

# CROSS-SECTIONAL MULTICENTRIC EUROPEAN OBSERVATIONAL CLIMATE-HEALTH ADVANCED INTERCONNECTION STUDY (CROSS-CLAVIS)

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## BACKGROUND



Horizon Europe project TRIGGER includes several multidisciplinary studies on the relationship between climate, health and ecosystems.

## AIM








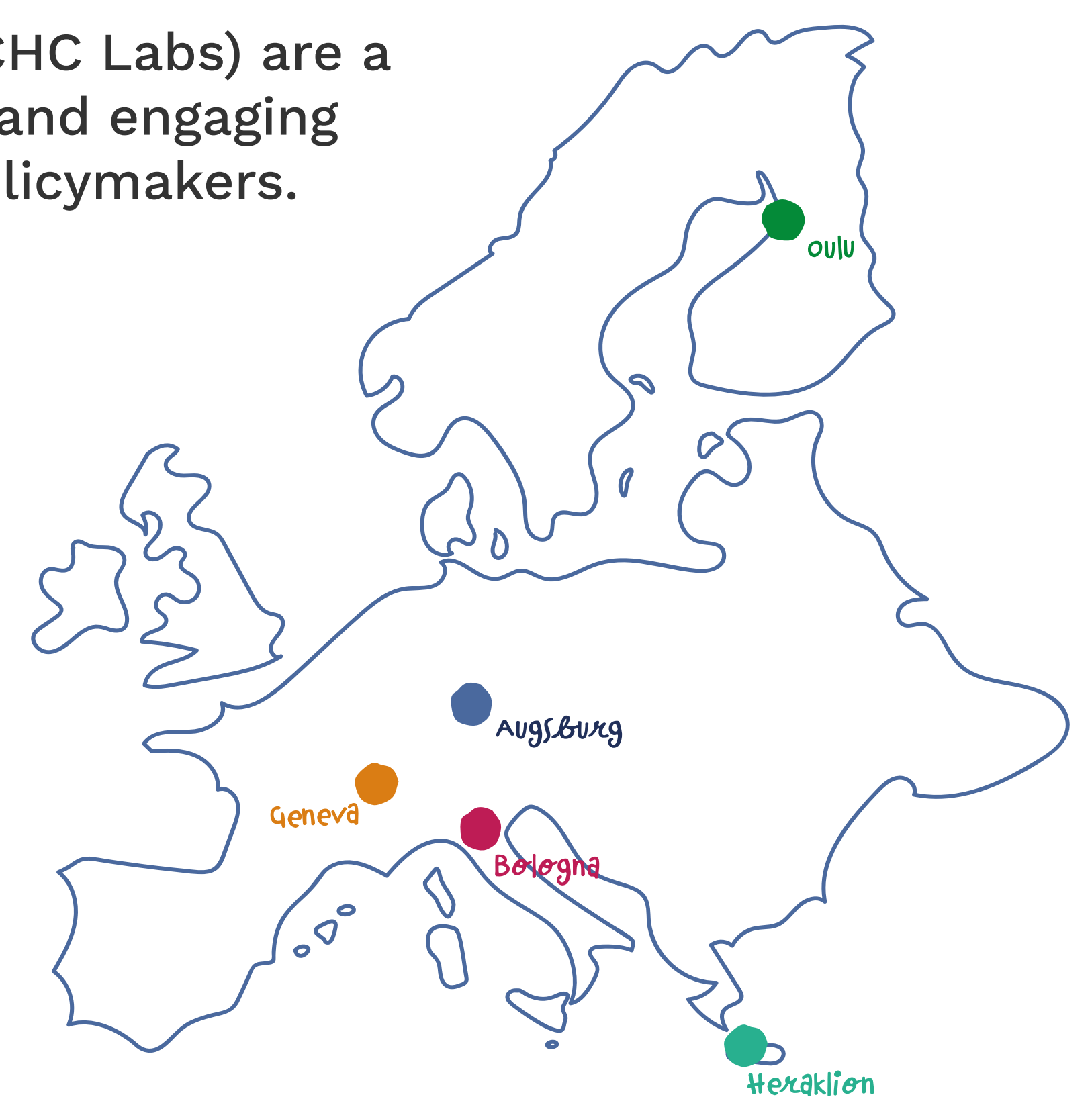
To examine the associations between acute exposures to temperature and air pollution: on the human aero- and microbiome and cardiovascular and respiratory (CVR) events in patients visiting the hospitals of the CHC labs.

