

**IL3E-5****Protein synthesis and ageing: a balancing act?****N. Tavernarakis***Institute of Molecular Biology and Biotechnology, Foundation for Research and Technology, Heraklion, GREECE*

Ageing in diverse species, ranging from yeast to humans is associated with extensive changes in both general and specific protein synthesis. Accumulating evidence now indicate that these alterations are not simply a corollary of the ageing process but rather, they have a causative

role in senescent decline. Indeed, interfering with mRNA translation significantly influences longevity. Interestingly, the mechanisms that control mRNA translation interface with intricate, conserved signalling pathways and specific conditions that regulate ageing, such as the insulin/IGF-I signalling pathway and caloric restriction. This emerging relationship reveals that protein synthesis is a novel determinant of ageing in diverse organisms such as yeast, worms, flies and mice and can be considered a universal component of the ageing process.