

# REVIEW



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## Messages from the EAACI board



### Dear EAACI Review readers

As we bid farewell to 2023, I am excited to reflect on the extraordinary advances and successes that have defined this year for the European Academy of Allergology and Clinical Immunology (EAACI). Throughout the past twelve months, our dedication to advancing knowledge has had a global impact through our courses and events.

In June, Hamburg hosted the EAACI Annual Congress 2023, a scientific event that not only showcased the latest developments in allergy and clinical immunology but also emphasised the collaborative spirit within our community.

Furthermore, the International Severe Asthma Forum (ISAF) in October and the Pediatric Allergy and Asthma Meeting (PAAM) Hybrid in November were standout successes, illustrating our commitment to creating an environment of collaboration and learning. Our Focused Meetings have also made a lasting impression, bringing experts and enthusiasts together to explore specialised areas of our field.

Moreover, I would like to highlight the wealth of research, scientific advances and insightful content presented on our EAACI Knowledge Hub, which has played a crucial role in advancing our mission. The recent publication of EAACI position papers and updates on our advocacy and international partnerships underscores our commitment to staying at the forefront of our field.

Looking ahead, we eagerly anticipate the EAACI Congress 2024 in Valencia, Spain, under the theme "Revolutionising Patient Care through the Power of Data Science." This event explores the intersection of allergy and clinical immunology with personalised care, data science, and the one health approach.

In addition, I am pleased to share two key events scheduled for the coming year: first, EAACI ISMA-RHINA 2024, which marks the convergence of two highly prestigious EAACI meetings – the International Symposium on Molecular Allergology (ISMA) and the European Rhinallergy Meeting (RHINA); second, the Food Allergy and Anaphylaxis Meeting (FAAM) will be a focal point for experts and enthusiasts to delve deeper into food allergy and anaphylaxis.

I extend my heartfelt gratitude to each of you for your unwavering commitment to our shared mission: to understand, treat, and cure allergy, asthma, and immune diseases. As we move forward, your collaboration and perspectives continue to be invaluable in shaping the future of our field.

I invite all members to broaden the scope of our collective efforts by sharing our future events with professional colleagues. Together, let us contribute to researchers and clinicians, sustaining growth and affirming EAACI's position as a world leader in allergy and clinical immunology.

I wish you a successful end to 2023 and look forward to our continued journey together in the coming year.

Warm regards



**Stefano Del Giacco**  
*EAACI President*

# IMMUNOLOGY WINTER SCHOOL 2024



08-11 January



Zakopane, Poland



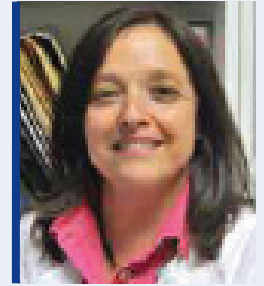
[eaaci.org](https://eaaci.org)

## Messages from the EAACI board



### EAACI's journey of growth:

# ELEVATING EXCELLENCE



**Maria Torres**  
EAACI Secretary General

EAACI's commitment to meeting the professional and scientific needs of our valued members remains steadfast. The continued dedication of the entire EAACI family during 2023 has boosted membership to an impressive 16,300 people. This growth is both a testament to our success and a substantial challenge, demanding our careful preservation and reinforcement of the sense of belonging felt by our members. It is through this achievement that we will elevate the global visibility of our Academy and underscore its unique identity. The EAACI HQ team is also expanding, with the aim of actively contributing to this objective and enhancing our capacity to provide an improved service.

To help tackle these crucial tasks, the myEAACI project was initiated in 2021, a venture of which I am honoured to be the coordinator. Under the umbrella of myEAACI, we conduct annual surveys to delve into the communication needs of our members, scrutinise country-specific issues within the allergy discipline, and gauge overall member satisfaction with the Academy.

Through these surveys, we have gained insights into the preferred communication channels and content deemed essential by our members, guiding us in prioritising key information on the website and utilising mass emails, social media, and other communication channels effectively.

The invaluable feedback from these surveys has led to the inception of various programs within the myEAACI project. Noteworthy among them is the initiative addressing dual memberships with national allergy societies. This program offers a reduced membership fee for professionals already affiliated with one of the national societies collaborating with the EAACI National Allergy Societies committee. Importantly, participants in this program retain all benefits associated with conventional EAACI membership.

Once again, we are thrilled to reflect on another successful year of organising impactful events, including the Annual Congress in Hamburg, the Pediatric Allergy and Asthma Forum (PAAM) in Porto, and the International Severe Asthma Forum (ISAF) in Rome, among others. The valuable feedback from our attendees and EAACI members has been instrumental in our continuous efforts to enhance and enrich overall event experiences.

As we look ahead to the coming year, we are diligently preparing cutting-edge events that will keep all of you abreast of the latest developments in the field of allergy and clinical immunology. A highlight on our agenda is the upcoming Annual Congress, set to take place in the vibrant city of Valencia, Spain, from May 31 to June 3, 2024. We are curating an outstanding Scientific Programme featuring inspiring speakers who will generously share their knowledge and professional experiences. The theme for this congress is "Revolutionising patient care through the power of data science," focusing on the crucial intersection of allergy and clinical immunology with personalised care, data science, and the one health approach.

At EAACI, we are committed to expanding the frontiers of allergy and clinical immunology by collaborating with the best professionals in the field, ultimately striving to improve the lives of patients. We extend a warm invitation to all of you to actively participate in our events by submitting your abstracts, presenting your groundbreaking research, and becoming integral contributors to the wealth of knowledge we collectively aim to share. We hope that these initiatives, and their successful dissemination and promotion, will contribute to addressing the ongoing needs of EAACI members: "Communication to engage" is very much our moto.



