

The LEARN project receives 7,550,974 million euros from the EC to investigate indoor air pollutants and their impact on children's health

- The project, funded by the European Commission under the Horizon Europe Programme, has received 7,550,974 million euros (Grant Agreement 101057510 - LEARN - HORIZON-HLTH-2021-ENVHLTH-02).
- The LEARN project aims to enhance the development of new sensors to measure air quality over the next four years.
- The scientific achievements expected from LEARN will unlock great technological potential in indoor air quality, improving the quality of life of children.

Braga, 29th September 2022. The [LEARN project](#) has been awarded a grant of €7,550,974 million under the European Commission's Horizon Europe programme for research on indoor air quality. The project aims to investigate indoor air quality, with the main objective being to improve the health of young people in the long term.

The LEARN project is funded by the European Commission under the framework of the **Horizon Europe Grant Agreement: 101057510**, is coordinated by [Laboratorio Iberico Internacional de Nanotecnologia LIN-INL](#) (Portugal), and also counts on the participation of: [AARHUS UNIVERSITET](#) (Denmark), [ALVEOLIX AG](#) (Switzerland), [ENVIROMETRICS TECHNIKOI SYMVOULOI ETAIREIA PERIORISMENIS EFTHYNIS](#) (Greece), [FI Group](#) (Spain), [STICHTING IMEC NEDERLAND](#) (The Netherlands), [KATHOLIEKE UNIVERSITEIT LEUVEN](#) (Belgium), [MANN + HUMMEL GMBH](#) (Germany), [NANOTECHNOLOGY INDUSTRIES ASSOCIATION](#) (Belgium), [UNIVERSITEIT HASSELT](#) (Belgium), [VRIJE UNIVERSITEIT BRUSSEL](#) (Belgium).

LEARN project: Three pilots around Europe

The project will measure the presence of pollutants in indoor air. With the aim of detecting the presence of nanoparticles, specifically those measuring less than 100 nanometres, as well as potential long-term cognitive problems in children that may be associated with them, the partners will take blood and urine samples from schoolchildren to measure the level of exposure to indoor pollutants, using advanced microscopy techniques to identify the number of particles found in the samples.

This project will base its three cohorts on three different levels of social development in Europe: **Denmark, Belgium and Greece.**

Improving the health of children

Another important component, which will be investigated in Portugal and Switzerland, is the analysis of the effects of pollutants on human cells. For this, advanced equipment called organ-on-a-chip will be used to investigate which kind of responses are generated at the molecular level, cell by cell. The ultimate goal is to recognise early indicators of damage to children's lungs from air pollutants.

An essential aspect of the project is to improve the health of young people through technology and the results obtained over the 4-year period. Ernesto Alfaro-Moreno, coordinator of LEARN project, explains that it is not just about detecting air pollution and putting filters in place; the project will also measure how it affects children's lung health and cognitive development.

Cristina Nappi, Senior Consultant at FI Group, explains that, with an investment of almost 8 million euros to research indoor air quality and detect the presence of particulate pollutants at the nano-scale, the project has the potential to make a big difference to young people's lung health in the long term.

For more information on the LEARN project and to participate in the activities, visit the website learnproject-heu.eu or follow the hashtag #LEARNproject on social media.

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