

Tuesday, 28 June 2022

13:00 – 14:00 Registration

Welcome Address

14:00 – 14:15 **Peter Baumann & Meng Wang** Johannes Gutenberg University & Institute of Molecular Biology (IMB), Mainz, DE
Baylor College of Medicine, Houston, US

Keynote Lecture

Chair: Peter Baumann, Johannes Gutenberg University & Institute of Molecular Biology (IMB), Mainz, DE

14:15 – 15:00 **Steve Horvath** University of California, Los Angeles, US *Epigenetic ageing studies*

Session 1

Chair: Peter Baumann, Johannes Gutenberg University & Institute of Molecular Biology (IMB), Mainz, DE

15:00 – 15:30 **Meng Wang** Baylor College of Medicine, Houston, US *Lysosomal lipid signals in longevity regulation*

15:30 – 16:00 *Coffee Break*

16:00 – 16:15 **Peter Tessarz** Max Planck Institute for Biology of Ageing, Cologne, DE *Single-cell resolution unravels spatial alterations in the metabolism, transcriptome and epigenome of ageing liver*

16:15 – 16:45 **Jessica Whited** Harvard University, Cambridge, US *Amputation-induced systemic stem cell activation in axolotl*

16:45 – 17:00 **Omid Omrani** Leibniz Institute on Aging, Fritz Lipmann Institute, Jena, DE *Ageing-induced alteration of proteome dynamics in mouse intestinal tissue upon regeneration*

17:00 – 18:00 Poster Session

18:00 – 20:00 *Welcome Reception*

Wednesday, 29 June 2022

Session 2

Chair: Joan Barau, Institute of Molecular Biology (IMB), Mainz, DE

09:30 – 10:00 **Adam Antebi** Max Planck Institute for Biology of Ageing, Cologne, DE *A TFEB/TGF- β axis regulates stem cell quiescence, activation, and rejuvenation in the adult reproductive diapause*

10:00 – 10:15 **Jonviea Chamberlain** Unisanté, Lausanne, CH *A novel, lifestyle-based epigenetic clock*

10:15 – 10:45 **Dario Valenzano** Leibniz Institute on Aging, Fritz Lipmann Institute, Jena, DE *Evolutionary ecology of ageing*

10:45 – 11:15 **Hans R. Schöler** Max Planck Institute for Molecular Biomedicine, Muenster, DE *Induction and maintenance of pluripotency by Oct4*

11:15 – 12:00 *Coffee Break*

12:00 – 12:15 **Björn von Eyss** Leibniz Institute on Aging, Fritz Lipmann Institute, Jena, DE *Taz protects hematopoietic stem cells from an ageing-dependent decrease in PU.1 activity*

12:15 – 12:45 **Thomas Rando** University of California, Los Angeles, US *Stem cell ageing and the regulation of heterochromatin*

| | | | |
|--|-------------------------|---|--|
| 12:45 – 13:00 | Dania Hamo | Berlin Institute of Health at Charité Universitätsmedizin Berlin, Center for Regenerative Therapies (BCRT), DE | <i>DNA replication speed regulates heterochromatic DNA-methylation loss during cellular ageing</i> |
| 13:00 – 13:30 | Jan Vijg | Albert Einstein College of Medicine, New York, US | <i>Ageing of the genome</i> |
| 13:30 – 14:30 | <i>Lunch</i> | | |
| 14:30 – 15:30 | Poster Session | | |
| Session 3 | | | |
| Chair: Beat Lutz, Leibniz Institute for Resilience Research & University Medical Center, Mainz, DE | | | |
| 15:30 – 15:45 | Chiara Herzog | University of Innsbruck, AT | <i>Discordance in general and epithelial ageing signatures indicates hormone-mediated cancer risk</i> |
| 15:45 – 16:15 | Allan Spradling | Carnegie Institution for Science, Baltimore, US | <i>Oocyte construction reverses ageing</i> |
| 16:15 – 16:30 | Dean Nizetić | Barts & The London School of Medicine, Queen Mary University of London, UK | <i>Mechanisms accelerating biological age in Down syndrome via IgG-glycome profiles and iPSC modelling</i> |
| 16:30 – 17:00 | Lea Harrington | Institute for Research in Immunology and Cancer, University of Montreal, CA | <i>Extending the telomere's bailiwick to epigenetic perturbations that alter murine stem cell fate</i> |
| 17:00 – 17:30 | <i>Fingerfood Snack</i> | | |
| | <i>Free Evening</i> | | |