# Nomenclature of allergic diseases and hypersensitivity reactions: Adapted to modern needs: An EAACI position paper published in *Allergy*

**W**e are excited to share a new classification of allergic disorders focusing on disease mechanisms that promise to revolutionise personalised disease management. The classification marks a significant shift in understanding and managing allergic diseases, aligning with advancements in patient-tailored treatments and precision medicine. EAACI, as a global allergy science and education leader, has spearheaded this initiative. The position paper, now available in *Allergy*<sup>1</sup>, introduces a groundbreaking perspective on allergic disorders, emphasising the underlying mechanisms of these diseases. The rapid development in precision diagnostic tools, such as molecular diagnostics, omic technologies, imaging, and genetic and epigenetic editing, necessitates a more nuanced approach. This shift is crucial for moving towards precision and personalised medicine in allergy treatment and management. This new classification is expected to transform how healthcare professionals approach allergic diseases. It delves into the roles of immune-competent cells, tissue changes, the impact of microbial infections, and the influence of genetic and epigenetic factors. This new approach offers a more comprehensive understanding of allergic conditions, with a focus on the possible protective mechanisms in the epithelial barrier in the skin, respiratory tract, and gut. The widespread adoption of this new nomenclature is vital for developing immune-mediated disease management. It leads the way for innovative diagnostic tools, improved therapies, and enhanced disease management strategies. Future research will likely focus on novel, targeted immune-based therapies, including biologicals and allergen immunotherapy, and approaches to modify the human microbiome. We believe that the true value of an idea is in its broad application. The new nomenclature for allergic diseases developed by EAACI holds great promise for healthcare professionals and patients alike, offering new pathways to manage and potentially cure allergic diseases. This article is a must-read for anyone interested in the latest developments in allergy research and treatment.



**Marek Jutel**  
EAACI Past President



**Ioana Agache**  
EAACI Past President;  
Research and Outreach  
Committee, Chair



**Magdalena  
Zemelka-Wiacek**  
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1. Jutel, M, Agache, I, Zemelka-Wiacek, M, et al. Nomenclature of allergic diseases and hypersensitivity reactions: Adapted to modern needs: An EAACI position paper. *Allergy*. 2023; 78: 2851-2874. doi:10.1111/all.15889. Open access: <https://onlinelibrary.wiley.com/doi/epdf/10.1111/all.15889>

## In the Spotlight



### Briefly, the paper presents:

- Mechanisms of type I hypersensitivity in various allergies, detailing the sensitisation and effector phases. Initially, allergens trigger immune cells on epithelial surfaces, leading to the production of specific immunoglobulin E and activation of mast cells and basophils, resulting in typical allergic symptoms. Eosinophils' role in prolonged allergic responses emphasises that an interplay of hypersensitivity types is crucial for both immediate and chronic allergic reactions. This process is a fundamental aspect of allergic disorders, ranging from asthma, atopic dermatitis, acute urticaria, and allergic rhinitis, to life-threatening anaphylactic reactions induced by foods, venoms, or drugs.
- Type II hypersensitivity including allergic cytopenia, which involves a drug binding to cell membrane proteins, attracting anti-drug antibodies (IgM or IgG). This triggers complement activation and attracts various immune cells leading to tissue damage.
- Type III hypersensitivity reactions, such as acute hypersensitivity pneumonitis, drug-induced vasculitis, or serum sickness, which involve IgM and IgG antibodies forming complexes with soluble antigens like drugs or venoms. These immune complexes accumulate in tissues (blood vessels, joints, kidneys, lungs) and can lead to local tissue necrosis, thrombosis, and vasculitis.
- Type IVa Hypersensitivity including allergic contact dermatitis, chronic hypersensitivity pneumonitis, and celiac disease. Antigen-presenting cells present antigens to Th1 memory cells, leading to the release of IFN- and TNF-, which recruit and activate immune cells (Tc and macrophages), causing inflammation, apoptosis and tissue damage.
- Type IVb Hypersensitivity. Central to this are Th2 cells, driven by cytokines such as IL-4, IL-5, IL-13, IL-31, and alarmines, leading to inflammation and tissue damage in conditions like allergic rhinitis, atopic dermatitis (T2 phenotype), chronic rhinosinusitis, asthma, eosinophilic oesophagitis,

and food allergy. These cytokines stimulate IgE production and eosinophilia. Th9 cells and ILC2 (type 2 innate lymphoid cells) also contribute to this response, enhancing IgE synthesis and promoting mast cell growth, and affecting epithelial barriers, respectively. Eosinophil and basophil recruitment contribute to the chronicity of reactions.

- Type IVc Hypersensitivity. In conditions like atopic dermatitis and neutrophilic asthma, ILC3 cells and Th17 are key, producing IL-17 that induce neutrophil recruitment and enhance cytokine production, leading to inflammation and necrosis.
- Type V Hypersensitivity. The impairment of epithelial barrier function, influenced by environmental factors and microbial dysbiosis, plays a crucial role in various inflammatory diseases like asthma and allergic conditions, leading to chronic inflammation and immune system activation of T1, T2, and T17 responses combined with the loss of Treg, Bregs and ILCregs.
- Type VI Hypersensitivity, which involves metabolic-induced immune dysregulation, particularly in obese asthmatics, where obesity alters chest wall dynamics and inflammatory responses.
- Type VII Hypersensitivity, which includes direct cellular and inflammatory responses to chemical substances, seen in conditions like allergic rhinitis, asthma, atopic dermatitis, and drug allergies. It encompasses idiosyncratic reactions to NSAIDs and aspirin-exacerbated respiratory disease.

The new nomenclature for allergic diseases developed by EAACI holds great promise for healthcare professionals and patients alike, offering new pathways to define the pathophysiological background and to potentially much better cure allergic diseases. This work will provide advice for translational and clinical research as well as routine clinical practice, which will be conferred further in follow-up articles.



# New Clinical Guidelines for the Diagnosis of Immediate-type Food Allergies are launched

This important document provides recommendations for best practice for an accurate diagnosis of immediate-type food allergies.

The European Academy of Allergy and Clinical Immunology (EAACI) announced today the publication of a much anticipated update of the EAACI Guidelines on Food Allergy Diagnosis. Published online today in *Allergy*, this important document provides recommendations for best practice to reach an accurate diagnosis for immediate food allergies.

The EAACI Guidelines on Food Allergy Diagnosis were led by Professor Alexandra Santos from King's College London together with Dr Isabel Skypala from the Brompton Hospital in London, Professor George Du Toit from Guy's and St Thomas' Hospital and Dr Carmen Riggioni from the National University Hospital and National University of Singapore with contribution from over 50 experts from top Allergy centres around the world, including Europe, North and South America, Africa, Asia and Australia. Food allergy diagnosis should start with an allergy focused clinical history, followed by recommended tests to determine IgE sensitization, which include skin and blood test to look for specific IgE antibodies to the suspected food. The latest EAACI Food Allergy Guideline, published a decade after the previous version, introduces new recommendations such as the utilization of tests to detect specific IgE antibodies targeting distinct allergen components within the bloodstream and the evaluation of basophil reactivity, the blood cells responsible for triggering allergic reactions. When in doubt, after blood and skin testing, the clinician seeing individuals with suspected food allergy need to do an oral food challenge (OFC) in a medically supervised setting – open OFC in most cases with double-blind placebo-controlled food challenges being reserved for equivocal cases and for research.

