

# Horizon Europe Health&SSH Brokerage Event



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Project: 101057279 – HNN3.0

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Pitching Session

## Topic

HEALTH CLUSTER - DESTINATION 2. LIVING AND WORKING IN A HEALTH-PROMOTING ENVIRONMENT

**HORIZON-HLTH-2024-ENVHLTH-02-06-two-stage: The role of environmental pollution in non-communicable diseases: air, noise and light and hazardous waste pollution**

## Type

**Partner seeks Consortium/Coordinator**

# Cooperation proposal

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## Our project cooperation proposal

Specific application field: **Human Biomonitoring (HBM)**

## Objectives

- **Development of an innovative analytical platform** for the determination of emerging/priority pollutants in human tissues
- **Pilot application** to investigate the systemic distribution, toxicological mechanisms and clinical/epidemiological risks of atmospheric pollutants in (non-)occupationally exposed populations
- **Specific research interest** (not exclusive) in the association of atmospheric pollutants with idiopathic pulmonary fibrosis

## Ca' Foscari University

82 EU projects hosted since 2014



### ↳ Department of Environmental Sciences, Informatics and Statistics (DAIS)

>30 years of cross-cutting research and education in the trans-disciplinary and trans-national study of pollution: monitoring, risks and impacts, remediation, climate change, health, society and economy

### ↳ Research Group: Analytical Chemistry for Environment and Climate Change



[www.healthncp.net](http://www.healthncp.net)



## Expertise in environmental analytical chemistry

- development of advanced analytical methodologies (mostly mass spectrometry-based)
- production of high-quality data for identification, quantitative determination and micro-to-nano scale imaging of both natural and anthropogenic trace and ultra-trace chemical species
- Pollution monitoring, source appointment, long-range transport dynamics and reconstruction

## Pollutants (not exhaustive)

- Priority (PAHs, PCBs, dioxins, heavy metals)
- Emerging (microplastics, bisphenols, PFAs, pharmaceuticals, pesticides, flame retardants, personal care products)
- Proxies of specific natural/anthropic processes (fires, primary production, biological stress)

## Matrices

Aerosols, waters, sediments, soils, biota, humans

## Instrumentation and infrastructure

- [Centre for Trace Analysis](#) – CeTrA
- [Inter-Departmental Centre of Services and Experimental Disciplines](#)



# Recent/ongoing projects

## Emerging pollutants

- [VENEZIA 2021](#)  
Scientific Research Program for a Regulated Lagoon
- [MICROTRACER](#), [ICEtoFLUX](#)  
Italian Program for Research in the Arctic
- [ECO AS:TRA](#), [IMPACT](#)  
Italian Program for Research in Antarctica

## Atmosphere

- [ECOMOBILITY](#)  
Interreg Italy-Croatia - ship traffic emissions
- [A-PAW](#)  
Italian Program for Research in the Arctic
- [ITINERIS](#) – Atmosphere domain  
Italian National Recovery and Resilience Plan  
Research Infrastructures

## Historical case-studies

VENICE  
LAGOON



COL MARGHERITA  
ATMOSPHERIC  
OBSERVATORY



ARCTIC AND  
ANTARCTICA



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# Cooperation proposal

## Tissue-based integrative HBM of pollutants

- Innovative analytical platform
- Pilot application
- Specific research interest

**Impacts** of destination 2 'Living and working in a health-promoting environment': pollution and health

- New tools for National and EU authorities
- New indicators and guidelines for National and EU authorities, stakeholder
- New evidence-based setting/updating of limit values, policies and public awareness
- Focus on noncommunicable diseases

## Existing local trans-institutional partnership

- Environmental Analytical Chemistry
- Neurosciences, Human Anatomy (BioBank)
- Respiratory Medicine

## Seeking for Coordinator and Partners

Counterparting policy makers, scientists from complementary fields (molecular biologists, toxicologists, epidemiologists), communicators, experts in ethics

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## Thank you

University Ca' Foscari of Venice |

<https://www.unive.it/pag/13526>

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