

PROJECT INFORMATION

Title: Premature onset of chronic aging-related diseases by long COVID: determination of aging shift and targeting senescent cells as a promising therapy

Acronym: PACT

Coordinating institution: CSIC; **Coordinator and Principal Investigator:** Cayetano von Kobbe

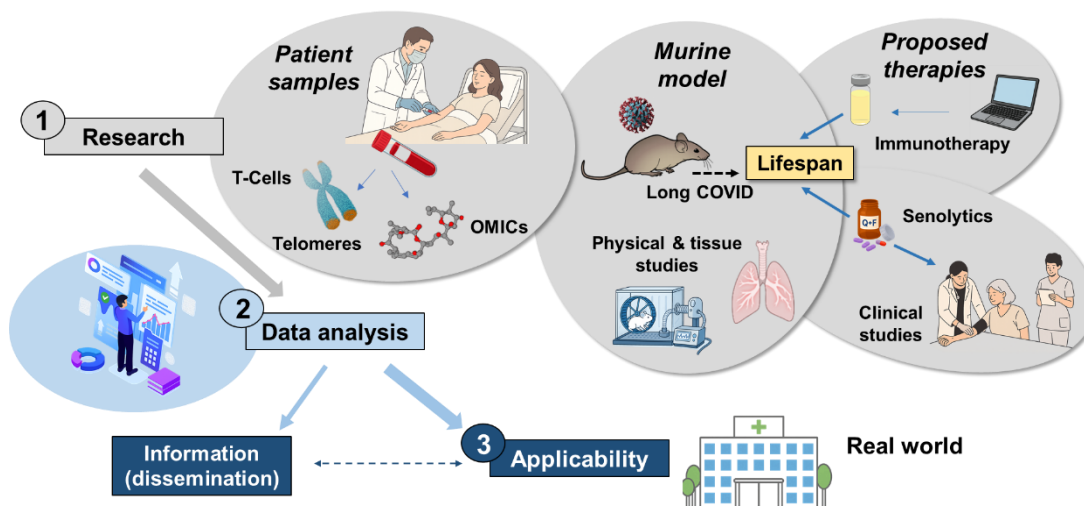
Brief summary

Long COVID represents one of the most pressing post-infectious long-term conditions, accelerating the onset of aging-related diseases and exacerbating the burden of morbidity in an already aging population. Thus, new research is urgently needed to clarify the extent to which long COVID contributes to accelerated aging in the population, as well as the use and development of new therapies to improve health and/or cure these chronic diseases, as proposed here.

PACT objectives

- I-** To **quantify** the aging shift induced by long COVID in the population.
- II-** To **mimic** long COVID in an established mouse model of COVID-19, and in a new model of premature aging generated ad hoc.
- III-** To **evaluate** senolytics therapies for long-term efficacy in reversing senescence-associated pathologies, as well as to **initiate** a safety and kinetic clinical study for their immediate use.
- IV-** To **develop** a first-in-class senescent cell immunotherapy-based approach as a safer and more effective therapy than senolytics.
- V-** To **translate** the molecular findings into practical strategies within primary and specialized healthcare and patient's associations.

Graphical abstract (for more details, see the attached image)



PARTNERS SOUGHT

- Research infrastructures or institutes with certified **BSL-3 facilities** for **large-scale** in vivo SARS-CoV-2 mouse studies.
- European Health Technology Assessment (**HTA**) **organizations** to support clinical, economic and regulatory translation.
- Companies or laboratories with strong expertise in large-scale **metabolomics** and advanced data integration.
- **European biobanks** providing access to well-characterized Long COVID patient cohorts, including blood and associated clinical metadata.