Food allergy affects up to 10% of children and adults and the number of hospital admission for severe allergic reactions to foods has increased over the last few decades. A diagnosis of food allergy requires avoidance of the culprit allergens and often leads to changes to life-style and anxiety related to the fear of accidental allergic reactions. An accurate diagnosis of food allergy is therefore extremely important. The new EAACI Food Allergy guidelines summarise the evidence and the rationale supporting the best practice recommendations for confirming or ruling out the diagnosis in children and adults with possible food allergy.

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An accurate diagnosis of food allergy is extremely important – in the new EAACI Food Allergy Guidelines, clinicians will have clear guidance on the approach to patients with suspected food allergy.

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## In the Spotlight



The expert group advising on the EAACI Food Allergy Guidelines included patient representatives, who ensured the patients' perspectives were taken into account. An important stage after the launch of the EAACI Guidelines on Diagnosis of Immediate-type Food Allergy is the implementation of the guidelines, which includes information of healthcare professionals looking after patients with suspected food allergy and also the information of patients and the public.

Dr Scott H. Sicherer, MD, Director, Jaffe Food Allergy Institute, Icahn School of Medicine at Mount Sinai, New York commented on the launch of the new EAACI Food Allergy Guidelines: *"The accurate diagnosis of IgE-mediated food allergy is paramount for ensuring patient safety, nutrition and quality of life. These updated diagnostic guidelines, with 8 evidence-based recommendations, will help reduce the current state where tests are often over-used and misinterpreted, and provide clinicians with the knowledge and tools needed to effectively arrive at an appropriate diagnosis."* Dr Aikaterini Anagnostou stated *"The diagnosis of food allergy places a significant burden on individuals and their families, as well as healthcare systems, so it is very important for all, to 'get it right'. Carefully designed algorithms (as included in the updated EAACI guidelines) are key in this area and can assist clinicians in the – often complicated- diagnostic process. The emergence of novel diagnostics in food allergy will likely provide testing modalities that are complementary to existing, traditional methods and enhance the accuracy of a food allergy diagnosis. Shared decision-making will play a key role when deciding which test (or combination of tests) to be used in individual patients."* Dr Kari Nadeau, John Rock Professor of Climate and Population Studies of Harvard University, said *"These EAACI guidelines are an unparalleled next step to meet the needs of a critical area in food allergy around the globe."* Indeed with a global reach, the new EAACI guidelines were also commented by Professor Mike Levin Head of Division of Asthma and Allergy at University of Cape Town: *"Food allergy is one of the most difficult conditions to manage due to the lack of any absolute test to determine the presence of food allergy or not, apart from an oral challenge. IgE results indicate sensitisation and significance need to be interpreted along with a clinical history, and levels may vary in different populations studied. The EAACI Guidelines for Food Allergy comprehensively addresses diagnosis of food allergy with meta-analyses of data on IgE testing and including advances in component resolved diagnosis and cellular tests, serving as an excellent resource for clinicians working in the field."*

EAACI has launched the new guidelines on diagnosis of immediate type food allergies. This key document provides clear recommendations for best clinical practice and summarises the evidence supporting it. This guideline was informed by a systematic review of studies looking at the diagnostic accuracy of any test for any food allergy that were published since the last EAACI Food Allergy Guidelines were published in 2014, was elaborated by a global group of experts in food allergy and is aimed at healthcare professionals seeing patients with possible food allergies for best possible care.

### LINKS TO PUBLICATIONS

**EAACI Guidelines on the Diagnosis of IgE-mediated Food Allergy**

→ [DOI: 10.1111/all.15902](https://doi.org/10.1111/all.15902)

**Executive Summary of the EAACI Guidelines on Diagnosis of IgE-mediated Food Allergy**

→ [DOI: 10.1111/all.15906](https://doi.org/10.1111/all.15906)

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# The fascinating world of **NERD**: NSAID-exacerbated respiratory disease

**N**onsteroidal anti-inflammatory drug (NSAID)-exacerbated respiratory disease (NERD) is a clinical syndrome characterised by the 'triad' of asthma, chronic rhinosinusitis (CRS) with recurrent nasal polyps (NPs) (CRSwNPs), and by NSAID-induced hypersensitivity reactions manifested as nasal and/or bronchial symptoms <sup>[1]</sup>. It is considered a specific phenotype of NSAID hypersensitivity and a difficult-to-treat asthma phenotype.

The prevalence of NERD is unknown and figures vary depending on the population studied and diagnostic criteria used. It has been reported to range from 0.3% to 12.4% in general population <sup>[2, 3]</sup>, and to be around 10% in CRSwNP patients, 7% in asthmatics, rising to 24% in severe asthma <sup>[4]</sup> and to 30–40% in asthmatics with CRS <sup>[3]</sup>.

Peak incidence occurs in the third and fourth decades of life. In the majority of cases, it starts with nasal symptoms that evolve into CRS, usually with refractory to conventional treatment, and with a high recurrence rate of NPs after polypectomy. Nasal symptoms often precede asthma <sup>[1, 5-7]</sup>, which usually has a severe course, with an increased risk for emergency room visits and hospitalisation <sup>[8]</sup>. Hypersensitivity reactions to NSAIDs imply the acute occurrence of upper and/or lower respiratory tract symptoms following ingestion of the drug and can occur at any time in the evolution of the disease <sup>[1, 5-7]</sup>. It is of note that despite avoidance of NSAIDs, patients continue suffering from chronic airway symptoms <sup>[6]</sup>.

NERD is considered a sub-endotype of type 2 (T2) asthma. The pathophysiology is based primarily on a chronic and extensive T2 eosinophilic inflammation together with the dysregulation of arachidonic acid (AA) metabolism associated with inhibition of the cyclooxygenase (COX)-1 pathway by NSAIDs. AA from the eosinophil membrane phospholipids is metabolised through the COX and lipoxygenase (LOX) pathways. The intake of a COX-1 inhibitor blocks the COX pathway and directs all the AA to the synthesis of cys-leukotriene (cys-LT) by LOX. Contrary to the case with healthy individuals, eosinophils from subjects with T2 inflammation show very high baseline activation with a loss of ability to adapt to additional metabolic demands. Therefore, excess cys-LT generated after the COX-1 inhibitor intake cannot be catabolised and accumulates in the respiratory mucosa inducing contraction of bronchial smooth muscles, increased vascular permeability and the influx of activated inflammatory cells, which leads to symptomatology of bronchoconstriction and nasal congestion <sup>[9-11]</sup>. Cells other than eosinophils can also participate. Indeed, an increased platelet adherence to granulocytes has been reported which potentiates cysLT production from granulocytes <sup>[12, 13]</sup>. However, the pathogenesis is not fully understood yet and is thought to be more complex, involving other cells and components of the innate immune system.

