

FEBS Workshop "Ageing and Regeneration": Sept 9-12, 2019

Venue: University of Innsbruck, Aula, Innrain 52,
Innsbruck, Austria



FINAL PROGRAMME Day 1: Monday, Sept 9, 2019



- 12:00 Registration
- 13:00 Greetings and Welcome: Ulrike Tanzer, Vice Rector for Research, University of Innsbruck
- 13:15 - 16:00 Session 1: DNA Repair and Ageing (Session Convener: Björn SCHUMACHER, Cologne, Germany)**
- 13:15 Björn SCHUMACHER (Cologne, Germany): DNA damage responses in the ageing process
- 13:40 Jan VIJG (Bronx, NY, USA / Shanghai, China): Single-cell analysis of genome instability in aging
- 14:05 Selected oral presentations from abstracts**
- 14:05 Valentina SLADKY (Innsbruck, Austria): The PIDosome regulates hepatocyte polyploidization during liver development and regeneration
- 14:20 Henning POPP (Mannheim, Germany): Accumulation of DNA damage and alteration of the DNA damage response in chronic myeloid leukemia
- 14:35 Alireza NOORMOHAMMADI (Cologne, Germany): Prostaglandin signals from adult germ stem cells delay somatic aging of *C. elegans*
- 14:50 Robert BAYERSDORF (Cologne, Germany): Autophagic responses after DNA damage in *Caenorhabditis elegans*
- 15:05 Coffee break
- 15:30 – 16:00 Session 1 (continued)**
- 15:30 Jan HOEIJMAKERS (Rotterdam, Utrecht, The Netherlands / Cologne, Germany): The impact of DNA damage and nutrition on transcription, ageing and neurodegeneration in mice and patients

- 16:00 – 17:00** Workshop “Women in Science”: Chairs: Ilse KRANNER (Innsbruck, Austria), Brigitte GALLIOT (Geneva, Switzerland), Robert REBITSCH (Innsbruck, Austria)
- 17:00 – 19:00** Poster Session 1 (posters # 01 - 18)
- 19:00 – 21:00** Reception

Day 2: Tuesday, Sept 10, 2019

09:00 - 11:45 **Session 2: Neuronal Ageing and Regeneration (Session Convener: Frank EDENHOFER, Innsbruck, Austria)**

- 09:00 Lorenz STUDER (New York, NY, USA): Modeling and treating age-related disorders using human pluripotent stem cells
- 09:25 Oliver BRÜSTLE (Bonn, Germany): Programming stem cells for neurological disease modelling and repair
- 09:50 Elly TANAKA (Vienna, Austria): Cell communication and cell potential during limb regeneration
- 10:15 Coffee break
- 10:45 Selected oral presentations from abstracts**
- 10:45 Maja FUNK (Heidelberg, Germany): Deciphering mechanisms of age-related intestinal stem cell exhaustion by single-cell genomics
- 11:00 Guohuan YANG (Vienna, Austria): Ribosomal RNA modifications in human dermal fibroblast senescence
- 11:15 Yulia KARGAPOLOVA (Cologne, Germany): Impaired CHD6 function links autophagy and DNA damage response misregulation to premature ageing
- 11:30 Ilija JEFTIC (Tucson, AZ, USA): Age-related defects in lymph node microenvironment and their reversal by an immunomodulatory treatment
- 11:45 Lunch

12:45-16:15 Session 3: Senescence and Ageing (Session Convener: Pidder JANSEN- DÜRR, Innsbruck, Austria)

12:45 Sebastian GRÖNKE (Cologne, Germany): A nutritional memory impairs survival, transcriptional and metabolic response to dietary restriction in old mice

13:10 Peter DE KEIZER (Utrecht, The Netherlands): Targeting senescent cells to improve tissue homeostasis in ageing

13:35 Joao PASSOS (Rochester, MN, USA): Mitochondria, telomeres and cell senescence: Implications for ageing and age-related diseases

14:00 Sara Annika WICKSTRÖM (Helsinki, Finland / Cologne, Germany): Mechanisms of stem cell fate regulation through niche-derived signals and forces

14:25 Coffee break

14:50 Carolina DOERRIER (Innsbruck, Austria): Mitochondrial fitness, degenerative diseases and aging

15:15 Selected oral presentations from abstracts

15:15 Dmytro GOSPODARYOV (Ivano-Frankivsk, Ukraine): Alternative NADH dehydrogenase extends lifespan and increases resistance to xenobiotics in *Drosophila*

15:30 Maria Sol JACOME (Nice, France): Mitochondrial function in skeletal myofibers is controlled by a TRF2-SIRT3 axis: Implications for muscle development and aging

15:45 Maria CAVINATO (Innsbruck, Austria): Involvement of mitophagy in the elimination of damaged mitochondria during the process of UVB-induced senescence

16:00 Dominik HANETSEDER (Vienna, Austria): Engineered extracellular matrix enhances the bone regeneration potential of aged human bone marrow stromal cells

