



# longCOVID

Decision support for  
prediction and  
management of LCS



Funded by  
the European Union

# Challenges

Over 200 million people globally have been affected by the SARS-CoV-2 virus until September 2021.

Although much is now known regarding appropriate clinical management of acute COVID-19, very little is known about clinical manifestations, risk factors and underlying mechanisms for development of the highly heterogeneous Long Covid Syndrome (LCS).

As per current statistics, 1 in 10 patients is developing LCS. As the number of patients suffering from long-term effects of a COVID-19 infection seems to be constantly rising since the start of the pandemic, it is essential to identify and understand the mechanisms behind persisting symptoms and to provide adequate treatment to patients. Currently, there is no validated information on the underlying mechanism for LCS nor are validated therapeutic interventions available.

**The Long COVID project, coordinated by Helsinki University Hospital (HUS), aims to understand the mechanisms of LCS by combining front-line expertise from the fields of clinical medicine, virology, metabolism, and immunology.**

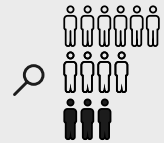
# Objectives



Collect cohort data to develop patient stratification and biomarker prediction algorithms.



Identification of the dynamics of immune responses behind the long-term clinical outcomes in LCS using mechanistic studies.



Identify novel biomarkers to guide stratification of patients according to differential symptoms and disease manifestations.



Develop Machine Learning (ML) and Artificial Intelligence (AI)-based patient stratification and biomarker prediction algorithms.



Facilitate clinical interventional studies for the management of LCS.



Disseminate and exploit project results.

# Methodology

The project will study the pathogenesis of LCS by:

- ① conducting geographically diverse cohort and registry studies,
- ② conducting mechanistic studies,
- ③ using novel high-throughput methods for biomarker analysis, and
- ④ conducting interventional and follow-up studies on LCS patients.

Additionally, an interactive graphic user interface infographic will be available to clinicians and patients. This will communicate novel and understandable information about LCS and offer recommendations for patient management.

**Cohort 1** - Registry linkage cohort from the Finnish National Centre for Health and Welfare (NCHW)

**Cohort 2** - LC polyclinic – HUS

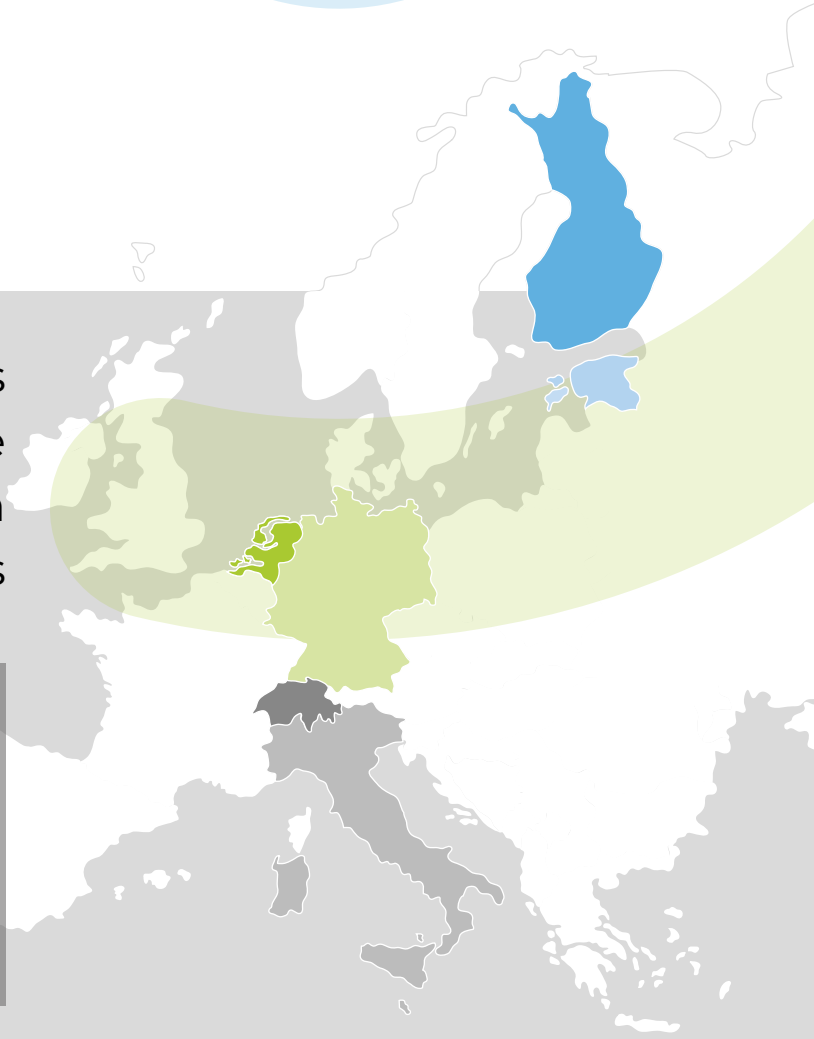
**Cohort 3** - ClinCOVID Cohort – UH

**Cohort 4** - ICU Cohort –UH

**Cohort 5** - Lifelines – Dutch population cohort (UMCG – Groningen)

**Cohort 6** - Basel LC Syndrome Cohort (BALCoS) – UNIBAS

Countries involved in the consortium & cohorts



## Contact us



 [www.longcovidproject.eu](http://www.longcovidproject.eu)

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## Partners



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