Clinical practice has shown a large heterogeneity among clinical features of NERD patients, suggesting different mechanisms involved in the underlying airway inflammation. This clinical heterogeneity points to the existence of subphenotypes; however, there is controversy on how to categorise them and different criteria have been used, including the intensity of upper airway symptoms, severity and control of asthma and/or the presence



**Maria Torres**  
EAACI Executive  
Committee,  
Secretary General

## In the Spotlight



of urticaria or atopy<sup>[14–16]</sup>. Presence of subphenotypes and subendotypes may have potential implications in the heterogeneous responses to treatment observed in NERD patients.

Classically, NERD is diagnosed when the triad of asthma, CRwNPs and NSAID hypersensitivity is identified, being a clinical diagnosis often established by clinical history and physical exam<sup>[1, 17]</sup>. However, up to 15% of NERD patients present with equivocal clinical histories [5]. In these cases, the confirmatory diagnosis is achieved by an acetylsalicylic acid (ASA) challenge<sup>[1]</sup>. Depending on the NSAID administration route, challenge can be nasal, inhaled, or oral. The oral challenge has the highest sensitivity, whilst the inhaled and nasal challenges are less sensitive but safer and faster<sup>[1, 18]</sup>. Therefore, if inhaled or nasal challenges are negative, an oral one should be performed.

The management of these patients is complex. It should be multidisciplinary and include the treatment of the underlying asthma and CRS, and the avoidance of NSAIDs in order to prevent exacerbations. Management of asthma and CRwNPs must include a guideline-based medical and surgical approach. ASA desensitisation followed by daily ASA therapy may be considered when standard medical treatments are not effective<sup>[1]</sup>.

In summary, NERD patients present with a variety of clinical features although these patients tend to have severe asthma and CRSwNP. They are affected by chronic T2 eosinophilic inflammation with the overproduction of cys-LTs in both upper and lower airways. A better understanding of underlying pathogenesis will help in diagnostic evaluations and new therapeutic strategies to improve clinical outcomes. Due to the phenotypic heterogeneity of NERD, efforts are focused on establishing precision medicine strategies tailored to individual phenotypes/endotypes with potential biomarkers. Therefore EAACI is undertaking important work in classifying hypersensitivity reactions to NSAIDs.

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# Allergen immunotherapy in asthma

## Clinical outcomes

Asthma is a heterogenic disease affecting approximately 350 million patients globally, a figure which is projected to increase to 400 million within the next 30 years. The pathogenesis is complex and still not completely unravelled, however a T2-driven inflammatory pathway is present in the majority of cases. Allergic asthma is one of the more common phenotypes with allergic rhinitis, atopic dermatitis and/or food allergy as frequent comorbidities. Treatment of asthma in a personalised manor focuses on the optimisation of all treatable traits that drive the disease, which varies between patients. Both allergy and allergic rhinitis are widely considered as treatable traits in allergic asthma, and therefore treatment and reducing symptoms is strongly advised.

Allergen immunotherapy (AIT) is an effective treatment for allergic rhinitis with or without asthma, with the most common administration routes being subcutaneous immunotherapy (SCIT) or sublingual immunotherapy (SLIT). AIT has disease-modifying properties and therefore confers long-term clinical benefit after cessation of treatment. The Global Initiative for Asthma (GINA) update of 2017 included house dust mite (HDM) SLIT tablets as a recommendation for patients with HDM-allergic asthma who remain inadequately controlled with pharmacotherapy. This recommendation has remained unchanged in subsequent updates. Also, EAACI guidelines recommend AIT in patients with HDM-driven allergic asthma.



**Jasper Kappen**  
*EAACI Task Force on  
the Standardisation  
of Clinical Outcomes  
Used in Allergen  
Immunotherapy in  
Allergic Asthma, Chair*



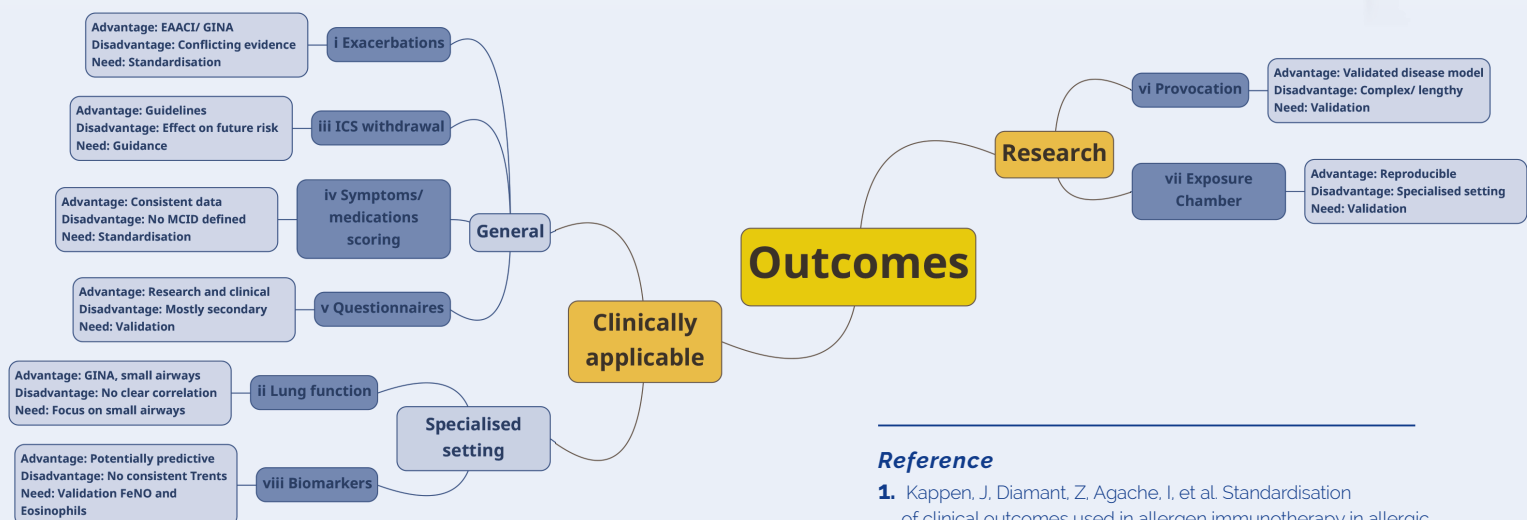
While recommendations for the standardisation of clinical outcomes used in AIT trials for allergic rhinitis (AR) have been defined, to date there has been no consensus on how to quantify clinical outcomes of AIT on asthma. For proper reviewing of the effectiveness of AIT in patients with allergic asthma, as well as for planning future trials for the development of novel products for AIT, such a consensus is crucial. In clinical practice, this consensus could be used in patient selection, identification of responders and criteria to continue or stop treatment.

