

# EAACI 2023



## Review of the European Association of Allergy and Immunology (EAACI) Congress 2023

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This year's European Association of Allergy and Immunology (EAACI) Hybrid Congress was held in-person, in the beautiful historic city of Hamburg, Germany, and online. The largest congress in the field, with the greatest number of participants since before the onset of the COVID-19 pandemic, brought together 7,400 delegates on site, and many more virtually. Hamburg proved a fitting site for EAACI 2023, as it is a renowned location for research in allergy and immunology, and serves as a hub of innovation in the field.

EAACI President, Stefano Del Giacco, began the inaugural address as follows: "I am struck by the immense diversity of expertise and knowledge, which is represented in this room, and at this congress," and declared that EAACI is "more alive than ever," with 15,700 societal members.

The focus of EAACI 2023 was precision medicine in treating allergies and immunological diseases as effectively as possible. Plenary research sessions covered "every scientific track in the field of allergy and immunology," including the role of the microbiome in asthma, molecular allergology, and allergies in the paediatric population. Del Giacco gave an overview of the programme, stating that the congress would offer the latest developments in endotyping asthma and allergic diseases; novel analytical tests; the role of microbial immune response; and

skin immunology, including new breakthroughs in IgE-mediated autoimmunity and the development of allergen immunotherapy.

Both Del Giacco and EAACI Vice President of Congresses, Mohamed Shamji, highlighted the importance of tailored healthcare for patients. As Shamji declared, it is of the utmost importance that EAACI can "move forward in a more personalised approach for diagnosis, treatment, and management" of allergic and immunological diseases.

The key EAACI achievement over the past year, as stated by Shamji, was the launch of the online EAACI Knowledge Hub, which brings together information about all of the recent developments in the field, as well as the opportunity to engage with experts. Shamji pointed to the huge contribution that the Knowledge Hub makes to the field, giving access to educational models, EAACI's own journals, and congress content, all on a single platform.

A keynote speech, entitled 'The Art of Observation and the Observation of Art', was given by Salvatore Mangione, Thomas Jefferson University, Philadelphia, Pennsylvania, USA. Throughout this fascinating introductory session, Mangione aimed to revisit "the roots of our profession."



During the Awards ceremony, five new EAACI Fellows were announced: Susanne Lau, Charité – Universitätsmedizin Berlin, Germany; Carsten Bindslev-Jensen, Odense Research Center for Anaphylaxis (ORCA), Denmark; Adnan Custovic, Imperial College London, UK; Pascal Demoly, University Hospital of Montpellier, France; Jeroen Buters, Technical University of Munich (TUM), Germany; and Cristobalina Mayorga, Instituto de Investigación Biomédica de Málaga (IBIMA), Universidad de Málaga, Spain.

The Clemens von Pirquet Award for Clinical Research was given to Marta Ferrer, Universidad de Navarra School of Medicine, Pamplona, Spain; the Daniel Bovet Award for Treatment and Prevention to Antonino Romano, Oasi Research Institute-IRCCS, Troina, Sicily, Italy; and the Paul Ehrlich Award for Experimental Research to Kari Nadeau, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, USA. Ignacio Dávila, University of Salamanca and University Hospital of Salamanca, Spain, was

given the Charles Blackley Award for Promotion of the Specialty in Europe; Milena Sokolowska, University of Zurich (UZH), Switzerland, was awarded the prestigious Pharf Award; and Marine-Alexia Lefevre, University Hospital of Saint-Étienne, Loire, France, received the AllergoPharma Award.

EAACI also incorporated the Beat Allergy charity run into the 2023 Congress, to raise funds for friends and colleagues in Türkiye and Syria, who have been affected by two devastating earthquakes that occurred in February.

The EMJ team was thrilled to be a part of EAACI's 2023 congress, and is looking forward to next year's, which will be held in Valencia, Spain, between the 31<sup>st</sup> May–3<sup>rd</sup> June. This issue of *EMJ Allergy & Immunology* includes summaries of the most noteworthy press releases and abstracts presented at EAACI 2023. Read on for more insights from this year's congress. ●

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## Allergen Exposure Chamber Assesses House Dust Mite Allergen Immunotherapy Outcomes



USE of an allergen exposure chamber (AEC) in the assessment of clinical outcomes of house dust mite (HDM) allergen immunotherapy (AIT) for patients with allergic rhinoconjunctivitis was validated in a study presented at the EAACI Congress 2023. This chamber allows patients to be exposed to the allergen in a controlled environment, under well-regulated and stable conditions.

In total, 50 patients were included in the study, which evaluated the efficacy and effectiveness of AEC-derived clinical outcomes of subcutaneous HDM AIT. All participants had HDM-triggered allergic rhinoconjunctivitis, confirmed through a variety of diagnostic tests, including serum-specific IgE, skin prick tests, and basophil activation tests. Patients were first assessed in the AEC before commencing AIT, then 12 months after treatment. The researchers assessed the effectiveness of AIT through multiple clinical endpoints, including visual analogue scale and total nasal symptom score, as well as objective parameters, including nasal secretion weight, peak nasal inspiratory flow, and acoustic rhinometry.

