

# CHRONOS

## How young is your muscle?

CHRONOS is a project, granted by EIT Health BP2018, to develop an efficient medical device for measuring the Motor Functional Age (MFA), a new concept related to motor functional abilities, by evaluating muscle quality and kinematic abilities through life. It will support intervention strategies for preventing premature motor decline, and lessen the burden on healthcare systems.

EU aging population induces challenges like how maintaining an “active aging”. Another challenge is the physical inactivity and unhealthy habits. These are related to the same effect: premature and acute muscle aging (sarcopenia) and functional motor loss, with a costly impact on EU healthcare policies. New tool assessing the concept of Motor Functional Age, directly related to muscle efficiency, can evaluate earlier motor decline for monitoring and preventing motor loss.

The consortium is formed by seven complementary partners (triangle model of research-industry-end user):

Sorbonne University, Assistance Publique –Hôpitaux de Paris (AP-HP) and University of Technology of Compiègne are key academic and clinical partners; IESE Business School is an internationally renowned business school; Abbott is a healthcare industrial and possible customer; E-senior is an end-user association and TMSi is the manufacturing company of the device (hardware).

CHRONOS is a project to develop a medical device for measuring the Motor Functional Age (MFA), a new concept related to motor functional abilities, by evaluating muscle quality using HD-sEMG technique, and kinematic abilities using accelerometers.

EIT Health strongly contributes in:

- Providing a suitable environment for supporting the triangle of research-industry-end user.
- Promoting innovation projects that cover all the steps of the value chain from academic research toward the market and fulfill to end-users needs.

The outcome is a medical device for:

- provoking public awareness and supporting health self-management throughout life.
- monitoring prevention strategies and clinical trial efficiency.
- helping to design personalized therapies (nutritional supplementation and physical activity).
- Providing relevant information to build EU evidence-based policies.
- Expected significant saving of healthcare spending related to early motor decline (sarcopenia).

**Network Partners:**

- University of Technology of Compiègne (co-lead)



**External Partners:**

- TMSi



**Partners:**

- Sorbonne University (lead)



- Assistance Publique –Hôpitaux de Paris (AP-HP)



- IESE Business School



University of Navarra

- Abbott



- E-senior



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