After reviewing outcomes divided into different domains, we believe that the exacerbation rate could be used as a reliable objective primary outcome, although there is limited evidence due to different definitions of exacerbation. Furthermore, the endpoints for allergic asthma and AIT are often more subtle. It is therefore advised that symptom scores and medication use (inhaled corticosteroid (ICS) and reliever medication reduction) are used as clinical outcomes in AIT in asthma patients. All are clinically applicable and easy to use; there is, however, an urgent need for standardisation for use in clinical trials. ACQ5/AQLQ and CARAT are well-established patient-reported outcome measures (PROMs) questionnaires; however, validation addressing asthma control in relation to AIT is an unmet need. After ICS withdrawal, the time to first exacerbation can be captured as a primary outcome measure.

FeNO and eosinophil levels (evaluated in a clinical context) have the potential to become surrogate biomarkers of clinical response. Additional studies are needed to confirm and to interpret their association with the clinical response to immunotherapy.

To analyse the suggested outcome measures, future systemic real-world evidence (RWE) data is definitely needed for analysis. Novel eHealth tools can support these evaluations.

A full exploration and overview of this topic, including unmet needs and clinical applicability, was prepared by the EAACI Task Force on the Standardisation of Clinical Outcomes Used in Allergen Immunotherapy in Allergic Asthma in our Position Paper which was recently published in *Allergy*.<sup>1</sup>



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# The Allergen Immunotherapy Adverse Events Registry: Setup and methodology

Allergen immunotherapy (AIT) is considered the only treatment option for respiratory IgE mediated allergies and venom allergy, able to provide a disease modifying effect. Both subcutaneous (SCIT) and sublingual (SLIT) routes have been demonstrated to deliver short- and long-term benefits for allergic patients and have a safe profile. Although there is a large body of knowledge generated from systematic reviews and meta-analysis on AIT efficacy and safety, prospective and systematic recording of adverse events (AEs) are still lacking<sup>1–2</sup>. Moreover, AIT practices and products differ widely among different countries, whilst study designs, inclusion criteria, population characteristics and AE recording systems are widely heterogenous in real life resulting in major limitations when comparing studies. The vast majority of the current data on safety is based on randomised clinical trials (RCTs) which have provided substantial knowledge of different AIT products<sup>3,5</sup>. Only a few observational studies have assessed AIT safety in real life<sup>4</sup>. However, these studies do not always reflect real-life clinical practice as they are generally conducted using predefined inclusion and exclusion criteria providing results that are restricted in applicability<sup>3,5</sup>.



**Julijana Asllani**  
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University of Medicine,  
Tirana, Albania;  
EAACI Junior Member*

The role of non-randomised, prospective studies in generating real world data and complementing results from RCTs has been highlighted recently. Furthermore, data from registries and pragmatic trials are ranked at the highest real world evidence hierarchy proposed by a recent EAACI position paper<sup>5</sup>. They can provide considerable and robust evidence which can help in generating future recommendations and guiding clinical practice guidelines<sup>3,5</sup>.



In this context, a Task Force was created under the academic support of EAACI to develop an AIT Adverse Events Registry (ADER). ADER is the first prospective, observational, multinational web-based registry of AIT safety in real-life clinical practices in settings from eight different European Countries<sup>6–7</sup>. The registry uses the harmonised MEDRA terminology for recording Aes, providing easily comparable outcomes and using the RedCAP platform for secure data uploading<sup>8–9</sup>. The main objectives of the registry are: (i) to assess systemic and local AEs occurring during regular clinical practice in real-life settings; (ii) to collect data and evaluate patient characteristics and AIT practice among countries (expected to differ substantially); (iii) to identify independent factors associated with AE; and (iv) to use ADER as a model for AIT pharmacovigilance that could be subsequently expanded to other European countries. Eligible patients were considered to be all adults and children presenting in regular daily clinical practices with documented IgE-mediated respiratory allergies and/or venom allergy. They were recruited on the day they received their first dose of an AIT treatment and were followed until the end of the treatment, recording any possible AE. A total of 2,772 eligible patients undergoing 3,209 immunotherapy courses were retrieved up to May 2017. Overall, 1,019 systemic and local AEs were recorded in 330 patients<sup>6</sup>.

Data gathered from registries in the field of allergy are lacking and we consider ADER one of the first initiatives in creating a multinational network exchanging real-life clinical practices on how AIT is delivered. Moreover, it can generate robust evidence on AIT safety and not only through systematic, prospective monitoring. We believe that our previous successful experience with the registry and the well-established framework offers the possibility to further expand it to also evaluate the effectiveness of AIT treatments in real-life conditions<sup>6–7</sup>. Using the most recent and validated patient outcome report measurements and uniform data recording in heterogeneous populations, healthcare systems, products and practices in real-life clinical settings are going to be the strengths of the future ADER-2 registry<sup>10–13</sup>.

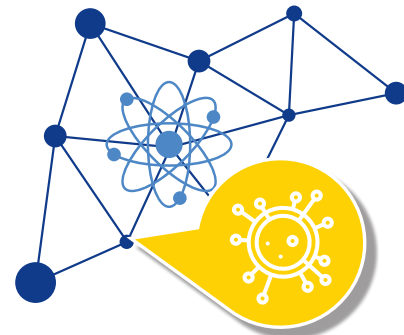
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# The constant development of the EAACI Knowledge Hub



The EAACI Knowledge Hub, launched in July 2022, has emerged as a pivotal platform for allergy and clinical immunology professionals, fostering a global exchange of expertise and knowledge.

