British Society for Research on Ageing

68th Annual Scientific Meeting

Ageing here and now: current research and transformative therapies



Oriel College Oxford 6-8th September 2018

Programme

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Ageing here and now: current research and transformative therapies

Thursday 6th September 2018

Early career researcher session:

Chairs: Adam Rolt and Terry Davis

10.30 -11.00 Coffee and register

- 11.00-11.30 Introduction and ideas exchange to identify related research interests
- 11.30-12.30 Guided workshop: developing a review article or primary research paper
- 12.30-13.00 Pitch to panel for ideas for a paper for Biogerontology
- 13.00-14.00 Join other delegates for sandwich lunch

Ageing research in an ageing society

Chair: David Weinkove

- 12.00-14.00 Arrival and registration for main meeting; sandwich lunch
- 14.00-14.10 Welcome
 - Lynne Cox, Oxford, UK
- 14.10-14.40 Human longevity: myths and possibilities Sarah Harper, Oxford, UK
- Cells as both cause and treatment of age-related disease Chairs: Lynne Cox and Jo Bridger
- 14.40-15.10 **Stem cell therapies in heart disease** Sian Harding, London, UK
- 15.10-15.40 **Tracking and targeting of senescent cells** Daniel Munez-Espin, Cambridge, UK
- 15.40-16.20 Afternoon tea
- 16.20-16.50 **Targeted apoptosis of senescent cells against aging and cancer** Peter de Keizer, Netherlands

- 16.50-17.20 **Targeting STING in senescence with small-molecule inhibitors** Andrea Ablasser, Lausanne, Switzerland
- 17.20-18.05 **KEYNOTE: Senolytic drugs: from mutant mice to human clinical trials** Nathaniel David, President, Unity Biotechnology, USA
- 18.05-18.25 Lightning talks (2 minutes each) Even numbered poster presenters
- 18.25-19.25 Posters with wine reception
- 19.30-20.45 Dinner in Hall
- 20.45-23.00 Cash bar

Friday 7th September 2018

Ageing mechanisms (1)

Chairs: Kasia Whysall and John Henderson

- 09.00-09.30 **Cellular ageing and replicative senescence** Suresh Rattan, Aarhus, Denmark
- 09.30-09.45 Human ageing is associated with reduced natural killer cell cytotoxicity against and migration towards senescent cells Jon Hazeldine, Institute of Inflammation and Ageing, Birmingham, UK
- 09.45-10.00 The genomic footprint of ageing: epigenetics, replication and somatic mutations
 - Benjamin Schuster-Boekler, Oxford, UK
- 10.00-10.30 Mitochondria to nucleus retrograde signaling triggers formation of cytoplasmic chromatin fragments and activation of SASP in senescent cells Peter Adams, Beatson Institute, Glasgow, UK and San Diego, USA

10.30-11.00 Morning coffee

Ageing mechanisms (2) – immunity, autophagy and mTOR

Chairs: Lorna Harries and Hannah Walters

- 11.00-11.30 Autophagy and immune aging
 - Katja Simon, Kennedy Institute, Oxford, UK
- 11.30-11.45 Genome-wide analysis identifies transcriptional down-regulation of insulinlike growth factor 1 receptor signalling as a major hallmark of ageing in developing B lymphocytes
 - Daniel Bolland, Babraham Institute, Cambridge
- 11.45-12.15 **mTOR signalling in autophagy and ageing** Viktor Korolchuk, Newcastle, UK
- 12.15-12.30 Age-dependent effects of reduced mTor signalling on life expectancy through distinct physiology Mirre Simons, Sheffield, UK
- 12.30-12.45 Longevity by RNA polymerase III inhibition downstream of TORC1

Nazif Alic, UCL, London, UK

12.45-13.50 Lunch in hall

13.50-14.30 BSRA AGM (all members requested to attend; several constitutional matters require a quorate membership vote)

Tools and models to study ageing (1)

Chairs: Suresh Rattan and Fiona Mutter

- 14.30-14.45 **Drosophila as a model to study innate immunity and ageing** Petros Ligoxygakis, Oxford, UK
- 14.45-15.15 Induced pluripotent stem cells: A versatile platform for the study and treatment of age-related diseases Paul Fairchild, Oxford, UK
- 15.15-15.45 **Tissue engineering approaches to modelling Alzheimer's disease** Eric Hill, Aston, UK

15.45-16.15 Afternoon tea

Tools and models to study ageing (2)

Chairs: Marina Ezcurra and Abigail Otchere

- 16.15-16.45 Werner syndrome models implicate DNA damage signalling in premature ageing and identify WRN as a *bona fide* anti-gerontogene Lynne Cox, Oxford, UK
- 16.45-17.15 NAD⁺ repletion inhibits accelerated aging in Werner syndrome through the restoration of mitophagy

Evandro Fei Fang, Oslo, Norway

- 17.15-17.30 Facilitating drug discovery by quantifying early declines in movement in large populations of adult worms David Weinkove, Durham, UK
- 17.30-17.45 **Defining an index for cellular senescence** Eva Latorre, Exeter, UK
- 17.45-18.05 Lightning talks (2 minutes each) Odd numbered poster presenters
- 18.05-19.15 Posters with drinks reception
- 19.30-21.00 Gala dinner in Hall
- 21.00-23.00 Cash bar

Saturday 8th September

Ageing in time and place (1): biomarkers

Chairs: Viktor Korolchuk and Luke Pilling

09.00-09.15 Discovery of a predictive biomarker for death in older adults diagnosed with frailty

Jorge Erusalimsky, Cardiff, UK

- 09.15-09.30 Attenuation of age-related renal lesions in a model of RAGE (receptor for advanced glycation end products) knockout Thibault Teissier, University of Lille, France
- 09.30-09.45 HNRNPM, HNRNPAO and AKAP17A splicing factor transcript levels demonstrate predictive associations with human ageing phenotypes in peripheral blood

Ben Lee, Exeter, UK

09.45-10.00 Applications of deep neural networks to human ageing biomarker development

Polina Mamoshina, Insilico Medicine, Rockville, USA, and Oxford, UK

10.00-10.15 Circadian rhythms in immune parameters and functioning in older adults: impact on vaccine responses and inflammatory diseases Niharika Duggal, Birmingham, UK

10.15-10.45 Morning coffee

Ageing in time and place (2): systems, trials and drug discovery

Chairs: Claire Stewart and Kay Hemmings

- 10.45-11.15 Circadian rhythms in the ageing musculoskeletal system: implications in therapies for osteoarthritis and low back pain Qin-Jun Meng, Manchester, UK
- 11.15-11.45 **Sarcopenia making the science work for patients** Miles Witham, Newcastle, UK
- 11.45-12.00 Announcement of prizes and awards BSRA committee
- 12.00-12.45 Open science, partnership with industry and close collaboration between UK universities and the NHS to accelerate treatments for multiple morbidities associated with ageing Chas Bountra, Oxford, UK
- 12.45-13.00 Closing remarks Layla Moran, MP for Oxford West & Abingdon
- 13.00-14.00 Sandwich lunch and depart
- 14.00 15.30 Guided walking tour of Oxford (if sufficient numbers) experienced guide and access to many of the very special sights of Oxford.
 PLEASE SIGN UP BEFORE LUNCH ON FRIDAY IF INTERESTED