

## **ADAGE**

### **Alzheimer's Disease pathology within the ageing physiology**

Ageing is the major risk factor for Alzheimer's disease (AD). The most recent conceptualizations hypothesize that ageing and neurodegenerative diseases share basic molecular mechanisms, and that neurodegenerative diseases represent an acceleration of the ageing trajectories.

The main goal of ADAGE project is to identify circulating biomarkers deviating from healthy ageing trajectories towards AD. To this aim the project adopted the strategy of comparing extreme phenotypes, *i.e.* samples from AD patients *versus* samples from subjects who experience an exceptionally healthy ageing (centenarians and their offsprings).

The results achieved so far suggest that, while some of the most used biomarkers of age fail to identify an accelerated ageing phenotype in AD patients, specific molecular (epigenetic and proteomic) signatures of the disease exist in peripheral tissues (blood). These results represent a step forward in current knowledge on AD biomarkers. Their dissemination to the research community through scientific papers will enrich the repertoire of possible biomarkers of AD that, once tested in large cohorts and in different experimental settings, will contribute to the early diagnosis of AD patients.