## Fostering Collaboration and Education

As the Editor-in-Chief of the EAACI Knowledge Hub, I take great pride in the accomplishments achieved over the past eighteen months. The Knowledge Hub stands as a central resource, playing an essential role in delivering up-to-date, evidence-based information to clinicians, researchers, healthcare professionals, patients, and various stakeholders. With a focus on fostering collaboration and education, the platform encompasses a spectrum of topics, ranging from key diagnostic tools in drug allergy to the challenges posed by difficult drug allergies, COVID-19 vaccine reactions, and more. It serves as a dynamic space where experts worldwide engage in discussions, symposia, and webinars, addressing critical issues in the field.

## Main Projects in the Knowledge Hub

In this article, I would like to highlight some of the main projects you will find in the Knowledge Hub if you visit us. One significant module focuses on allergen immunotherapy (AIT), providing both foundational and advanced insights into the mechanisms of tolerance induced by AIT. This module goes beyond theoretical understanding, emphasizing the practical application of AIT to achieve optimal clinical outcomes. Recorded Q&A sessions within this module contribute to a nuanced comprehension of personalized solutions, incorporating molecular IgE tests, mobile health technology, and e-diaries.

Particularly, the Go Green Webinar Series raises awareness about the environmental factors influencing allergies and asthma. By addressing the impact of pollution, climate change, and daily routines, the series underscores the One Health perspective, highlighting the role of the healthcare sector as the fifth-largest CO<sub>2</sub> emitter on the planet. Symposia and webinars cover diverse topics such as novel immunomodulators, precision immunology in allergen immunotherapy, and discussions from the EAACI perspective. These sessions serve as a nexus for experts to share insights, advancements, and perspectives, fostering a collaborative environment conducive to the growth of collective knowledge.



## EAACI Position Paper



Two notable courses recently hosted on the Knowledge Hub include a session on World Food Day, where experts from WG One Health, WG Immunomodulation & Nutrition, and Section Allied Health & Primary Care delved into the intersections of health, nutrition, and primary care. Additionally, a webinar explored the latest guidelines in diagnosing IgE-mediated food allergies, providing insights into recent developments in the field. Specialized modules covering the diagnosis of Type 2 reactions in various conditions, including asthma in the pediatric population, chronic rhinosinusitis, atopic dermatitis, food allergy, and asthma in adults, have also been featured.

The EAACI Knowledge Hub not only provides a platform for professionals but also caters to the educational needs of Junior Members. By offering specialized training in the complexities of allergic conditions, the platform becomes an invaluable resource for individuals seeking to explore the field more comprehensively.

### SOCIAL MEDIA PRESENCE

As the platform continues to evolve, it remains an essential tool for the global allergy and clinical immunology community. We have created new Social Media channels to stay updated on the latest developments, courses, and discussions. You can now stay up to date by following the Knowledge Hub on our social media platforms, such as **Facebook**, **X**, **Instagram**, and **LinkedIn**. Join the growing community and contribute to advancing the knowledge landscape in allergy and clinical immunology.

Join our growing community, and together, let's advance the knowledge landscape in allergy and clinical immunology!



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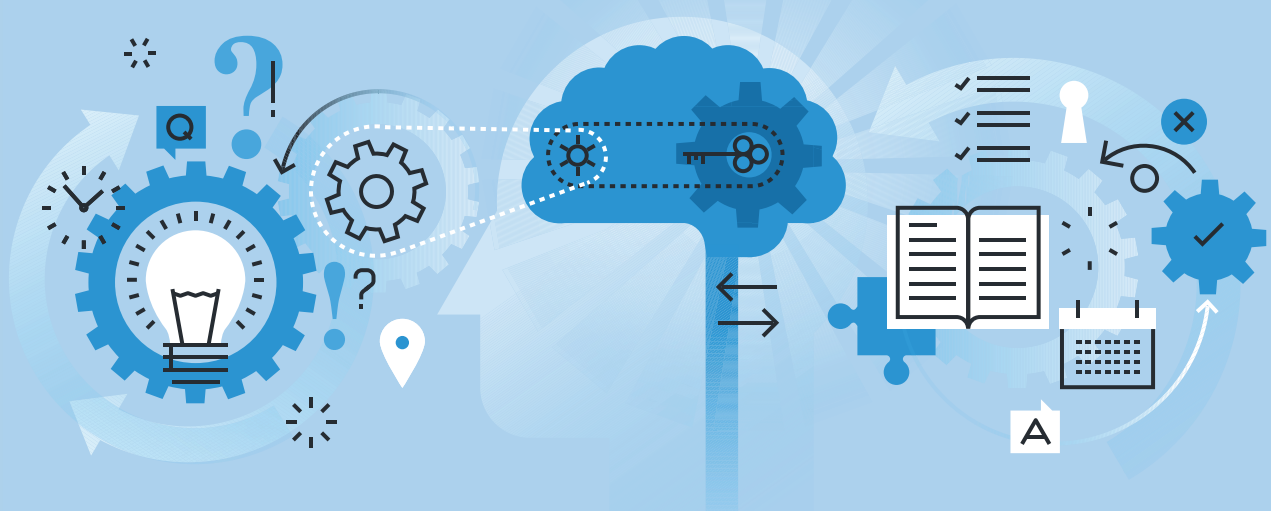
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# EAACI Hybrid Congress 2023: an inspiring glimpse into the future of allergology and immunology

The EAACI Hybrid Congress 2023 held in Hamburg, Germany from June 9-11, was a resounding success, bringing together professionals, researchers, and students at the forefront of allergy, asthma, and clinical immunology advancements. The dynamic program featured renowned experts, innovative research, and interactive sessions, providing participants with an opportunity to explore the latest breakthroughs, treatment options, and strategies in the field.

Regardless of their background, whether healthcare professionals, researchers, or students, attendees discovered an invaluable platform to expand their knowledge, network with peers, and collaborate on groundbreaking projects. This year's congress provided a wide array of sessions and activities delving into the forefront of allergy and immunology research, with a specific focus on personalised medicine and precision allergy, showcasing the potential to tailor treatments to individual patients and ultimately improve their quality of life.

