**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  |   |