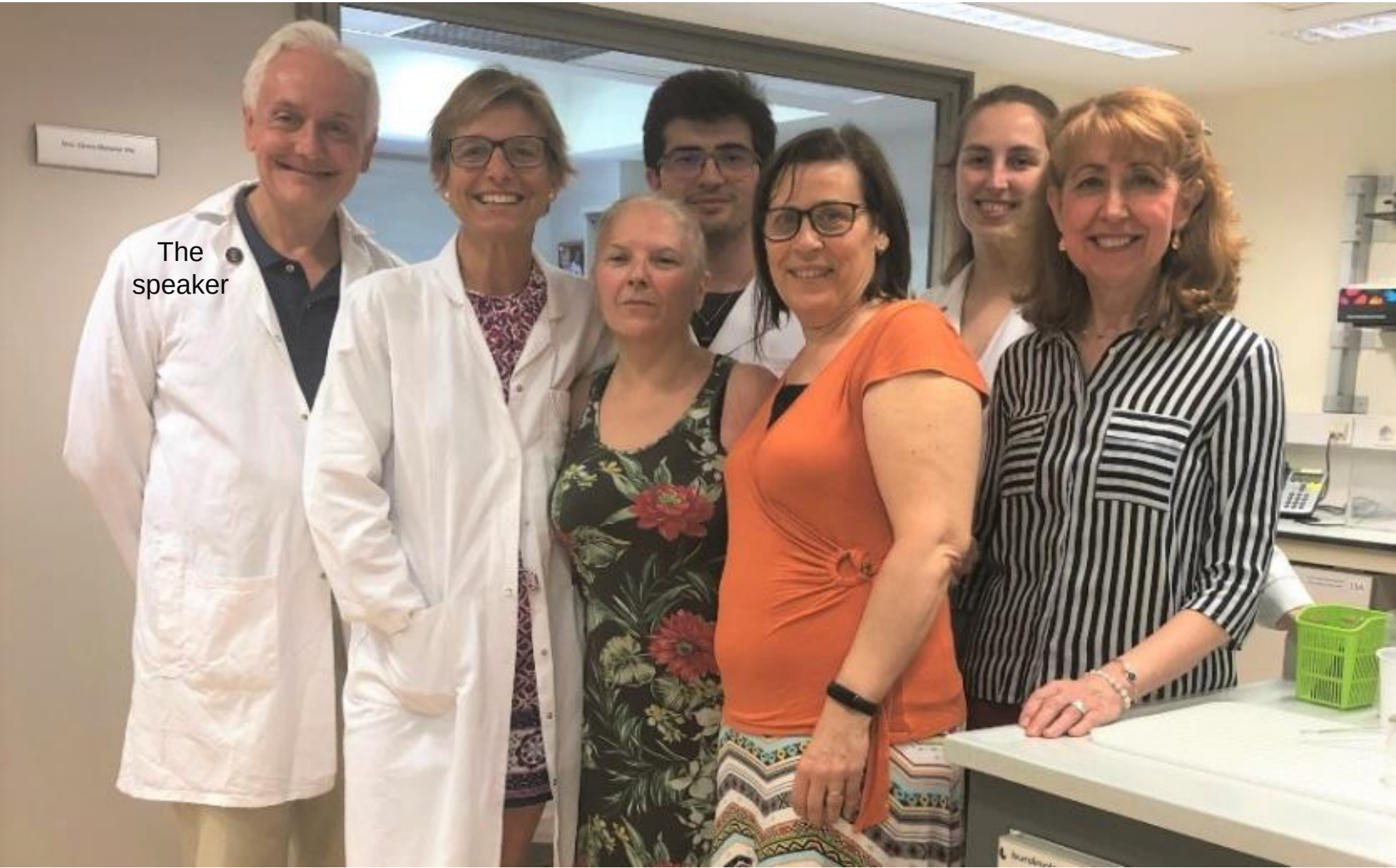
‘Is it possible to control the progression of ALS?’

by

Prof. Jose M. Estrela at the University of Valencia (Spain) on the 24th Sep. 2020

(14:00 CET via zoom https://uio.zoom.us/j/8863743687)



The NO-Age and NO-AD Seminar Series 008

‘Is it possible to control the progression of ALS?’

by

Prof. Jose M. Estrela

The University of Valencia, Spain

at

14:00-15:00 (CET), Thursday 24th Sep. 2020

Zoom Meeting

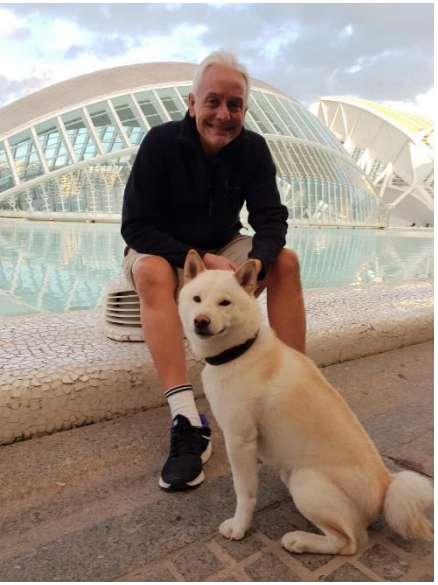
https://uio.zoom.us/j/8863743687

Meeting ID: 886 374 3687

Organizers:

Evandro F. Fang, Trygve Holmøy, and Jon Storm-Mathisen

Queries: e.f.fang@medisin.uio.no



Name: Prof. Jose M. Estrela
Institute: The University of Valencia
Email: Jose.M.Estrela@uv.es

Speaker: Prof. Jose M. Estrela

Title: Is it possible to control the progression of ALS?

Abstract:
Amyotrophic lateral sclerosis (ALS) is a progressive motor neuron (MN) disease. Its primary cause remains elusive, although a combination of different causal factors cannot be ruled out. There is no cure, and prognosis is poor. Most patients with ALS die due to disease-related complications, mainly respiratory failure, within 3 years of diagnosis.

Neuroinflammation, involving reactive astrocytes, microglia, and peripheral immune cells, promotes oxidative stress in the MN microenvironment. Neurodegeneration and the death of the MN would be the consequence of these phenomena. Experimental evidences suggest that damage to mitochondria could be a key mechanism in the final activation of neuronal death.

In light of recent evidences highlighting the therapeutic potential of sirtuin activation and NAD^+ repletion, a sequential cascade of events in the pathophysiology of ALS begins to be visualized. In 2017 a pilot study in ALS patients used a NAD+ promoter (nicotinamide riboside) and pterostibene (a natural antioxidant) as a potential therapy aiming to slow the progression of the disease. At the present time, some of the patients in that study are still alive, without progression or with minimal progression since then.

Biography:
Jose M. Estrela is Prof. of Physiology at the University of Valencia (Spain) and Director of the Cell Pathophysiology Unit in its Faculty of Medicine. He is M.D. and Ph.D. in Biochemistry and Molecular Biology. He has worked in the laboratories of Prof. Helmut Sies (Heinrich Heine University, Düsseldorf, Germany; oxidative stress), Prof. Alfred J. Meijer (Amsterdam University, The Netherlands; intermediary metabolism), and Prof. Alfred L. Goldberg (Harvard University, Boston, U.S.A.; protein degradation in mammalian cells). At present, his main research area relates to the biomedical applications of natural polyphenols aiming to identify strategies where specific polyphenols may improve the efficacy of different oncotherapies. Alternatively, one of these polyphenols, pterostilbene, has shown efficacy as part of an experimental therapy in patients with ALS.