## Some Highlights from the EAACI Congress 2023

The congress highlighted innovative diagnostic tools, biomarkers, and targeted therapies with immense potential to revolutionise patient care and treatment outcomes. Leading experts, researchers and professionals from around the globe came together, fostering collaboration and knowledge exchange. Through thought-provoking presentations, interactive workshops and engaging discussions, attendees were provided with valuable insights into cutting-edge research and breakthrough discoveries in allergy and immunology. The future of allergy and immunology looks brighter than ever!

## A successful "Beat Allergy" run

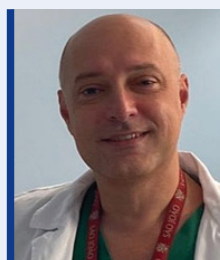
Participants in this year's "Beat Allergy" run completed either a 2.5km or 5km course, either running or walking. The event provided a fantastic opportunity for participants to come together, support a good cause, and enjoy good



**Mohamed Shamji**  
EAACI Vice President  
Congresses



**Mübeccel Akdis**  
Scientific Programme  
Committee Co-Chair



**André Moreira**  
Scientific Programme  
Committee Co-Chair

## EAACI Events



vibes. Now becoming a regular feature of our Congresses, the Allergy Run welcomes participants of all levels and serves as a wonderful opportunity for exercise, making connections, and supporting a meaningful cause, with families and friends joining in.

### A heartfelt thank you

We would like to thank all the incredible participants who joined the EAACI Congress both in Hamburg and also online as part of this year's hybrid congress. Their presence, enthusiasm, and dedication contributed to the event's resounding success. The gallery on the EAACI webpage captures vibrant moments from the Congress in Hamburg, and we invite everyone to take a look and download some of the pictures!

Moreover, we would like to thank as well to all the speakers, abstract presenters, and sponsors, for their active participation and contributions during the congress. Their dedication and commitment played a crucial role in shaping the success of this esteemed event.

The journey doesn't end here. Excitingly, the destination and dates for next year's EAACI Congress have already been announced—Valencia, Spain, from 31 May to 3 June, 2024. Known for its vibrant culture, historical landmarks, and Mediterranean charm, Valencia promises to be the perfect backdrop for another extraordinary gathering of experts, researchers, and professionals in the field. The anticipation is high, and our ongoing mission and search for innovation are set to continue with the collaboration of all participants. Get ready for an inspiring continuation of the future of allergology and immunology in Valencia!





# Echoes from the EAACI Summer Symposium 2023

## Exploring the Epithelial Cell Biology

In a remarkable convergence of scientific minds, the EAACI Summer Symposium on Epithelial Cell Biology 2023 unfolded its intellectual tapestry at the prestigious Imperial College of London. Held on September 21st and 22nd, this annual event, hosted by EAACI, served as a dynamic forum for global scientists and experts to delve into the intricate realms of epithelial cell biology.

The visionary organizing committee, headed by Mohamed Shamji, orchestrated an environment that fostered collaboration, encouraging the exchange of in-depth knowledge and innovative ideas among participants.

*Prof Mo Shamji, Nichell Samson, Manahil Mustaqeem, Sean Keane, Prof Ioana Agache, Dr Janice Layhadi and Prof Cezmi Akdis*



## EAACI Events



The symposium commenced with a compelling exploration of the epithelial barrier hypothesis, shedding light on how cells within the epithelium—encompassing vital areas such as the skin, lungs, and intestines—are susceptible to harm from toxins. This vulnerability in the barriers was identified as a pivotal contributor to allergies, autoimmune disorders, and a spectrum of health challenges.

Delegates engaged in illuminating discussions on the localized damages inflicted upon skin and mucosal barriers, culminating in conditions like allergies and inflammatory bowel diseases. A resounding call for intensive research emerged, focusing on comprehending how environmental antigens traverse these barriers—a crucial step towards enhancing prevention and treatment strategies.

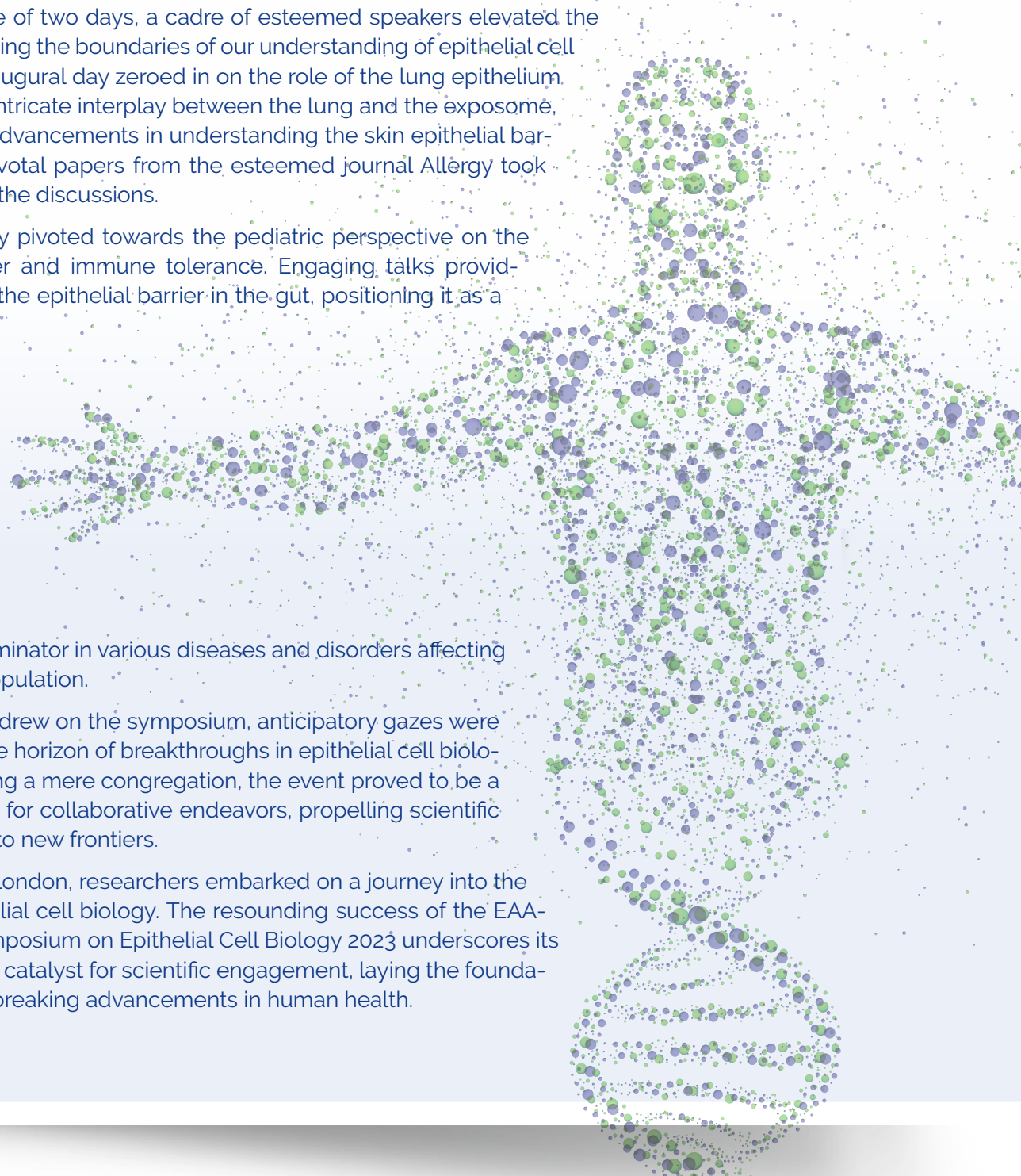
Over the course of two days, a cadre of esteemed speakers elevated the discourse, pushing the boundaries of our understanding of epithelial cell biology. The inaugural day zeroed in on the role of the lung epithelium in asthma, the intricate interplay between the lung and the exposome, and the latest advancements in understanding the skin epithelial barrier. Notably, pivotal papers from the esteemed journal *Allergy* took center stage in the discussions.