- 16:15 – 17:15** **Meet the Expert Session 1**
- 16:15 Elly TANAKA (Vienna, Austria), Jan VIJG (Bronx, NY, USA / Shanghai, China), Oliver BRÜSTLE (Bonn, Germany), Sebastian GRÖNKE (Cologne, Germany) plus 6 young scientists each
- 17:15 Buffet
- 19:30 – 21:00** **Public panel discussion: “Altern und Regenerationsmedizin: Wohin geht die Reise?”** (for interested laypersons; in German)
- Moderator: Marlene NOWOTNY
 Panel participants: Björn SCHUMACHER (Cologne, Germany), Lorenz STUDER (New York, NY, USA), Bishop Hermann GLETTLER (Innsbruck, Austria), Hans-Jörg EHNI (Tübingen, Germany)

Day 3: Wednesday, Sept 11, 2019

- 09:00 FEBS presentation: Winnie ESKILD (Oslo, Norway)
- 09:20 - 12:30** **Session 4: Evolutionary Aspects of Ageing and Regeneration (Session Convener: Ilse KRANNER, Innsbruck, Austria)**
- 09:20 Thomas LAUX (Freiburg, Germany): Epigenetic regulation of plant stem cells links pluripotency to stress response
- 09:45 Yvonne STAHL (Düsseldorf, Germany): Meristems - The stem cells of plants
- 10:10 Coffee break
- 10:35 Sergi MUNNÉ-BOSCH (Barcelona, Spain): Ageing in perennial plants
- 11:00 Brigitte GALLIOT (Geneva, Switzerland): Ageing and regeneration in *Hydra*, the impact of autophagy on stem cell behavior
- 11:25** **Selected oral presentations from abstracts**
- 11:25 Matthias VOGG (Geneva, Switzerland): Multiple head regeneration after turning the molecular switch: A sophisticated transcriptional network controls *Hydra* head regeneration

- 11:40 Bert HOBMAYER (Innsbruck, Austria): Analysis of the interstitial stem cell system during ageing in *Hydra oligactis*
- 11:55 Ute ROTHBÄCHER (Innsbruck, Austria): Linking *Ciona* larval settlement to ageing
- 12:10 Vicent CASELLES (Barcelona, Spain): Defining the threshold between life and death in *C. albidus*
- 12:30 Lunch
- 13:30 – 16:45 Session 5: Metabolism, Tissue Homeostasis and Ageing (Session Convener: Werner ZWERSCHKE, Innsbruck, Austria)**
- 13:30 Pura MUÑOZ-CÁNOVES (Barcelona, Spain): Understanding muscle stem cell regenerative decline with aging
- 13:55 Ralf ADAMS (Münster, Germany): Molecular heterogeneity and functional specialization of vascular cells
- 14:20 Johannes GRILLARI (Vienna, Austria): Extracellular pathways in skin ageing
- 14:45 Coffee break
- 15:10 Stephan HERZIG (Munich, Germany): Metabolic reprogramming in aging-associated diseases
- 15:35 Luca SCORRANO (Padova, Italy): Keeping mitochondria in shape: A matter of life, ageing and death
- 16:00 Selected oral presentations from abstracts**
- 16:00 Markus MANDL (Innsbruck, Austria): Sprouty1 is a weight-loss target gene in human adipose stem/progenitor cells affecting aging and adipogenic differentiation

- 16:15 Maria RICHTER (Munich, Germany): Single-nucleus RNA-seq2 reveals cell-to-cell transcriptional heterogeneity during ageing in adult liver
- 16:30 Alexander WEISS (Innsbruck, Austria): Fumarylacetoacetate Domain Containing Protein 1 acts as regulatory enzyme in the TCA cycle, and genetic inactivation of FAHD1 induces mitochondrial dysfunction, and associated senescence (MiDAS)

16:45 – 17:45 Meet the Expert Session 2

- 16:45 Lorenz Studer (New York, NY, USA), Peter de KEIZER (Utrecht, The Netherlands), Luca SCORRANO (Padova, Italy) plus 6 young scientists each
- 17:45 Poster Session 2 (posters # 19 - 37)
- 19:45 Poster Award Ceremony and Farewell
- 20:00 Buffet / Speakers' Dinner

Day 4: Thursday, Sept 12, 2019

09:00 – 10:30 Young Scientists' Career Workshop (SR 3114, 3rd floor)

grant applications, international mobility, entrepreneurship, mentoring, etc.

Frank EDENHOFER & Jerome MERTENS (Genomics, Stem Cells & Regenerative Medicine, University of Innsbruck), Barbara TASSER (International Relations, University of Innsbruck), Sara MATT-LEUBNER (Transferstelle Wissenschaft - Wirtschaft - Gesellschaft, University of Innsbruck), Robert REBITSCH (project.service.büro, University of Innsbruck)

10:30 Coffee break

11:00 – 17:00 DP AGE-REG Special Event (SR 3114, 3rd floor)

AGE-REG faculty and students only