brandeis University, US)  
**Biochemical analysis of *E. coli* gap repair proteins**

11.50 – 12.15 Maria Spies (University of Iowa, US)  
**Conformational dynamics in the RAD52 function**

12.15 – 12.40 Douglas Bishop (University of Chicago, US)  
**A primary function of the ATPase activity of *E. coli* RecA is to prevent accumulation of a toxic form of the protein bound to undamaged chromosomal sites**

12.40 – 13.00 Selected Talk 5

Lunch

#### **Session 4 Chair: Tifia de Lange**

14.00 – 14.25 Steve West (The Francis Crick Institute, UK)  
**Resolution of DNA replication/recombination intermediates by MUS81 and GEN1**

14.25 – 14.50 Kenneth Mariani (Memorial Sloan Kettering Cancer Center, US)

14.50 – 15.15 Petr Cejka (University of Zurich, Switzerland)  
**Mechanisms of DNA end resection**

15.15 – 15.40 Andrés Aguilera (CABIMER, Spain)  
**Role of chromatin in DSB repair via SCE**

15.40 – 16.00	Selected Talk 6
	Break
16.30 – 16.55	Xiaolan Zhao (Memorial Sloan Kettering Cancer Center, US) <b>Regulation of recombinational repair</b>
16.55 – 17.20	Alain Nicolas (Institut Curie, France) <b>Mechanisms of genetic diversification in yeasts: mutational landscapes and reversion of meiosis</b>
17.20 – 17.45	Jeff Sekelsky (University of North Carolina - Chapel Hill, US) <b>Interactions between homologous recombination and DNA polymerase theta-mediated end joining</b>
17.45 – 18.05	Selected Talk 7
18.05 – 18.25	Selected Talk 8
	Conference social (including dinner)

## Tuesday, May 22

08.00 – 09.00	Open poster session
<b>Session 5</b>	<b>Chair: Xiaolan Zhao</b>
09.00 – 09.25	Dan Camerini-Otero (NIH, US) <b>Linking meiotic replication and recombination in mice and humans</b>
09.25 – 09.50	Tony Carr (University of Sussex, UK) <b>Mechanisms of restarted DNA replication</b>
09.50 – 10.15	Rodney Rothstein (Columbia University, US) <b>Increased chromosome mobility after DNA damage</b>
10.15 – 10.35	Selected Talk 9
	Break
11.00 – 11.25	Tanya Paull (University of Texas, US) <b>The MRN complex and regulation of recombination in eukaryotic cells</b>
11.25 – 11.50	John Petrini (Memorial Sloan Kettering Cancer Center, US) <b>The Mre11 – Nbs1 interface: ATM signaling and tumor suppression</b>
11.50 – 12.15	Sue Jinks-Robertson (Duke University, US) <b>Repair of mitotic double-strand breaks: does end structure matter?</b>
12.15 – 12.35	Selected Talk 10
	Lunch
13.30 – 16.00	Poster Session 2

**Session 6**

**Chair: Steve Kowalczykowski**

- 16.00 – 16.25 Titia de Lange (The Rockefeller University, US)  
**Recombination at telomeres**
- 16.25 – 16.50 Simon Boulton (The Francis Crick Institute, UK)
- 16.50 – 17.15 Anne Villeneuve (Stanford University, US)
- 17.15 – 17.40 Maria Jasin (Memorial Sloan Kettering Cancer Center, US)  
**Protecting the genome by homologous recombination**
- 17.40 – 18.05 Scott Keeney (Memorial Sloan Kettering Cancer Center, US)  
**When good breaks go bad: germline genome rearrangements**
- 18.05 – 18.40 **Keynote:** Bernard de Massy (CNRS, France)  
**Mechanism and regulation of meiotic DNA double strand break formation**
- 18.45 Close

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Meeting information

<http://www.abcam.com/Recombination2018>