## CHC LABS

Climate-Health Connection (CHC Labs) are a source of the data collection and engaging citizens, practitioners, and policymakers.

We built 5 CHC Labs in

-  Augsburg
-  Bologna
-  Geneve
-  Heraklion
-  Oulu



## STUDY POPULATION

- At least 240 participants admitted to the Oulu University Hospital due to CVR events during 12 months.
- Overall, all the CHC Labs will recruit  $\geq 1200$  participants.

## METHODS

The enrollment in Oulu started at the end of January 2024. The data collection includes



A nasopharyngeal swab (for the identification of microbiome)



A saliva sample (for analysing mitochondrial DNA)



Relevant clinical information



A questionnaire inquiring of environmental exposures, health and behavior.

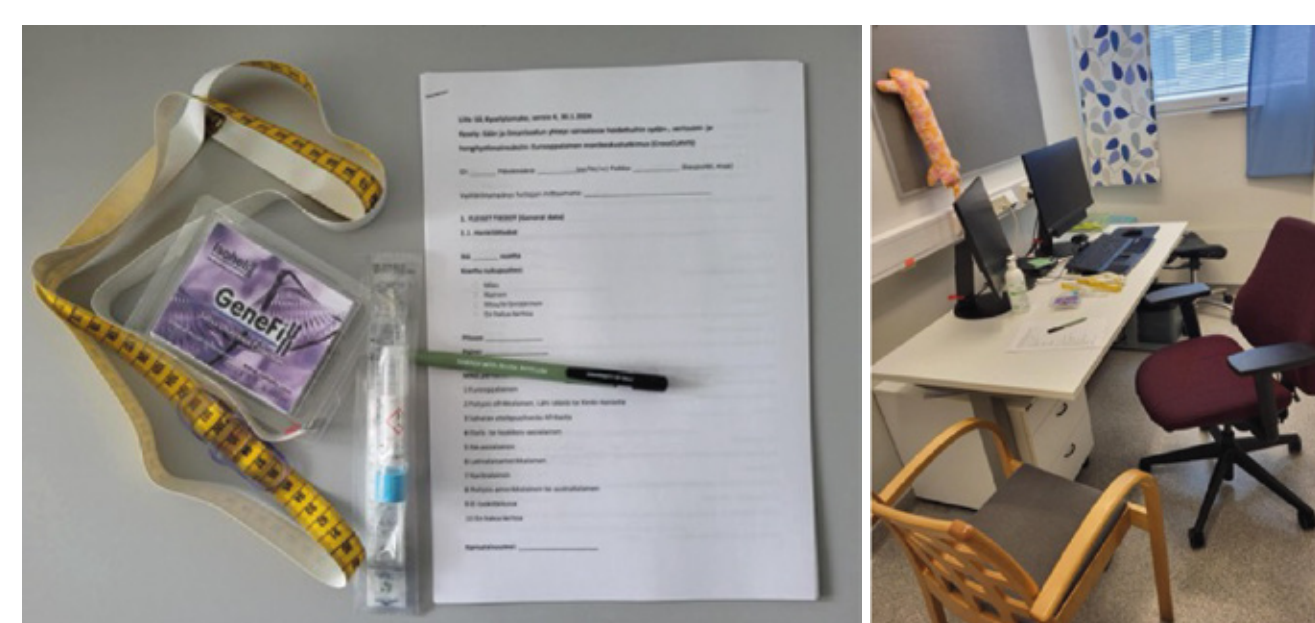
Information of exposures to temperature and air pollution during the preceding days of admission will be linked to the health data. We will explore the relationship between the exposures and participant characteristics to identify possible risk factors or modifiers for the observed health outcomes.

### INCLUSION CRITERIA

- Age  $\geq 18$  years
- Myocardial infarction (non-STEMI and STEMI)
- Atrial fibrillation
- Acute heart failure
- Acute exacerbation of asthma
- Acute exacerbation of COPD
- <72 hours after admission to hospital

### EXCLUSION CRITERIA

- Living outside the area of interest (in Finland: the Pohjois-Pohjanmaa wellbeing county of service)
- Oncological patient



With the new insights gained, the TRIGGER project will provide new understanding on how environmental exposures are reflected to the community of microbes in humans and how these relate to CVR morbidity. The CHC Labs will advance this understanding at different levels of society.



Linktree\*

PLEASE CONNECT!