

THE 2015 AGEING SUMMIT



ABSTRACTS

**10th-12th February
London, UK**

EuroSciCon 

This event will look at current scientific research and thinking regarding the ageing process. With discussions ranging from discovery of biomarkers and assay development to the immunology of ageing, this event promises to be packed with discussion and debate and is an ideal opportunity to discover what is new in the field.

This event has [CPD accreditation](#)

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Day 2, Session 1: Genetic and Epigenetic regulation

Invited Speakers Abstracts

The role of the telomerase protein TERT in brain ageing and neurodegeneration

[Dr. Gabriele Saretzki](#), Lecturer in Ageing Research, Institute for Ageing and Health, Newcastle upon Tyne, UK

Although telomerase is best known for its telomeric function, its protein component TERT (telomerase reverse transcriptase) has additional non-telomeric functions like the protection of mitochondria.

We found increased mitochondrial TERT in neurons of Alzheimer's disease brains and demonstrate a mutual exclusion of neurons with tau pathology and those expressing TERT protein.

As a model of tau pathology we expressed tau in cultivated neurons with and without telomerase and found that neurons lacking TERT protein displayed higher levels of mitochondrial ROS and more peroxidised lipids than wild type neurons.

We conclude that mitochondrial TERT might have a protective function in neurons.

Expression of phosphorylated H2AX histone in the aging mouse brain and its relation with slowly cycling neurons

[Professor Adalberto Merighi](#), Dipartimento di Scienze Veterinarie, GRUGLIASCO (Torino), Italy

Phosphorylation of the histone H2AX is an early response to DNA damage and a marker of aging. γ H2AX appears in foci within interkinetic/apoptotic nuclei and mitotic chromosomes from development to senescence. Immunoreactivity is mainly detected in neurogenetic areas, but also in the adult and senescent cerebral cortex. γ H2AX in neurogenetic areas is temporally and functionally related to proliferation and apoptosis of neuronal precursors (type C transit amplifying cells in SVZ and granule cell precursors in cerebellum). In senescent SVZ cells, displaying an extremely long cell cycle and slow proliferation rate, H2AX phosphorylation is primarily related to DNA repair

Genetics of Healthy Ageing: What do genes tell us about Ageing Better?

[Dr Irene Maeve Rea](#), Queens University Belfast and Belfast City Hospital, Belfast, Ireland

This session will explore how genetic and life-style profiles from nonagenarians may help our understanding about malleable factors which can contribute to longer lifespan accompanied by healthspan. Genetic, immunological, cardiovascular and nutritional factors contributing to good quality ageing will be presented with evidence from the nonagenarian BELFAST cohort together with early results from the GeHA study of European nonagenarian siblings and insights from the nonagenarian siblings themselves about factors involved in their good quality longevity.
