PreLiminary Programme

Monday 27th June

13.00 Registration

17.00 Welcome Address
Mauro Giacca (ICGEB Director-General, Trieste)

17.25-19.25 Basic mechanisms at the replication fork
Session chair: James Berger (Johns Hopkins, Baltimore)

17.25 Karim Labib (University of Dundee)
The end of chromosome replication

17.50 Luca Pellegrini (University of Cambridge)
A biochemical and structural analysis of the interaction of human Cdc45 with Treslin

18.05-18.20 Short Break

18.20 Juan Mendez (Spanish National Cancer Res. Center, Madrid)
Addressing the functions of mammalian PrimPol protein

18.45 Michael O’Donnell (Rockefeller University, New York)
Architecture and function of the eukaryotic replisome

19.10 Alessandro Costa (Francis Crick Institute, London)
A conformational switch in the CMG-Pol epsilon assembly

19.30 Welcome Reception

Tuesday 28th June

8.30-10.30 Replication-repair interface I
Session chair: Agata Smogorzewska (Rockefeller University, New York)

8.30 Dana Branzei (IFOM, Milan)
SUMO-mediated global and local control of recombination during replication

8.55 Antonio Porro (University of Zurich)
A FAN1-dependent repair pathway processes G-quadruplex structures at replication forks and contributes to telomere maintenance

9.10 Peter Burgers (Washington University, St.Louis)
The inner workings of the lagging strand maturation machinery

9.35 Amaia Ercilla (University of Barcelona)
Acute replication stress-induced fork remodeling occurs with replisome components displacement but without their dissociation from chromatin and does not compromise fork restart

9.50 Karla Mettrick (University of Newcastle, Callaghan)
DNA replication fork processing and recovery in living Escherichia coli cells

10.05 Justin Sparks (Harvard Medical School, Boston)
CMG can bypass a leading-strand covalent DNA-protein complex

10.20-11.00 Coffee Break
11.00-12.35 Replication-repair interface II
Session chair: Dana Branzei (IFOM, Milan)

11.00 Agata Smogorzewska (Rockefeller University, New York)
ICL repair-aldehyde detoxification and ICL repair-NHEJ pathway interactions

11.25 Puck Knipscheer (Hubrecht Institute, Utrecht)
How does the Fanconi pathway promote unhooking of DNA interstrand crosslinks?

11.50 Paolo Swiec (Francis Crick Institute, London)
Structural basis for the Fanconi anemia ICL repair pathway activation

12.05 Andrew Seeber (Friedrich Miescher Institute, Basel)
RPA recruits MRX to forks and breaks to hold replicated sister chromatids together

12.20 Delphine Lemacon (Saint Louis University)
Mechanisms of DNA replication fork resection in BRCA1 and BRCA2 deficient cells

12.35 Lorena Zentilin (ICGEB, Trieste)
Genome-wide siRNA screening highlights the role of cellular DNA-damage response in modulating AAV transduction

12.50-14.15 Light Lunch

14.15-16.30 Free Time

16.30-18.15 Replication fork remodeling
Session chair: Massimo Lopes (University of Zurich)

16.30 Tony Carr (University of Sussex, Falmer)
Mechanisms of replication-associated genome rearrangement

16.55 David Cortez (Vanderbilt University, Nashville)
ETAA1 regulates ATR to maintain genome stability during DNA replication

17.20 Philippe Pasero (Institute of Human Genetics, Montpellier)
SAMHD1 processes stalled forks and links DNA replication stress to inflammation

17.45 Marko Vujanovic (University of Zurich)
PCNA poly-ubiquitination and ZRANB3 mediate replication fork slowing and reversal upon genotoxic stress

18.00 Hocine Mankouri (University of Copenhagen)
Analysis of replication-associated mutagenesis at a single stalled replication fork

18.15 - 20.15 Poster Session I (refreshments)
even-numbered abstracts

Free dinner/evening

Wednesday 29th June

8.30-10.25 Structural and single molecule analysis of replication / repair
Session chair: Johannes Walter (Harvard Medical School, Boston)

8.30 Antoine van Oijen (University of Wollongong)
Single-molecule studies of DNA replication: the plasticity of the replisome

8.55 Steve Kowalczykowski (University of California, Davis)
Single-molecule visualization of DNA recombination and replication, one molecule at a time

9.20 Logan Myler (The University of Texas at Austin)
Single-molecule imaging reveals how the Mre11/Rad50/Nbs1 complex coordinates the early stages of DNA double strand break repair

9.35 Wei Yang (NIDDK, NIH, Bethesda)
Molecular gymnastics during DNA translesion synthesis

10.00 Elettra Sincrotrone Trieste’ lecture
James Berger (Johns Hopkins, Baltimore)
Structural mechanisms for initiating DNA replication

10.25-10.55 Coffee Break
10.55-12.30  
**Replication-transcription interface**  
Session chair: Philippe Pasero (Institute of Human Genetics, Montpellier)

10.55  
**Karlene Cimprich** (Stanford University)  
*RNA meets DNA: novel mechanisms for RNA-induced genome instability*

11.20  
**Angelos Constantinou** (Institute of Human Genetics, Montpellier)  
*A FANCM protein interaction screen reveals a pyrimidine catabolism enzyme required to prevent cell-intrinsic DNA replication stress*

