

Data collected during EPHOR: description and contact information for data requests short-term study

In the EPHOR WP6 short-term case study data from 146 persons across 8 centers are available, Table 1. participants was a subsample of persons from the European Community Respiratory Health Survey, ECRHS.

Table 1. Participants in the short-term WP6 study centres.

Country	Study center	N
Denmark	Aarhus	17
Norway	Bergen	52
Estonia	Tartu	14
Iceland	Reykjavik	10
Sweden	Göteborg	13
	Umeå	10
	Uppsala	22
Spain	Barcelona	8
		146

A rich dataset is available including questionnaires, sensor data, biomarkers (from exhaled breath, exhaled breath condensate, blood, urine), anthropometric data and lung function data, for details, please see Figure 1 and Table 2

Figure 1 illustrate data collected on the short-term WP6 case study.

Clinical investigations- Monday and Friday mornings

- Short questionnaire re. airway infections, use of medication etc.
- Collection of exhaled breath (ca. 10-20 min)
- Exhaled breath condensate (15 min)
- Measurement of lung function (no asthma medication)
- Blood sample (47 mL)
- Urine collection (min 50 mL)

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The sensors - what are we measuring

Passive sampler
Volatile/semi-volatile organic compounds (VOCs)

EPHOR sensor box
Light
UVB
Sound
Fine dust (PM1, 2.5, 10)
Particle count
Temperature
Humidity



Sensors, app and EDC - during the work week

- App with two daily questionnaires
- Sensor box (worn in a belt)
- Passive sampler (worn in the breathing zone)
- Activity meter
- Self-measurement of lung function 3x daily
- Passive dust collector (EDC)



EDC placed in the bedroom for 3 weeks

Table 2, biomarkers available in the short-term case study.

Biomarkers analysed at KUL, KI, STAMI or CUT

Exhaled breath condensate:

*Immune markers: IFN- γ , IL-1 β , IL-2, IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, TNF- α ; E-Selectin, MMP-1, MMP-2, MMP-7, MMP-9 (total), P-Selectin, VEGFR-1/Flt-1 (Monday and Friday)
Untargeted proteomics (Monday and Friday),*

Exhaled breath: VOC analysis and biomarker discovery: Monday and Friday

Blood:

Exposures:

*Metals: manganese, cobalt, zinc, cadmium, mercury, antimony, lead: Monday and Friday
Cotinine (plasma): Monday and Friday*

OMICS:

*GWAS and EWAS analysis: (Monday and Friday)
Untargeted Proteomics (Monday and Friday)
Targeted RNA expression: Monday and Friday*

Outcomes and effect modifiers:

*Immunoglobulins (total IgE/Specific IgE measurements); Monday and Friday
Telomere length analysis: Friday
Immune factors (IFN- γ , IL-1 β , IL-2, IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, TNF- α ; E-Selectin, MMP-1, MMP-2, MMP-7, MMP-9 (total), P-Selectin, VEGFR-1/Flt-1): Monday and Friday
CC16 and YKL-40: Monday and Friday
8-OHdG: Monday and Friday*

Urine:

Exposures

*Metals: cadmium, lead: Monday and Friday
PAH: 1-naphthol (1-OH-NAPH); 2-naphthol (2-OH-NAPH); 2-hydroxyfluorene (2-OH-FLU); 1-hydroxypyrene (1-OH-PYR); 9-hydroxyphenanthrene (9-OH-PHEN): Monday and Friday*

All data is updated to YODA, where they will be available until 2030 and accessible for former EPHOR partners. For other researchers, AU has an up and running VDI (virtuel computer) solution, where pseudo-anonymous data from the WP6 short-term study can be assessed remotely, and data will be stored at least 10 years after ends of EPHOR (2035). Statistical packages are available at the VDI (e.g. R, Stata, SAS). There are certain requirements, including a dedicated course in the VDI system and in GDPR. Furthermore, access to data requires a Collaboration agreement and a data processing agreement. For data access, please approach Vivi Schlünssen, vs@ph.au.dk

Due to the richness and type of data (for example genetic data) data cannot be anonymised, and therefore we cannot offer open access to the WP6 short-term data

When a data request is received, the proposal will be shared with the ECRHS coordinating group headed by Vivi Schlünssen (AU) and Randi Bertelsen (UiB) to avoid overlap in data analysis.

AU will cover most of the expenses, but a user fee is also needed (200 Euro) in order to have a sustainable solution.