

## **Annual Congress 2022 of the European Academy of Allergy and Clinical Immunology**

### **EAACI Guidelines – Environmental Science for allergic diseases and asthma**

**(Prague, Czech Republic, 1-3 July 2022)** Environmental science was set as a key priority for the EAACI Research Agenda. Natural and man-made environments such as air quality, water and soil, together with all the physical, chemical, biological, and social features of our surroundings, have a major influence on the control and severity of allergic diseases and asthma.

Poor quality environments contribute to 13 % (one in every eight) of deaths according to a major assessment on health and environment released recently by the European Environment Agency. Although the precision medicine revolution has the potential to transform environmental measures, we still have a long way to go to more effectively identify what or whom should be targeted. Some environmental interventions like air quality regulation cannot be targeted to any subgroup, genetic, epidemiologic or otherwise. Others, like breastfeeding, vaccination, antismoking campaigns, exercise or diets, can be targeted, but they need to prove practical and/or cost-efficient. The most efficient prevention strategies would identify those at highest risk of disease following avoidable exposures. However, simply evaluating genetic risks is not sufficient because of the need to cofactor the interaction with environment.

The advanced methodological approach proving causality instead of associations together with an integrated surveillance network for the environment impact on allergies and asthma is key to move the field forward.

Urgent and concerted actions are needed to improve the European legislation on environment control, with a special focus on air quality, tobacco banning, indoor and outdoor pollution, invasive allergenic plants and standard occupational exposure. The European Green Deal is the EU plan implemented to make the EU's economy sustainable by turning climate and environmental challenges into opportunities, and making the transition just and inclusive for all. The EU aims to be climate neutral in 2050. The action plan is based on 2 priorities: a) boost the efficient use of resources by moving to a clean, circular economy; b) restore biodiversity and cut pollution.

An integrated approach to environment and health policies is needed to tackle environmental risks, based on high quality evidence in order to implement appropriate measures. This requires high quality tools in a form of a framework delivered by the Academia in the format of evidence-based guidelines.

Speaking at the Opening Plenary of the EAACI Congress in Prague, Ioana Agache, Chair of the project, presented the structure of the guideline, its aims and the first set of recommendations.

The Guideline includes 5 domains of interest:

1. Atmospheric science with a special focus on pollution (indoor and outdoor), air quality, aerobiology, climate change
2. Ecology – with a special focus on the exposome and biodiversity



3. Social science – with a special focus on migration and regiotypes
4. Regulatory science - focus on: a) the economic and political dimensions with recommendations for policy change based on validated models of exposure and means of mitigation; b) integrated surveillance network
5. Models of causality – deployment of the AI machine learning to develop a causality model

Stay tuned for the first publication with recommendations for pollen-induced asthma and allergic rhinitis due this summer!

**About EAACI:**

*The European Academy of Allergy and Clinical Immunology (EAACI) is an association of clinicians, researchers and allied health professionals founded in 1956. EAACI is dedicated to improving the health of people affected by allergic diseases. With more than 13 000 members from 125 countries and over 75 National Allergy Societies, EAACI is the primary source of expertise in Europe and worldwide for all aspects of allergy.*

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