# ISAAC - International Study of Asthma and Allergies in Childhood in France

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## General

### Identification

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| Detailed name | International Study of Asthma and Allergies in Childhood in France |
| Sign or acronym | ISAAC |
| CNIL registration number, number and date of CPP agreement, AFSSAPS (French Health Products Safety Agency) authorisation | CNIL agreement |

### General Aspects

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| Medical area | Pediatrics<br>Study of allergies |
| Health determinants | Genetic<br>Lifestyle and behavior<br>Pollution<br>Social and psychosocial factors |
| Keywords | skin test, air pollution, child, environment, allergy |

### Scientific investigator(s) (Contact)



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| Name of the director | Annesi-Maesano |
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| Unit | UMRS 707 : Épidémiologie, systèmes d'information, modélisationÉpidémiologie des maladies allergiques et respiratoires EPAR |

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| Organization | Institut national de la santé et de la recherche médicale - |

## Collaborations

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| Participation in projects, networks and consortia | Yes |
| Details | During ECHRS paediatrics. The project involves six hospital departments (Clermont-Ferrand, Marseille, Bordeaux, Reims, Strasbourg, Paris) and three specialist teams: ? epidemiology team: Dr I. Annesi-Maesano, G. Debotte, INSERM U 472), ? paediatric team: Prof. P. Scheinman, Dr. C. Karila, Dr. E. Paty (Necker-Enfants Malades Hospital, Paris); ? metrology team: M. Squinazi, Y. Le Moullec, M. Laurent (laboratoire d'hygiène de la ville de Paris [The City of Paris Hygiene Laboratory]). |

## Funding

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| Funding status | Public |
| Details | - National Institute for Healthcare and Medical Research - Ministry of Employment and Solidarity - Mutuelle Générale de l'Éducation Nationale - Agency for the Environment and Energy Management, ADEME/PRIMEQUAL 96 |

## Governance of the database

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| Sponsor(s) or organisation(s) responsible | Institut national de la santé et de la recherche médicale - Inserm |
| Organisation status | Public |

## Additional contact

## Main features

## Type of database

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| Type of database | Study databases |
| Study databases (details) | Not-repeated cross-sectional studies (except case control studies) |
| Database recruitment is carried out by an intermediary | A population file |
| Database recruitment is carried out as part of an interventional study | No |

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| Additional information regarding sample selection. | Sample of children with average age of 10.4 (plus or minus standard deviation), plus or minus 0.7 years, from 108 schools and 401 classes. |
| **Database objective** | |
| Main objective | To establish a global map of the prevalence of childhood allergic diseases and to determine the risk factors for these diseases by comparing contrasting population groups based on a particularly strong or weak prevalence.<br><br>The ISAAC study consists of three phases:<br>The objective of Phase I is to assess the prevalence of asthma, allergic rhinitis and eczema by using a simple questionnaire and possible video questionnaire (for asthma), in representative samples of children from two age groups: 13-14 years old (obligatory for all centres) and 6-7 years old (optional).<br>Phase II aims to identify the risk factors and treatment procedures for allergic diseases through a more detailed study of selected population groups with relatively high or low prevalence rates suggested during Phase I.<br>Phase III aims to assess the trends in allergy prevalence.<br>As such, the Phase I protocol will be repeated in areas that participated in this phase. |
| Inclusion criteria | - primary school children<br>- between 8 and 13 years old |
| **Population type** | |
| Age | Childhood (6 to 13 years) |
| Population covered | General population |
| Gender | Male<br>Woman |
| Geography area | International |
| Detail of the geography area | One hundred and fifty-six centres in 56 countries: North America, Central America, South America, Western Europe, Central Europe (Albania, Germany, Estonia, Spain, France, Greece, Iceland, Italy, Norway, Netherlands , Portugal, U.K., Sweden), the Baltic States, Far East, Western Pacific, Anglophone Africa, Francophone Africa, Southeast Asia, East Mediterranean countries and Oceania. In France |

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| | (primary schools in six French cities: Créteil, Clermont-Ferrand, Bordeaux, Marseille, Reims, Strasbourg). |
| **Data collection** | |
| **Dates** | |
| Date of first collection (YYYY or MM/YYYY) | 03/1999 |
| Date of last collection (YYYY or MM/YYYY) | 10/2000 |
| **Size of the database** | |
| Size of the database (number of individuals) | [1000-10 000[ individuals |
| Details of the number of individuals | Monde/World: 721 601 France: 7 432 |
| **Data** | |
| Database activity | Data collection completed |
| Type of data collected | Clinical data<br>Declarative data<br>Paraclinical data<br>Biological data |
| Clinical data (detail) | Medical registration |
| Details of collected clinical data | Allergy assessment: skin prick tests, Williams standardised skin test (eczema), free running test, with peak respiratory flow (bronchial hyper-reactivity). |
| Declarative data (detail) | Paper self-questionnaire |
| Details of collected declarative data | Parent questionnaire assessing the child's personal and family history, respiratory symptoms and domestic environment (allergen exposure, passive smoking, psychosocial factors) |
| Paraclinical data (detail) | Anthropometric measurements (height, weight, hip contour , head circumference) |
| Biological data (detail) | urine and hair cotinine research (nicotine metabolite), inflammation and lead markers |
| Presence of a biobank | No |

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| Health parameters studied | Health event/morbidity |
| **Procedures** | |
| Data collection method | Pollutants measured in school yards and measurements collected by urban air quality monitoring networks: - SO2, FN, NOx, NO2, O3 and PM using collective measurements (city monitoring networks) (macroenvironment); - NOx, NO2, O3, VOC (formaldehyde) and PM using passive sensors within schools (microenvironment); - NO2, O3, COV. using individual badges as part of the panel (individual). Each centre can choose the protocol best suited to them. However, a minimum protocol was agreed at European level. |
| Participant monitoring | No |
| Links to administrative sources | No |
| **Promotion and access** | |
| **Promotion** | |
| Link to the document | http://erj.ersjournals.com/content/24/3/406.long |
| Link to the document | http://www.sciencedirect.com/science/article/pii/S0335745708001342 |
| Link to the document | http://www.annallergy.org/article/S1081-1206%2810%2960598-4/abstract |
| Link to the document | http://www.resmedjournal.com/article/S0954-6111%2807%2900099-6/abstract |
| Link to the document | http://www.resmedjournal.com/article/S0954-6111%2806%2900221-6/abstract |
| Link to the document | http://www.sciencedirect.com/science/article/pii/S1352231005010575 |
| Link to the document | http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2222.2005.02336.x/abstract;jsessionid |
| Link to the document | http://onlinelibrary.wiley.com/doi/10.1111/j.1398-9995.2005.00860.x/abstract |
| Link to the document | http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2222.2004.02002.x/abstract |
| **Access** | |

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| 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 |