**2023 Birmingham Centre for Genome Biology Symposium 29/30th June Programme.**

University of Birmingham Medical School Leonard Deacon Lecture Theater and Wolfson common room.

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| **BCGB SYMPOSIUM THURSDAY 29TH JUNE 2023** | | |
| 09:00 | Registration  Wolfson Common Room |  |
| 09:50 | Welcome + Introduction to BCGB | Ferenc Mueller |
|  | **Session 1:  DNA Repair** **and replication** | **Chair:** Martin Higgs |
| 10:00 | The SWI/SNF chromatin remodelling complex prevents genome instability in G quadruplex containing chromatin | Jessica Downs (ICR, UK) |
| 10:25 | Loss of Ezh2 function remodels the DNA replication initiation landscape | Ildem Akerman |
| 10:40 | Initial processing of perturbed replication forks regulates repair pathway choice at ALT telomeres | Ronan Broderick |
| 10:55 | DONSON facilitates Cdc45 and GINS chromatin association and is essential for DNA replication initiation | Aga Gambus for Georgia Kingsley |
| 11.10 | The SPATA5-SPATA5L1 ATPase complex direct replisome proteostasis to ensure genome integrity | Martina Foglizzo (Leeds UK) |
| 11:25 | Flash Poster Session (odd numbers)  5 minute sponsor presentation | 5 posters each 2 min person |
| 11:45 | Lunch and poster session (odd numbers)  Wolfson Common Room | Poster Panel Judges: |
|  | **Session 2:  Gene regulation in blood cells** | **Chair:** Conny Bonifer |
| 13:30 | Genome form and function | Matthias Merkenschlager (Imperial UK) |
| 13:55 | Transcriptional Control of Embryonic Blood Cell Development | Bertie Gottgens (Cambridge UK) |
| 14:20 | A Leukemic stem cells hijack lineage inappropriate signalling pathways to promote their growth | Sophie Kellaway |
| 14:35 | The molecular basis of T cell memory | Peter Cockerill |
| 14:50 | Rapid establishment of a tumour-retained state curtails the contribution of conventional NK cells to anti-tumour immunity in solid cancers | David Withers |
| 15:05 | The alternative Nucleosome Remodeling Factor complex sustains acute myeloid leukemia by regulating the accessibility of insulator regions | Aliaksandra Radzisheuskaya (ICR UK) |
| 15:20 | Afternoon Tea. Wolfson Common Room |  |
|  | **Session 3:  RNA in genome regulation** | **Chair:** Teresa Carlomagno |
| 15:50 | Mechanistic insight into the mRNA poly(A) tail machinery | Lori Passmore (Cambridge UK) |
| 16:15 | RNA-editing based approaches identify the function of an RNA-Binding Protein network promoting cancer stem cell survival | Diu Nguyen (QMUL UK) |
| 16:40 | Transcription initiation site choice precedes mTOR-dependent RNA metabolism and defines cancer differentiation and radiotherapy sensitivity | Joe Wragg |
| **16:55** | **Keynote Speaker introduction** | Conny Bonifer |
| 17:00 | Weird nuclear noncoding RNAs regulating DNA methylation, transcription, DNA replication, and DNA trinucleotide repeat expansion | Keynote Daniel Tenen (Harvard USA) |
| 17:30 | Poster Session (all numbers) and Wine Reception  Wolfson Common Room  **19:30 Speaker's dinner (Edgbaston Park Hotel)** |  |

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| **BCGB SYMPOSIUM FRIDAY 30TH JUNE 2023** | | |
|  | **Session 4:  DNA repair and Cancer** | **Chair:** Jo Morris |
| 09:00 | The role of PARPs in DNA repair and genome stability | Nick Lakin (Oxford UK) |
| 09:25 | Combining radiotherapy with inhibitors of the DNA damage response: effects on glioblastoma and the normal brain | Anthony Chalmers (Glasgow UK) |
| 09:50 | RNA Polymerase II major subunits overexpression induces genome instability and deregulates transcription | Martina Muste Sadurni |
| 10:05 | Recent and ongoing early Phase trials involving DNA damage repair inhibitors in relapsed/refractory paediatric cancer patients and potential implications for translational research and new paediatric and adult cancer trials | Susanne Gatz |
| 10.20 | Parse Biosciences Sponsor Talk |  |
| 10:25 | Coffee Break Wolfson Common Room |  |
| 10:55 | Phosphorylation of ubiquitin as a novel post-translational modification in the double strand break response | Abigail Farrell |
| 11:10 | Comparative Functional Analysis of Toxicity Responsive Genes in Daphnia and Mouse Hepatocytes | Shay Glasgow |
| 11:25 | REC drives recombination to repair double-strand breaks in animal mtDNA | Hansong Ma |
| 11:40 | Flash Poster Session (even numbers) | 5 posters each 2 min person |
| 12:00 | Lunch and poster session (even numbers)  Wolfson Common Room | Poster Panel Judges: |
|  | **Session 5:  Gene regulation in development and disease** | **Chair:** Rui Monteiro |
| 13:30 | Deciphering the roles of telomerase in multi-tissue senescence and inflammation, using the zebrafish model | Catarina Henriques (Sheffield UK) |
| 13:55 | A Cytokine signalling reprograms the gene regulatory network of FLT3-ITD Acute Myeloid Leukaemia in response to FLT3 inhibition: A crucial role of RAS and RUNX1 in overcoming drug resistance | Daniel Coleman |
| 14:10 | Runx1 is a Key Transcription Factor That Drives Synovial Fibroblast Pathogenicity in Rheumatoid Arthritis | Chris Mahoney |
| 14:25 | Investigating the Relationship Between Genome Structure and Function at the Globin Locus | Douglas Higgs (Oxford UK) |
| 14:50 | Coffee Break Wolfson Common Room |  |
| 15:20 | Mechanisms of extreme long-range gene regulation in human craniofacial development | Hannah Long (Edinburgh UK) |
| 15:45 | Gene expression dynamics in the Drosophila embryo | Hilary Ashe (Manchester UK) |
| 16:10 | Paloma and Clare |  |
| **16:25** | **Keynote Speaker introduction** | Peter Cockerill |
| 16:30 | The lymphomyeloid bridge: transcription factors and the epigenome in early T cell development | Ellen Rothenberg (CalTech USA) |
| 17:00 | Talks and Poster Awards |  |
| 17:10 | Concluding remarks |  |