PRESS RELEASE

Allergy, environmental changes and invasive ragweed at the Atopica conference in Brussels

Future perspectives and latest advances under discussion at 'Pollen is in the air: invasive plants and allergy in our changing environment' the conference of the Atopica EU funded project

Brussels, March 5th, 2015 – The two-day conference on atopic diseases in changing climate, land use and air quality starts today at the Committee of the Regions in Brussels.

The International team of Atopica, a multidisciplinary project funded by the European Commission under the Seventh Framework Programme (FP7), organised the event aiming at building bridges between science and society. Scientists, EU politicians, patients associations, journalists and EU citizens at large will come together to learn about and discuss advanced research and issues across a broad range of fields impacting on human health, with a focus on pollen-related allergic disease.

The combined impact of global and regional climate and land use on the potential spread of the highly invasive weed *Ambrosia artemisiifolia* (common ragweed), on air quality and on consequences on health will be key topics of the conference.

For the past three years, the Atopica team has been moving towards a better understanding, and where possible towards a quantification, of the key influences on the risk of allergic disease across Europe due to ragweed. With a multi- and interdisciplinary approach involving cellular and molecular biologists, immunologists, clinicians, physicists, climate and air quality experts and land use specialists, Atopica has been investigating the complex interplay between multiple stressors and their interaction on ragweed allergic sensitization, incidence and disease severity. Physical environmental factors (climate, land cover, pollen and air quality) and human biology, together with socioeconomic factors and policy have been the focus of their studies resulting in a unique blend of predictive models, field campaigns and laboratory experiments.

Work undertaken in Atopica has indicated that, in the future, if we do nothing, the distribution of *Ambrosia artemesiifolia* is likely to expand and that ragweed pollen loads across Europe may increase a lot, in particular in areas where it is not currently present. But what are the likely health consequences of this predicted invasion scenario?

Atopica scientists' best estimate is that across Europe the number of individuals with clinically relevant Ambrosia allergy is likely to more than double by 2041-2060. The majority of this increase is climate related.

As the spread of ragweed is an on-going invasion event in Europe, there is an opportunity to limit its future impact by designing control strategies based on the predicted rate and extent of future spread.

We also anticipate news on

- projections of ragweed potential to spread, especially in areas where it is not present, in relation to future climate scenarios.
- data on *de novo* allergy to ragweed in children and during three consecutive ragweed pollination seasons (2012-2014) in Croatia and data on the prevalence of allergies including ragweed in the elderly (60-89 years) in Germany;
- the latest on how the epigenetic landscape of the individual (*i.e.* the repertoire of which do not affect the DNA sequence but impact on cell/tissue behaviour and function) can be affected by environmental and pollen pressure leading to the development of allergic disease in European populations of different age groups;
- the rate at which an individual becomes sensitive to ragweed pollen in relation to air quality and airborne pollen concentrations;
- new seasonal temperature and precipitation indices that correlate well with pollen concentrations and could be used for seasonal prediction of pollen amounts
- the relation between allergic sensitisation to ragweed and air quality
- projections of air pollution at the mid (2030) and long term (2050) in Europe;

This is just a snapshot of what is being presented at the conference. Among the talks and workshops in the agenda:

- " Atopica key messages for EU politicians at the European, national and local level"
- " Influence of air quality and allergenic pollens on allergic diseases"
- " Climate change in Europe: Observations, projections and implications for air quality and pollen"

Key sessions also include interventions by invited members of the European Parliament and Commission as well as members of the International Ragweed Society, the Health and Environment Alliance, the European Federation of Allergy and Airways Diseases Patients Associations.

Sessions on March 6th will dig deeper into Atopica science with talks on environmental and clinical drivers of pollen-related allergies, integration and future outlook. Invited speakers will give insights on "Climate services in support of society needs" and "The future of biomedical science and clinical practice".

Keep in contact on www.atopica.eu/conference or secretariat@atopica.eu

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A press kit with useful factsheets on:

ALLERGY

COMMON RAGWEED (AMBROSIA ARTEMISIIFOLIA)

CLIMATE CHANGE

THE ATOPICA PROJECT

is available for download at the conference website.

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