



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA

## **CHANGE - Cellular Homeostasis AND AGing in Connective Tissue Disorders**

The increased longevity in developed countries not necessarily goes hand in hand with amelioration of health and quality of life. Musculoskeletal, cardiovascular and neurodegenerative failure are not only hallmarks of the physical and cognitive decline in elderly people, but also represent common traits in several early-onset hereditary connective tissue (CT) disorders. These disorders represent a unique tool for the molecular investigation of such age-related pathologies due to the specific genetic disturbance of cellular homeostasis. The scientific objectives of CHANGE are: (i) to investigate CT disorders to identify key pathways responsible for age-related decline of physiological functions, being aware of gender differences (ii) to learn more about the interdependency of these pathways leading to stereotypic cellular responses including cellular senescence. This knowledge will pave the way for developing innovative treatment strategies for common diseases and frailty associated with ageing. To this end, we will train and establish a network of 10 highly-skilled doctoral candidates (DC) equipped with scientific expertise, transferable skills and societal and environment awareness as a foundation for their future careers. To succeed, CHANGE has built a unique and multidisciplinary network of 7 renowned academic partners and 5 companies (including 2 non-academics as associated partners) working together to train 10 young scientists. The DC network will address the basic biology of ageing from an interdisciplinary perspective, by deeply investigating CT diseases to uncover the pillars of ageing and its multi-systemic signatures. Altogether, CHANGE will provide an integrative map of cellular/extracellular consequences of age-related changes in cartilage, bone, muscle and vasculature as consequences to precocious disease exposure.

**Coordinator:** Università degli Studi di Pavia

**Beneficiary:** Università degli Studi di Padova

**UNIPD Supervisor:** Paolo Bonaldo

**Department:** Dipartimento di Medicina Molecolare

**Total Contribution:** 259 437,60

**Project Duration in months:** 48

**Find out more:** <https://cordis.europa.eu/projects/en>



UNIVERSITÀ  
DEGLI STUDI  
DI PADOVA