

**[ERC CoG EARLY-ADAPT] Predoctoral and postdoctoral researchers in climate, air pollution, environmental epidemiology, economy and social sciences for ERC CoG EARLY-ADAPT projects.**

### **Description:**

The Barcelona Institute for Global Health (ISGlobal) is a cutting-edge institute addressing global public health challenges through research, translation into policy and education. ISGlobal has a broad portfolio in communicable and non-communicable diseases including environmental and climate determinants, and applies a multidisciplinary scientific approach ranging from the molecular to the population level. Research is organized in three main areas, Malaria and other Infectious Diseases, Child and Maternal Health, and Urban Health, Climate & Non-Communicable Diseases. ISGlobal is accredited with the Severo Ochoa distinction, a seal of excellence of the Spanish Science Ministry.

### **What we are looking for**

We are seeking **between 5 and 7 talented and highly motivated researchers** in the areas of **climate, air pollution, environmental epidemiology, economy and social sciences**. The successful candidates will join the research team of Dr. [Joan Ballester](#) at ISGlobal within the framework of various research projects (see *“Project information”* below), mainly the recently awarded ERC project EARLY-ADAPT (find details in the next paragraph). The team will be at the forefront of environmental research by creating and analysing a novel database of human health in Europe, which incorporates a range of environmental, socioeconomic and demographic variables and novel digital data streams at different spatiotemporal scales. Interest is additionally expressed for candidates specialized in **big data, infectious diseases and COVID-19** (see *“Competences and duties”* below).

**EARLY-ADAPT** (*“Signs of Early Adaptation to Climate Change”*) is a 5-year **European Research Council Consolidator Grant (ERC-2019-CoG)**, whose overarching aim is to jointly analyse the multiple drivers of recent trends in human health. Its driving hypothesis is that societies are starting to adapt to climate change, but the effectiveness of early adaptation is heterogeneous in space and time. EARLY-ADAPT will create a daily, continental-wide database with multiple health outcomes, climate variables, seven air pollutants, desert dust and influenza. The database will be used to model the relation between health and the environment, quantify the modifying effect of the societal factors, and perform a predictability analysis to determine the most realistic adaptation scenarios for the projections of future health. The project will allow to detect, understand and quantify the inequalities in adaptation between countries, regions, cities and social groups. More information is available [here](#).

### **Competences and duties**

Candidates are expected to:

- have a completed, or close to completion, PhD (for postdoctoral candidates) or MSc (for predoctoral candidates) with expertise in environmental epidemiology, biostatistics, mathematics, big data analysis, climate, air pollution, infectious diseases, economy, social sciences or related areas;

- have experience (for postdoctoral candidates) or interest (for predoctoral candidates) for the modelling of the environmental, socioeconomic and/or demographic drivers of human health, including non-transmissible and/or infectious diseases;
- have experience in common programming languages, with particular focus on R, Stata, Python, NetCDF, HDF5 and/or GIS tools;
- have experience with the management and analysis of large datasets, and particularly, health, climate, air pollution and/or satellite data, as well as novel digital data streams;
- be fluent in spoken and written English, and be willing to apply to individual fellowships to become an independent researcher and define new own lines of research;
- be willing to work in an inter-disciplinary project team within a highly collaborative research institute.

Postdoctoral researchers are additionally expected to have a good track record of first-authored publications in peer-reviewed journals, preferably in high-impact journals.

We are seeking candidates in the following areas, whose main duties will be:

- Climate and environmental sciences: to analyse and interpret the outcome of climate and air pollution models, and to perform predictability analyses to explore the skill of health forecasts at daily, seasonal and climate change timescales (e.g. see an example [here](#)).
- Epidemiological modelling: to design and implement different techniques to model the relationship between the daily health outcomes and the daily environmental variables at different scales, including analyses at the continental, national, regional and city levels.
- Economy and social sciences: to describe the relationship between macroeconomic cycles and early adaptation to climate change, and to analyse the socioeconomic and demographic drivers of adaptation inequalities between countries, regions, cities and social groups.
- Software engineering: details of this position are separately provided [here](#).

All the researchers are expected to closely interact, and to expand their research beyond the respective areas of expertise. In close collaboration with the software engineer, they are all expected to contribute to the definition of the database, the development of software tools, take the lead on data analyses and publications, and contribute to the activities of the group and institution.

As defined by the ERC founding scheme, EARLY-ADAPT is an innovative, purely inter-disciplinary, high-risk/high-gain project, and therefore, the objectives and methodologies might be somewhat dynamically re-defined during the course of the project in order to continuously generate beyond state-of-the-art, high-impact knowledge. As such, the project offers some degree of flexibility to accommodate the interests and areas of expertise of the chosen candidates. Within the general guidelines and main objectives of the project, we will always favour the independent thinking of the researchers, the formulation of frontier research hypotheses, and the exploration of innovative ideas and methodologies spanning across disciplines.

The above-mentioned profiles correspond to the basic research pillars of the project, but additional research lines will be considered if talented and highly motivated researchers in other related disciplines decide to apply. Particular interest is expressed for **big data, infectious diseases and COVID-19**.

## Conditions

Dedication: Full time.

Starting date: Any time since May 1<sup>st</sup> 2020.

Duration: 1 year, renewable annually subject to performance.

### **Project information**

We gratefully acknowledge funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No **865564 (European Research Council Consolidator Grant EARLY-ADAPT)** and **727852 (project Blue-Action)**, and from the **Ministry of Science and Innovation (MCIU)** under grant agreements **No RYC2018-025446-I (programme Ramón y Cajal)** and **EUR2019-103822 (project EURO-ADAPT)**.

### **How to apply:**

Applicants must fill in the [request form](#) including the following reference: **[PhD \_ EARLY-ADAPT\_Apr20]** or **[PD \_ EARLY-ADAPT\_Apr20]** depend on the position they are interested in. Applications should attach the Curriculum Vitae and a supporting statement briefly describing your qualifications and experience with regard to the competences and duties of the offer.

**The receipt of applications will be open until a candidate is selected.**

**Only shortlisted candidates will be contacted.**

In ISGlobal we are committed to maintaining and developing a work environment in which the values and principles of our organization are respected and equal opportunities between women and men be promoted in each of the areas in which we operate, not tolerating discrimination based on criteria such as age, sex, marital status, race, ethnicity, disabilities, political leanings, religion or sexual orientation.