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The Human Early-Life Exposome – novel tools for integrating early-life environmental exposures and child health across Europe

Fact Sheet

Project Information

HELIX

Grant agreement ID: 308333

Project closed

Start date

1 January 2013

End date

31 December 2017

Funded under

Specific Programme "Cooperation": Environment
(including Climate Change)

Total cost

€ 11 292 724,89

EU contribution

€ 8 623 939,00

Coordinated by

FUNDACION PRIVADA
INSTITUTO DE SALUD GLOBAL
BARCELONA

 Spain

Objective

The aim of HELIX is to exploit novel tools and methods (remote sensing/GIS-based spatial methods, omics-based approaches, biomarkers of exposure, exposure devices and models, statistical tools for combined exposures, novel study designs,

and burden of disease methodologies), to characterise early-life exposure to a wide range of environmental hazards, and integrate and link these with data on major child health outcomes (growth and obesity, neurodevelopment, immune system), thus developing an “Early-Life Exposome” approach.

HELIX uses six existing, prospective birth cohort studies as the only realistic and feasible way to obtain the comprehensive, longitudinal, human data needed to build this early-life exposome. These cohorts have already collected large amounts of data as part of national and EU-funded projects. Results will be integrated with data from European cohorts (>300,000 subjects) and registers, to estimate health impacts at the large European scale.

HELIX will make a major contribution to the integrated exposure concept by developing an exposome toolkit and database that will: 1) measure a wide range of major chemical and physical environmental hazards in food, consumer products, water, air, noise, and the built environment, in pre and postnatal periods; 2) integrate data on individual, temporal, and toxicokinetic variability, and on multiple exposures, which will greatly reduce uncertainty in exposure estimates; 3) determine molecular profiles and biological pathways associated with multiple exposures using omics tools; 4) provide exposure-response estimates and thresholds for multiple exposures and child health; and 5) estimate the burden of childhood disease in Europe due to multiple environmental exposures. This integration of the chemical, physical and molecular environment during critical early-life periods will lead to major improvements in health risk and impact assessments and thus to improved prevention strategies for vulnerable populations.

Fields of science (EuroSciVoc)

[natural sciences](#) > [computer and information sciences](#) > [databases](#)

[medical and health sciences](#) > [basic medicine](#) > [immunology](#)

[engineering and technology](#) > [environmental engineering](#) > [remote sensing](#)

[medical and health sciences](#) > [clinical medicine](#) > [obstetrics](#) > [postnatal care](#)

[medical and health sciences](#) > [health sciences](#) > [nutrition](#) > [obesity](#)



Programme(s)

[FP7-ENVIRONMENT - Specific Programme "Cooperation": Environment \(including Climate Change\)](#)

Topic(s)

[ENV.2012.6.4-3 - Integrating environmental and health data to advance knowledge of the role of environment in human health and well-being in support of a European exposome initiative](#)

Call for proposal

FP7-ENV-2012-two-stage
[See other projects for this call](#)

Funding Scheme

[CP - Collaborative project \(generic\).](#)

Coordinator



FUNDACION PRIVADA INSTITUTO DE SALUD GLOBAL BARCELONA

EU contribution

No data

Total cost

No data

Address

**C ROSSELLO 132 PLANTA 05
08036 Barcelona**

 **Spain** 

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Participants (13)



FUNDACIO CENTRE DE RECERCA EN EPIDEMIOLOGIA AMBIENTAL - CREAL

 Spain

EU contribution

€ 2 266 689,85

Address

Calle Doctor Aiguader 88
08003 BARCELONA 

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 
[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost

No data



FOLKEHELSEINSTITUTTET

 Norway

EU contribution

€ 2 025 814,50

Address

LOVISENBERGGATA 8
0456 Oslo 

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 
[Participation in EU R&I programmes](#) 
[HORIZON collaboration network](#) 

Total cost

No data



PANEPISTIMIO KRITIS

 Greece

EU contribution

€ 402 622,00

Address

UNIVERSITY CAMPUS GALLOS

74100 Rethimno 

Region

Νησιά Αιγαίου > Κρήτη > Ρέθυμνο

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE

 France

EU contribution

€ 677 604,00

Address

RUE DE TOLBIAC 101

75654 Paris 

Region

Ile-de-France > Ile-de-France > Paris

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



BRADFORD TEACHING HOSPITALS NHS FOUNDATION TRUST

United Kingdom

EU contribution

€ 452 948,15

Address

Duckworth Lane

BD9 6RJ Bradford

Region

Yorkshire and the Humber > West Yorkshire > Bradford

Activity type

Research Organisations

Links

[Contact the organisation](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



VYTAUTO DIDZIOJO UNIVERSITETAS

Lithuania

EU contribution

€ 342 144,00

Address

K DONELAICIO G 58

LT-44248 KAUNAS

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



IMPERIAL COLLEGE OF SCIENCE TECHNOLOGY AND MEDICINE

United Kingdom

EU contribution

€ 772 367,90

Address

**SOUTH KENSINGTON CAMPUS EXHIBITION ROAD
SW7 2AZ LONDON**

Region

London > Inner London — West > Westminster

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



FUNDACIO CENTRE DE REGULACIO GENOMICA

Spain

EU contribution

€ 819 492,60

Address

**CARRER DOCTOR AIGUADER 88
08003 Barcelona**

Region

Este > Cataluña > Barcelona

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



VEILIGHEIDS- EN GEZONDHEIDSREGIO GELDERLAND-MIDDEN

 Netherlands

EU contribution

€ 148 440,00

Address

EUSEBIUSBUITENSINGEL 43

6802 EJ Arnhem 

Region

Oost-Nederland > Gelderland > Arnhem/Nijmegen

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



HYLOBATES CONSULTING SRL

 Italy

EU contribution

€ 37 312,00

Address

VIA DEI MONFORTANI 57 B

00100 Roma 

Region

Centro (IT) > Lazio > Roma

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



SENSING & CONTROL SYSTEMS SL



Spain

EU contribution

€ 63 600,00

Address

CALLE CREUETA NUMERO 28 PLANTA BAJA
08700 IGUALADA

Region

Este > Cataluña > Barcelona

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Total cost

No data



INSTITUT NATIONAL DE L ENVIRONNEMENT INDUSTRIEL ET DES RISQUES - INERIS



France

EU contribution

€ 163 710,00

Address

PARC TECHNOLOGIQUE ALATA
60550 Verneuil En Halatte

Region

Hauts-de-France > Picardie > Oise

Activity type

Research Organisations

Links

[Contact the organisation](#) [Website](#)

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data



UNIVERSIDAD DE SANTIAGO DE COMPOSTELA

 Spain

EU contribution

€ 451 194,00

Address

COLEXIO DE SAN XEROME PRAZA DO OBRADOIRO S/N
15782 Santiago De Compostela 

Region

Noroeste > Galicia > A Coruña

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Total cost

No data

Last update: 6 March 2017

Permalink: <https://cordis.europa.eu/project/id/308333>

European Union, 2025