

Co-financed by:



**Main Project:** Pilot project for the establishment of a predictive model as possible modulator of aging in health (ModulEn).



**Associated Project:**

**Circadian health, physical activity and pattern of eating habits as frailty predictors: data from the portuguese population.**

### Project Overview

It's increasing the necessity to implement and evaluate new methodologies that increase the objective evaluation component and the predictive value of frailty. For that it's necessary to develop technological solutions and services that allow the early detection of states of frailty, ensuring, in a sustainable way, an adequate response of the health systems. With this purpose, this project proposes the use of ACM KRONOWISE® 2.0 sensors ("wristwatch"), which allows proactive and continuous monitoring of circadian cycles, physical activity habits and eating habits that can predict frailty evolution in older people. With this information, a new predictive model can be implemented and evaluated, which will be available to the scientific community and health professionals. To achieve that, this study aims to: evaluate the circadian rhythms of the older people integrated in the study, recording their peripheral body temperature, motor activity and position; assess the levels of brightness to which participants are exposed; describe their patterns of sleep, eating, physical activity and chronotype; and describe their state of frailty. The results of this project will enable the construction and validation of instruments that will improve the well-being of the older people and that will support the existing conventional techniques in research. In addition, participation in this study allows to the older people to obtain detailed information about their health status, which are provided in the individual health report. This report also includes individualized recommendations, based on individual results, to promote healthy lifestyles. In this way, this project aims to contribute to the increase older people literacy, autonomy and well-being, involving them in their self-care.

This project is being developed in partnership between Coimbra Nursing School (Portugal), Institute of Health Carlos III (Spain) and Chronobiology Laboratory: Cronolab - University of Murcia (Spain).



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