



Organizers:  
Paulo J Oliveira  
(Coimbra, Portugal)  
Catarina R Oliveira  
(Coimbra, Portugal)



Coimbra, Portugal, 22-24 May 2019



## Symposium 8 | Neurobiology of Aging

Organizers: Catarina Oliveira (Coimbra, Portugal)  
Paula Moreira (Coimbra, Portugal)  
João Malva (Coimbra, Portugal)  
George Perry (San Antonio, TX, USA)

Day: Thursday 23 afternoon and Friday 24 morning  
Meeting room: Meeting Room Coimbra, Hotel Dona Inés (Congress venue 2)

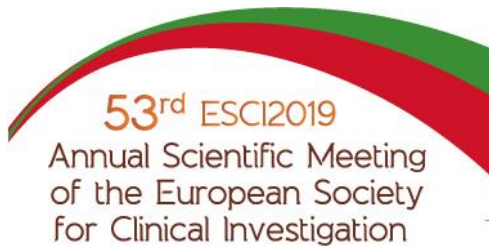
---

### Thursday, 23 May

#### 14.00-16.00 Session 1: Molecular Mechanisms of Aging and Age-related Diseases

Chairs: Catarina Oliveira (Coimbra, Portugal)  
João Malva (Coimbra, Portugal)

- 14.00-14.25 **S8-L1 | Memory and the Ageing Brain**  
Carol Barnes (Tucson, USA)
- 14.25-14.50 **S8-L2 | Imbalance of adenosine neuromodulation is responsible for the dysfunction of synaptic plasticity and memory on ageing**  
Rodrigo Cunha (Coimbra, PT)
- 14.50-15.15 **S8-L3 | Regulated cell death: does it matter how cells dies?**  
Cecília Rodrigues (Lisboa, Portugal)
- 15.15-15:30 **S8-O1 | Connecting the dots between a High-Fat/Cholesterol Diet and Sporadic Alzheimer's Disease**  
Ana Ledo<sup>1,2</sup>, Gianni Mancini<sup>3</sup>, Cândida Dias<sup>1,2</sup>, Cátia F. Lourenço<sup>1,2</sup>, João Laranjinha<sup>1,2</sup>, Andreza de Bem<sup>4</sup>  
<sup>1</sup>Faculty Of Pharmacy, University of Coimbra, Coimbra, Portugal, <sup>2</sup>Center for Neuroscience and Cell Biology, Coimbra, Portugal, <sup>3</sup>Departament of Biochemistry, Universidade Federal de Santa Catarina, Florianopolis, Brazil, <sup>4</sup>Department of Physiological Sciences, Institute of Biological Sciences, University of Brasília, Brasilia, Brazil
- 15:30-15:45 **S8-O2 | Characterization and follow-up of the Coimbra cohort of Machado-Joseph disease patients**  
Magda Santana M<sup>1</sup>, Patrick Silva<sup>1</sup>, Joana Ribeiro<sup>2</sup>, Inês Cunha<sup>2</sup>, Laetitia Gaspar<sup>1</sup>, Cristina Januário<sup>2</sup>, Luís Pereira de Almeida<sup>1,3,4</sup>, ESMI consortium  
<sup>1</sup>CNC - Center For Neuroscience And Cell Biology, University of Coimbra, Coimbra, Portugal, <sup>2</sup>CHUC - Coimbra Hospital and University Centre , Coimbra, Portugal, <sup>3</sup>CIBB – Center for Innovative Biomedicine and Biotechnology, Coimbra, Portugal, <sup>4</sup>FFUC - Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal
- 15:45-16:00 **S8-O3 | WWOX1 and mitochondria crosstalk in diabetic conditions: the beginning of a cell death fait**  
Cristina Carvalho<sup>1,2</sup>, Paula I. Moreira<sup>1,3</sup>  
<sup>1</sup>Center For Neuroscience And Cell Biology, University Of Coimbra, Coimbra, Portugal, <sup>2</sup>Institute for Interdisciplinary Research, University of Coimbra, Coimbra, Portugal, <sup>3</sup>Laboratory of Physiology – Faculty of Medicine, University of Coimbra, Coimbra, Portugal



Organizers:  
 Paulo J Oliveira  
 (Coimbra, Portugal)  
 Catarina R Oliveira  
 (Coimbra, Portugal)



Coimbra, Portugal, 22-24 May 2019



16:00-16:30 Coffee-break

**16.30-18.00 Session 2: Physiopathology of aging**

Chairs: George Perry (San Antonio, Texas, USA)  
 Paula Moreira (Coimbra, Portugal)

16.30-16.55 **S8-L5 | The potential role of glucocorticoids in the aging brain of nonhuman primates and rodents**  
 Peter Nathanielsz