The team noted a statistically significant reduction in total nasal symptom score 12 months after treatment, as well as a high reduction in nasal symptoms, showing that the treatment had a positive impact on nasal symptoms.

Researchers concluded that the AEC challenge is safe, effective, reproducible, and consistent, allowing researchers to collect high-quality data quickly, and assess outcomes of HDM AIT in patients with allergic rhinoconjunctivitis. Furthermore, the findings suggest that the AEC could be an alternative to traditional trial designs, as the obtained clinical measurements align with the effectiveness evaluation through the Combined Symptom and Medication Score (CSMS) in real-life conditions. This study also suggests that accelerating dose escalation of native HDM AIT is convenient and safe. Further research is now attempting to validate clinical endpoints through immunological biomarkers, which could improve diagnostic and treatment approaches. ●

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## New Immunotherapy Could Trigger Immune Response in Malignant Melanoma

IMMUNE responses can be triggered by IgE immunotherapy when treating malignant melanoma, according to research presented at the EAACI Congress 2023. Researchers from King's College London, UK, and Guy's and St Thomas' NHS Foundation Trust, London, UK, investigated the efficacy of a novel antibody to target and treat melanomas.

The most aggressive form of skin cancer, malignant melanoma has low survival rates. Although progress has been made in developing new immunotherapies that use an individual's natural defence system to fight the cancer, many patients fail to respond to current treatments. However, newly discovered antibodies could benefit patients with melanoma who do not respond to treatment.

Researchers have designed an IgE antibody that specifically targets immune responses towards melanoma cells. It was developed for chondroitin sulfate proteoglycan 4 (CSPG4), a marker that is found on the surface of human melanoma cells in up to 70% of cases.

Current immunotherapies use the IgG antibody, which broadly activates the immune system. However, the researchers illustrated how CSPG4 IgE can attach to and activate immune cells,

effectively killing melanoma cancer cells, in the blood of patients with melanoma. Cancer growth slowed down when treated with CSPG4 IgE. Further, the researchers proved that CSPG4 IgE did not activate basophils, a type of white blood cell, in an allergy test. This result suggests the potential safety of this therapy.

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Previously, King's College London generated an IgE antibody to treat ovarian cancer, with the findings due to be published later this year. Heather Bax, King's College London, stated: "Our findings replicate existing observations for MOV18 IgE, the first anti-cancer IgE, which targets ovarian cancer, and supports development of IgE therapies for other solid tumours."

Researchers from both institutions were "excited about the prospect of a whole new class of antibody drugs in oncology," according to James Spicer, King's College London, and Guy's and St Thomas NHS Foundation Trust. ●





## Potential New Treatment Approach for Allergic Rhinitis and Rhinoconjunctivitis

RESULTS of a randomised controlled trial evaluating the efficacy of Pollinex Quattro (PQ) Grass, a novel modified short-course subcutaneous immunotherapy, in treating allergic rhinitis and rhinoconjunctivitis were presented at the EAACI Congress 2023, in Hamburg, Germany.

Allergic rhinitis and rhinoconjunctivitis are common chronic inflammatory allergic conditions that affect the upper respiratory tract. Unlike currently used treatment strategies that target symptom control, allergen immunotherapy has shown potential in inducing clinical and immunological tolerance.

Following results from a previous Phase II study, researchers conducted an exploratory Phase III trial, utilising an adaptive trial design, and recruiting patients from 14 different sites in Germany and the USA. The aim was to evaluate the effectiveness of PQ Grass compared with placebo in addressing unmet needs of allergic patients by evaluating patient combined symptom and medication scores, averaged over the peak grass pollen season. Patients were randomised into four different treatment groups: PQ Grass conventional regimen, PQ Grass extended regimen, active placebo, or saline.

Mohamed Shamji, EAACI Vice President of Congresses, and Faculty of Medicine, National

Heart and Lung Institute, Imperial College London, UK, and colleagues found that the combined symptom and medication scores were significantly improved in both the PQ Grass extended regimen and PQ Grass conventional regimen groups compared with placebo, with relative risk reductions of 39.5% and 33.1%, respectively. The absolute reduction in symptoms compared with placebo were 0.67 points for PQ Grass extended regimen and 0.56 points for PQ Grass conventional regimen. Furthermore, the PQ Grass extended regimen showed significant improvement in the total combined score.

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**"The PQ Grass extended regimen showed significant improvement in the total combined score."**

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Shamji stated: "These findings highlight the potential of PQ Grass as an effective therapeutic option for allergic patients. The adaptive trial design utilised in this study enables a more efficient evaluation of treatment strategies, providing valuable insights into the clinical and immunological effects of novel therapies." Whilst these results are promising, PQ Grass is not yet approved, and further studies to determine the safety and efficacy are required. ●