

# SEPAGES, Sépages - Monitoring of Exposure to Air Pollution during Pregnancy and Effect on Health

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## General

### Identification

Detailed name Monitoring of Exposure to Air Pollution during Pregnancy and Effect on Health

Sign or acronym SEPAGES, Sépages

CNIL registration number, number and date of CPP agreement, AFSSAPS (French Health Products Safety Agency) authorisation CNIL agreement no. 912098, favourable opinion received on 04/10/2012

### General Aspects

Medical area Endocrinology and metabolism  
Gynecology/ obstetrics  
Neurology  
Pediatrics  
Pneumology  
Study of allergies

Pathology (details) Respiratory diseases

Health determinants Climate  
Genetic  
Geography  
Lifestyle and behavior  
Nutrition  
Pollution  
Others (specify)

Others (details) Endocrine disruptors

Keywords atmospheric pollution, respiratory health, foetal growth, epigenetics, phenols, bisphenol A, Exposure, foetus, newborn, pregnancy, environment, child, phthalates, BPA

### Scientific investigator(s) (Contact)

Name of the director Slama

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Organization	Inserm et CHU de Grenoble

### Collaborations

Participation in projects, networks and consortia	Yes
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Details	European Helix project
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Others	HBM4EU
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### Funding

Funding status	Public
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Details	- European Research Council - ANR
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### Governance of the database

Sponsor(s) or organisation(s) responsible	Inserm - Institut national de la santé et de la recherche médicale
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Organisation status	Public
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Presence of scientific or steering committees	Yes
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## Additional contact

## Main features

### Type of database

Type of database

Study databases

Study databases (details)

Cohort study

Database recruitment is carried out by an intermediary

A selection of health institutions and services

Database recruitment is carried out as part of an interventional study

No

Additional information regarding sample selection.

Couples-children cohort.  
Participation on a voluntary basis, inclusion is in the first trimester of pregnancy (or early in the second trimester).

### Database objective

Main objective

The main objectives are:

- to better characterise environmental exposure experienced during pregnancy and its impact on the health of a pregnant woman, foetus, newborn and child by paying particular attention to foetal growth and respiratory health
- to study the biological mechanisms by which environmental factors might influence health, particularly epigenetic mechanisms.

The targeted environmental factors are:

- air pollutants (fine particles, nitrogen oxide, benzene and BTEX series)
- endocrine disruptors, including phenols and phthalates
- at term, exposome

Inclusion criteria

- be aged over 18 years
- be covered by a social security system (French or foreign)
- be pregnant by 19 weeks and 6 days maximum
- have a single pregnancy (and not twins)
- reside in Isère, in an area not more than one hour from Grenoble
- not be considering moving away from the inclusion area within the next two years

### Population type

Age	Newborns (birth to 28 days) Infant (28 days to 2 years) Early childhood (2 to 5 years) Adulthood (19 to 24 years) Adulthood (25 to 44 years)
Population covered	General population
Pathology	
Gender	Male Woman
Geography area	Local
French regions covered by the database	Auvergne Rhône-Alpes
Detail of the geography area	Grenoble urban area (4 maternity clinics of Grenoble: Clinique Belledonne, Clinique des Cèdres, Clinique du Groupe Hospitalier Mutualiste or at the Hôpital Couple Enfant)
<b>Data collection</b>	
<b>Dates</b>	
Date of first collection (YYYY or MM/YYYY)	03/2014
<b>Size of the database</b>	
Size of the database (number of individuals)	[500-1000[ individuals
Details of the number of individuals	500 families (mother, father, child) (estimation)
<b>Data</b>	
Database activity	Current data collection
Type of data collected	Clinical data Declarative data Paraclinical data Biological data
Clinical data (detail)	Medical registration
Details of collected clinical data	Clinical data on the growth, respiratory and cardiovascular health of the parents in the first stage and then that of their child from birth.

Declarative data (detail)	Internet self-questionnaire
Details of collected declarative data	Questionnaires, (self)-administered via a computer platform, to better understand the environment in which the volunteers live (Environmental exposure in the workplace, the presence of domestic animals at home, tobacco consumption, dietary habits, etc.).
Paraclinical data (detail)	Individual measurement tools (GPS, accelerometers, atmospheric pollution dosimeters).
Biological data (detail)	During pregnancy: urine, blood and hair specimens. At the time of delivery: placenta, tissue, blood, urine, hair, meconium and milk specimens.
Presence of a biobank	Yes
Contents of biobank	DNAc/RNAm
Details of biobank content	The RNA and DNA are stored in numbered tubes with no nominal information.
Health parameters studied	Health event/morbidity Health care consumption and services Quality of life/health perception Others
Care consumption (detail)	Hospitalization Medical/paramedical consultation Medicines consumption
Other (detail)	Exposure to atmospheric pollution; exposure to endocrine disruptors (phenols, phthalates)
<b>Procedures</b>	
Participant monitoring	Yes
Monitoring procedures	Monitoring by contact with the participant (mail, e-mail, telephone etc.) Monitoring by convocation of the participant
Details on monitoring of participants	The monitoring of the pregnancy takes place until the birth of the child then the monitoring of the child continues until at least 3 years of age.
Followed pathology	J00-J06 - Acute upper respiratory infections
	J20-J22 - Other acute lower respiratory infections
	J30-J39 - Other diseases of upper respiratory tract

J40-J47 - Chronic lower respiratory diseases

J45 - Asthma

E65-E68 - Obesity and other hyperalimantation

F54 - Psychological and behavioural factors associated with disorders or diseases classified elsewhere

Links to administrative sources No

## Promotion and access

Promotion

Access

Dedicated website <http://sepages.inserm.fr/fr/accueil/>

Presence of document that lists variables and coding procedures No

Terms of data access (charter for data provision, format of data, availability delay) Contact the scientist in charge.

Access to aggregated data Access on specific project only

Access to individual data Access on specific project only