16.55-17.20 **S8-L4 | The cellular stress response in the innate immune system**  
 Cláudia Pereira (Coimbra, Portugal)

17.20-17.33 **S8-O4 | Levels of nitric oxide production in the rats of different age**  
Vyatcheslav Andrianov<sup>1,2</sup>, Farit Sitdikov<sup>1</sup>, Railya Zaripova<sup>1</sup>, Gusel Yafarova<sup>1,2</sup>, Ludmila Muranova<sup>1</sup>,  
 Svetlana Yurtaeva<sup>2</sup>, Vassily Iyudin<sup>2</sup>, Nafisa Ziiatdinova<sup>1</sup>, Timur Zefirov<sup>1</sup>, Khalil Gainutdinov<sup>1,2</sup>  
<sup>1</sup>Institute Of Fundamental Medicine And Biology, Kazan Federal University, Kazan, Russian Federation, <sup>2</sup>Zavoisky Physical-Technical Institute of the Russian Academy of Sciences, Kazan, Russian Federation

17.33-17.46 **S8-O5 | Cofilin inhibitor T56-LIMKi protects mouse brain from photothrombotic stroke**  
Anatoly Uzdensky<sup>1</sup>, Svetlana Demyanenko<sup>1</sup>  
<sup>1</sup>Southern Federal University, Rostov-on-don, Russian Federation

17.46-17.59 **S8-O6 | Type 2 diabetes attenuates brain glycolytic and oxidative glucose metabolism in middle-aged female rats**  
Inês Alves<sup>1,2</sup>, Débora Mena<sup>1,2</sup>, Raquel Seiza<sup>3</sup>, Catarina R. Oliveira<sup>1,4</sup>, Paula I. Moreira<sup>1,3</sup>, Ana I. Duarte<sup>1,5</sup>  
<sup>1</sup>CNC - Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal, <sup>2</sup>Department of Life Sciences, University of Coimbra, Coimbra, Portugal, <sup>3</sup>Laboratory of Physiology, Faculty of Medicine, University of Coimbra, Coimbra, Portugal, <sup>4</sup>Laboratory of Biochemistry, Faculty of Medicine, University of Coimbra, Coimbra, Portugal, <sup>5</sup>Institute for Interdisciplinary Research (IIIUC), University of Coimbra, Coimbra, Portugal

18.00-19.30 Poster session 2

20.30 Congress dinner



Organizers:  
Paulo J Oliveira  
(Coimbra, Portugal)  
Catarina R Oliveira  
(Coimbra, Portugal)



Coimbra, Portugal, 22-24 May 2019



## Friday, 24 May

### 08.30-10.00 **Session 3: Alzheimer's disease: beyond amyloid $\beta$**

Chairs: George Perry (San Antonio, Texas, USA)  
Catarina Oliveira (Coimbra, Portugal)

08.30-08:55 **S8-L7 | Role of tau in neuronal functions**  
Jesús Avila (Madrid, Spain)

08.55-09:20 **S8-L6 | Age-based models to study Alzheimer's disease**  
Luísa Lopes (Lisboa, Portugal)

09.20-09:33 **S8-O7 | Loss of HUMMR in Alzheimer's disease acts as a "red traffic light" on the mitochondrial movement**  
Sónia Correia<sup>1</sup>, Xiongwei Zhu<sup>2</sup>, George Perry<sup>3</sup>, Paula I. Moreira<sup>1,4</sup>  
<sup>1</sup>Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal, <sup>2</sup>Case Western Reserve University, Cleveland, USA, <sup>3</sup>University of Texas at San Antonio, San Antonio, USA, <sup>4</sup>Faculty of Medicine, University of Coimbra, Coimbra, Portugal

09:33-09.46 **S8-O8 | The Gut Hypothesis For Alzheimer'S Disease: Bacterial Metabolites Cause Bioenergetic Failure And Activation Of Innate Immunity In Cortical Neurons**  
Diana F Silva<sup>1</sup>, Emanuel Candeias<sup>1</sup>, Ana Raquel Esteves<sup>1</sup>, João Duarte Magalhães<sup>1</sup>, Ildete Luísa Ferreira<sup>1</sup>, Ana Cristina Rego<sup>1</sup>, Nuno Empadinhas<sup>1</sup>, Sandra Morais Cardoso<sup>1</sup>  
<sup>1</sup>Center For Neuroscience And Cell Biology, University Of Coimbra, Coimbra, Portugal, <sup>2</sup>Institute of Cellular and Molecular Biology, Faculty of Medicine; University of Coimbra, Coimbra, Portugal

