



Università degli Studi di Padova

## PhasAGE- Excellence Hub on Phase Transitions in Aging and Age-Related Disorders

The percentage of elderly population in Portugal and Europe is in rapid expansion raising a pressing concern for the increase of seriously incapacitating age-related diseases.

The Twining proposal PhasAGE aims specifically at strengthening the excellence, knowledge and innovation potential of its coordinating institution - Instituto de Biologia Molecular e Celular (IBMC/i3S) - in the emerging field of biomolecular phase transitions in age-related diseases.

The coordinating institution has been increasing its international visibility, and is approaching excellence in different aspects of cell and molecular biology applied to late-onset diseases, with a focus on cancer and neurodegenerative disorders.

However, IBMC/i3S researchers are lagging behind, losing their potential and external opportunities for being more competitive in different aspects of systems biology, bioinformatics and advanced biophysics, competences that are unquestionably required for complementing ongoing research and systematically exploring macromolecular assembly and phase transitions in health and their de-regulation in age-related disorders.

By establishing a sustainable and unique collaborative network between IBMC/i3S and the University of Padova (UNIPD, IT), the Autonomous University of Barcelona (UAB, ES) and the Vlaams Instituut voor Biotechnologie (VIB, BE), PhasAGE will primarily enhance the impact and quality of research and training at IBMC/i3S on computational and experimental analysis of protein phase separation. It will contribute to overcome the European fragmentation in this field and to the creation of a European excellence hub at IBMC/i3S, while raising the research and teaching profile of all Partners' staff. PhasAGE will also foster the development and implementation of novel tools and technologies, while contributing towards a more responsible and intensive science communication and outreach scientific literacy with societal impact.

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Universidad Autonoma de Barcelona (Spain)

VIB VZW (Belgium)

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