Thursday, 30 June 2022

Session 4

Chair: René Ketting, Institute of Molecular Biology (IMB), Mainz, DE

| | | | |
|---------------|---------------------------|---|--|
| 09:30 – 10:00 | Jan Karlseder | Salk Institute for Biological Studies, La Jolla, US | <i>ZBP1-mediated telomere-to-mitochondria signalling prevents cancer initiation</i> |
| 10:00 – 10:15 | Brian Luke | Institute for Developmental Neurology, Johannes Gutenberg University, Mainz, DE | <i>Telomeric RNA-DNA hybrids regulate senescence rates before and after crisis by preventing end resection</i> |
| 10:15 – 10:45 | Francesco Neri | University of Torino, IT | <i>Origin of the intestinal DNA methylation drift during aging</i> |
| 10:45 – 11:30 | <i>Coffee Break</i> | | |
| 11:30 – 12:00 | Benedikt Berninger | Centre for Developmental Neurobiology, King's College London, UK | <i>Engineering new interneurons for grown-up brains</i> |
| 12:00 – 12:15 | Sophie Péron | University Medical Center, Johannes Gutenberg University Mainz, DE | <i>Harnessing the regenerative potential of cortical glia through Ascl1-mediated lineage reprogramming</i> |

| | | | |
|---------------|---|---|--|
| 12:15 – 12:45 | Scott Kennedy | Harvard Medical School, Boston, US | <i>Poly(UG)-tailed RNAs in genome protection and epigenetic inheritance</i> |
| 12:45 – 13:00 | Nadezda Podvalnaya | Institute of Molecular Biology (IMB), Mainz, DE | <i>The novel nuclease complex PUCH processes piRNA 5' ends in C. elegans</i> |
| 13:00 – 14:00 | <i>Lunch</i> | | |
| 14:00 – 15:00 | Poster Session | | |
| 15:15 – 21:00 | <i>Excursion to and Dinner at Reichenstein Castle, Trechtingshausen</i> | | |

Friday, 1 July 2022

Keynote Lecture

Chair: Meng Wang, Baylor College of Medicine, Houston, US

| | | | |
|---------------|--------------------|----------------------------------|--|
| 09:30 – 10:15 | John Sedivy | Brown University, Providence, US | <i>Involvement of retrotransposons in aging and age-related diseases</i> |
|---------------|--------------------|----------------------------------|--|

Session 5

Chair: Meng Wang, Baylor College of Medicine, Houston, US

| | | | |
|---------------|-----------------------|--|--|
| 10:15 – 10:45 | André Fischer | German Center for Neurodegenerative Diseases, Goettingen, DE | <i>Epigenetic and epi-transcriptomic processes in age-associated CNS diseases</i> |
| 10:45 – 11:15 | <i>Coffee Break</i> | | |
| 11:15 – 11:30 | Yasmeen Taalab | Institute of Forensic and Traffic Medicine, University of Heidelberg, DE | <i>How suitable are formalin-only-fixed postmortem brain tissues for use in genome-wide chromatin profiling?</i> |
| 11:30 – 12:00 | Peter Reddien | Whitehead Institute for Biomedical Research, Cambridge, US | <i>Stem cell-mediated tissue turnover promotes extreme longevity in planarians</i> |

Closing Remarks and Prizes

| | | |
|---------------|---|--|
| 12:00 – 12:15 | René Ketting, Beat Lutz & Joan Barau | Institute of Molecular Biology (IMB), Mainz, DE Leibniz Institute for Resilience Research & University Medical Center, Mainz, DE Institute of Molecular Biology (IMB), Mainz, DE |
| 12:15 – 13:00 | <i>Fingerfood Lunch</i> | |