What causes asthma?

Universitätsklinikum Erlangen is investigating the air in classrooms as part of a new EU project. The researchers hope to identify pollutants that may lead to asthma in children. The SynAir-G project will be funded with a total of 6.6 million euros over the next four years.

Different pollutants such as viruses, bacteria or particulate material can, in combination or separately, have an impact on the lung health, the immune system and the mental health of children. The air at school is particularly relevant, but the air at home affects children too. The aim of the project is to identify the various components contributing to air pollution, to determine which combinations are most detrimental to health and to understand the effect they have on the body. ‘This EU project is crucial for investigating how particles, viruses and allergens interact to trigger asthma in childhood,’ explains Prof. Dr. Dr. Susetta Finotto, head of the Department of Molecular Pneumology and responsible for the research at Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU) within the context of the project.

Clinical studies in the partner countries are used to observe school children throughout Europe and determine their exposure to air pollution in their environment. Using these air analyses, the working group at FAU will analyse the combination of substances in the air in the laboratory using cell culture experiments, in vitro lung tissue models and experimental models. At the end of the project, the researchers hope to have an improved knowledge of how different air pollutants interact, and then move forward to find a technical solution for monitoring and cleaning the air. In addition, new guidelines are to be drafted for the quality of indoor air on the basis of this project. ‘SynAir-G is a pioneering project for better air quality in school classrooms and beyond,’ explains Prof. Dr. Dr. Susetta Finotto. Prof. Dr. Dr. Susetta Finotto has years of experience in researching the immunopathogenesis of asthma bronchiale and in researching non-small cell lung cancer.

About SynAir-G

SynAir-G stands for ‘Disrupting Noxious Synergies of Indoor Air Pollutants and their Impact in Childhood Health and Wellbeing, using Advanced Intelligent Multisensing and Green Interventions.’ FAU is part of an interdisciplinary team including researchers from France, Finland, Great Britain and Greece. FAU is the only German university to take part in the project that is funded with funds from the Horizon Europe research framework programme.

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