11.45  
**Eva Petermann** (University of Birmingham)  
*Increased global transcription activity as a mechanism of oncogene-induced replication stress*

12.00  
**Cosetta Bertoli** (University College London)  
*E2F-dependent G1/S transcription is required to tolerate oncogene-induced replication stress*

12.15  
**Fumiko Esashi** (University of Oxford)  
*Role of BRCA1-independent PALB2 chromatin association*

12.30-14.00 Lunch

14.00-16.30  
**Replication-recombination interface**  
Session chair: Jiri Lukas (University of Copenhagen)

14.00  
**Steve West** (Francis Crick Institute, London)  
*Activation of MUS81 structure-selective endonuclease by formation of the SMX complex*

14.25  
**Pavel Janscak** (University of Zurich)  
*RECVQ DNA helicase promotes MUS81-mediated processing of late replication intermediates in mitosis*

14.40  
**Boris Pfander** (Max Planck Institute of Biochemistry, Martinsried)  
*Novel regulators in the cell cycle control of JM resolution by Mus81-Mms4*

14.55-15.10 Short Break

15.10  
**Maria Jasin** (Memorial Sloan-Kettering CC, New York)  
*Protecting the genome by homologous recombination: roles of the BRCA2 tumor suppressor*

15.35  
**Vincenzo Costanzo** (IFOM, Milan)  
*Dissecting the role of BRCA2, Rad51 paralogs and SMARCAL1 in vertebrate DNA replication*

16.00  
**Alberto Ciccia** (Columbia University, New York)  
*Restoration of fork stability in BRCA1- and BRCA2-deficient cells*

16.15  
**Michael Cox** (University of Wisconsin-Madison)  
*DNA flap creation by the MgsA/RarA protein of Escherichia coli*

16.30-20.00 Free Time – see [www.icgeb.org/programme-779.html](http://www.icgeb.org/programme-779.html) for suggested excursions

20.00 – 22.00  
**Poster Session II (Wine & Cheese)**  
odd-numbered abstracts

**Thursday 30th June**

8.30-10.15  
**Chromatin, replication and genome maintenance**  
Session chair: Karlene Cimprich (Stanford University)

8.30  
**Anja Groth** (University of Copenhagen)  
*Chromatin replication: a histone reader based mechanism to identify post-replicative chromatin*

8.55  
**Iestyn Whitehouse** (Memorial Sloan-Kettering CC, New York)  
*Coupling of gene enhancers and replication origins*

9.20  
**Jiri Lukas** (University of Copenhagen)  
*Limits and thresholds of protein pathways that protect integrity of replicating genomes*

9.45  
**Sujan Devbhandari** (Memorial Sloan-Kettering CC, New York)  
*An essential role for chromatin during budding yeast DNA replication reconstituted with purified proteins*

10.00  
**Tatsuro Takahashi** (Osaka University)  
*Chromatin remodeling facilitates eukaryotic mismatch repair by promoting the displacement of nucleosomes around mismatches*
10.15-10.45 Coffee Break

10.45-12.40  **Difficult-to-replicate loci and telomeres**  
Session chair: David Cortez (Vanderbilt University, Nashville)

10.45  **Ginger Zakian**  (Princeton University)  
*Pop proteins affect the abundance of telomerase RNA and telomere length*

11.10  **Titia de Lange**  (Rockefeller University, New York)  
*Shelterin does not protect telomere-internal DSBs from ATM signaling and DNA repair*

11.35  **Sergei Mirkin**  (Tufts University, Medford)  
*Mechanisms of genome instability mediated by interstitial telomeric sequences*

12.00  **Eric J. Brown**  (University of Pennsylvania, Philadelphia)  
*Potent and selective ATR inhibitors for the treatment of PARPi-resistant cancers*

12.25  **Stefan Schoeftner**  (LNCIB/University of Trieste)  
*TERRA binding proteins control RNA:DNA hybrid formation at telomeres*

12.40-14.00 Light Lunch

14.00-17.30 Free Time

17.30-19.55  **Replication stress in cancer onset and therapy**  
Session chair: Alessandro Vindigni (Saint Louis University)

17.30  **Andre Nussenzweig**  (NIH, Bethesda)  
*Replication fork stability confers chemoresistance in BRCA-deficient cells*

17.55  **Oscar Fernandez-Capetillo**  (Spanish National Cancer Res. Center, Madrid)  
*Mechanisms of resistance to anticancer therapies*

18.20  **Mareike Herzog**  (Wellcome Trust Sanger Institute, Cambridge)  
*POLE and POLD1 mutations found in cancers cause distinct mutational patterns and are synthetic lethal with mismatch repair*

18.35-18.50 Short Break

18.50  **Thanos Halazonetis**  (University of Geneva)  
*Mechanisms of oncogene-induced DNA replication stress*

19.15  **Thomas Hellday**  (Karolinska Institute, Stockholm)  
*Poisoning replication with oxidized nucleotides as cancer treatment*

19.40  **Gro Elise Rødland**  (Oslo University Hospital)  
*Synergistic S-phase DNA damage by combined inhibition of Wee1/Chk1 or Wee1/ATR checkpoint kinases*

20.30 Social Dinner  
**Closing cocktails offered by**

Friday 1st July

Departures