09.46-09.59 **S8-O9 | Obstructive Sleep Apnea As An Aging Trigger**  
Laetitia Gaspar<sup>1,2,3</sup>, Bárbara Santos<sup>2,3,4</sup>, Sara Carmo-Silva<sup>2,3</sup>, Joaquim Moita<sup>5</sup>, Cláudia Cavadas<sup>2,3,4</sup>, Ana Rita Álvaro<sup>2,3</sup>  
<sup>1</sup>Institute for Interdisciplinary Research, University of Coimbra (IIIUC), Coimbra, Portugal, <sup>2</sup>Centre For Neuroscience And Cell Biology, University Of Coimbra (CNC), Coimbra, Portugal, <sup>3</sup>Centre for Innovation in Biomedicine and Biotechnology, University of Coimbra (CIBB), Coimbra, Portugal, <sup>4</sup>Faculty of Pharmacy, University of Coimbra, Coimbra, Portugal, <sup>5</sup>Sleep Medicine Centre, Coimbra Hospital and University Centre (CHUC), Coimbra, Portugal

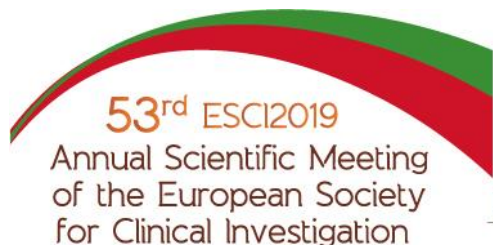
10:00-10:30 Coffee-break

### 10.30-12.30 **Session 4: Prevention and Intervention Strategies in Aging and Alzheimer's disease**

Chairs: João Malva (Coimbra, Portugal)  
Paula Moreira (Coimbra, Portugal)

10.30-10.55 **S8-L8 | In search of a cure for Alzheimer's disease**  
George Perry (San Antonio, Texas, USA)

10.55-11.20 **Tau therapeutics in stress-driven brain pathology: a link between depression and Alzheimer's disease**  
Ioannis Sotiropoulos (Braga, Portugal)



Organizers:  
 Paulo J Oliveira  
 (Coimbra, Portugal)  
 Catarina R Oliveira  
 (Coimbra, Portugal)



Coimbra, Portugal, 22-24 May 2019



- 11.20-11.45      **S8-L9 | Preconditioning: a strategy to fight Alzheimer's disease?**  
 Paula I. Moreira (Coimbra, Portugal)
- 11.45-12.00      **S8-O10 | Hydrogen sulfide prevented pro-nociceptive effects of ATP in the trigeminovascular system of rats**  
Kseniia Koroleva<sup>1,2</sup>, Raisa Giniatullina<sup>2</sup>, Yan Konshev<sup>1</sup>, Guzel Sitdikova<sup>1</sup>  
<sup>1</sup>Kazan Federal University, Kazan, Russian Federation, <sup>2</sup>A.I. Virtanen Institute for Molecular Sciences at University of Eastern, Kuopio, Finland
- 12.00-12.15      **S8-O11 Cu(II) mediated dityrosine cross-linking in the AD brain**  
George Perry<sup>1</sup>, Andrea Kelley<sup>1</sup>, Stephan Bach<sup>1</sup>  
<sup>1</sup>University Of Texas At San Antonio, San Antonio, United States
- 12.15-12.30      **S8-O12 | Brain activity of white wine polyphenols in the Alzheimer's disease context: effects on cell redox state and amyloid-beta peptides levels**  
Daniela Mendes<sup>1</sup>, Maria Manuel Oliveira<sup>2</sup>, Paula Moreira<sup>3</sup>, David Pereira<sup>1</sup>, Patrícia Valentão<sup>1</sup>, Paula Andrade<sup>1</sup>, Romeu António Videira<sup>1</sup>  
<sup>1</sup>REQUIMTE/LAQV, Laboratory of Pharmacognosy, Department of Chemistry, Faculty of Pharmacy, University of Porto, Rua de Jorge Viterbo Ferreira, nº 228, Porto 4050-313, Portugal., Porto, Portugal,  
<sup>2</sup>Chemistry Center – Vila Real (CQ-VR), Chemistry Department, School of Life and Environmental Sciences, University of Trás-os-Montes e Alto Douro, UTAD, P.O. Box 1013; 5001-801 Vila Real, Portugal., Vila Real, Portugal, <sup>3</sup>CNC – Center for Neuroscience and Cell Biology, University of Coimbra and Laboratory of Physiology, Faculty of Medicine, University of Coimbra, 3000-548 Coimbra, Portugal., Coimbra, Portugal
- 12.30-14.00      Poster session 3 and lunch  
 14.00-16.30      Multi-focus plenary session, ESCI Prizes and Closing Ceremony