The second day pivoted towards the pediatric perspective on the epithelial barrier and immune tolerance. Engaging talks provided updates on the epithelial barrier in the gut, positioning it as a

common denominator in various diseases and disorders affecting the pediatric population.

As the curtains drew on the symposium, anticipatory gazes were cast towards the horizon of breakthroughs in epithelial cell biology. Beyond being a mere congregation, the event proved to be a robust platform for collaborative endeavors, propelling scientific understanding to new frontiers.

In the heart of London, researchers embarked on a journey into the future of epithelial cell biology. The resounding success of the EAACI Summer Symposium on Epithelial Cell Biology 2023 underscores its pivotal role as a catalyst for scientific engagement, laying the foundation for groundbreaking advancements in human health.





# Lasting memories from the Allergy School on Anaphylaxis 2023!

**A**naphylaxis, with its life-threatening potential, is one of the major topics in our field and it is essential to review the information we have in order to keep up with recent advancements. On 21–23 September, the EAACI Allergy School on Anaphylaxis 2023: Anaphylaxis revisited took place in Izmir, Türkiye's third largest city located on the country's west coast, offering a rich program which was enjoyed by the 21 faculty members and 94 international participants. Lectures on pathomechanisms, causes and cofactors of anaphylaxis, and diagnosis and management were given by renowned experts. Furthermore, drug and venom induced anaphylaxis, anaphylaxis in pediatric populations, and management at home, and in emergency and intensive care units, were all addressed by representatives from the EAACI Pediatric Section, Drug Allergy Interest Group and Working Groups on Biologicals and Hymenoptera Venom Hypersensitivity in six different workshops. In one of the workshops, a hands-on simulation of CPR following anaphylaxis provided by anaesthesiologists had the rapt attention of participants and let us review our knowledge and skills. In the workshop on Hymenoptera venom hypersensitivity, we had the chance to examine and differentiate real insects.



**Asli Akkor**  
*Allergy School on  
Anaphylaxis 2023, Chair*

Furthermore, four oral abstracts and 58 posters were successfully presented, including by many EAACI junior members. As part of the social programme, we toured the famous ancient city of Ephesus with experienced guides, and visited the well-known Lucien Arkas Vineyard and Restaurant. EAACI President Stefano Del Giacco and the EAACI Education and Specialty VP Tomas Chivato were with us throughout the school so that participants had the chance to communicate with EAACI leadership. Chairing this Allergy School, alongside co-chair and President of the Turkish National Society of Allergy and Clinical Immunology (TNSACI), Dilsad Mungan, was a fantastic opportunity for me, and gave me the chance to listen to international experts in the field, and exchange knowledge and experience with colleagues; and it was really fun to see the passion in the eyes of our junior members. Certainly, this EAACI event has taken a special place in our memories. I present my sincere thanks to the EAACI leadership, to the leadership of TNSACI, to all the speakers, to the EAACI Headquarters team, and finally to all the participants for their support and collaboration.

# EAACI Events





# ISAF Hybrid

## 2023



**Ibon Eguiluz-Gracia**  
*EAACI Asthma Section, Chair*

EAACI ISAF Hybrid 2023, this year's edition of the EAACI International Severe Asthma Forum, took place in Rome from October 5th to 7th, and was a wonderful three-day event filled with continuous learning. The Forum was focused on severe asthma, which is a debilitating and potentially life-threatening condition that can significantly impact a person's quality of life, and it provided our diverse scientific community with rich knowledge and experience to improve patient outcomes, as well as a multidisciplinary perspective for the treatment of this condition. During the event, attendees learned much from the inspiring speakers who shared their knowledge, research, and experience, and it was a fantastic opportunity for networking with other professionals in the field.

We had the privilege of having 67 faculty members representing 14 different European countries, including from Italy, Spain, Belgium, Switzerland, Ireland, the Netherlands, and Germany, as well as others representing countries from further afield such as Australia, Canada, and the USA.

Over the course of the three-day event, we were delighted to welcome more than 370 participants, with 302 attendees joining from Europe, 10 from North America, 11 from Asia, and 4 from Oceania. This year's event adopted a hybrid format, providing an inclusive experience for participants who were unable to attend in person, enabling them to have remote access to sessions, fostering a collaborative platform that engaged professionals worldwide. Notably, 78 attendees actively participated in the event through our digital platform.

Plenary sessions showcased international experts in severe asthma, presenting the latest research and providing valuable insights. These were accompanied by symposia focused on specific topics and workshops with a more practical approach. Finally, sessions with the Italian and Spanish national societies were organised prior to the opening of the Forum itself, in order to engage with delegates. Delegates also had a great opportunity to network and interact with other attendees during poster sessions and oral abstract sessions, where they could discuss their own research and/or clinical cases with their peers and the expert faculty.

The educational aim of the event was to provide attendees access to the latest advances and cutting-edge information regarding asthma mechanisms. The participation of junior members was especially encouraged and we explored the world of asthma through exciting JM mentor classes and JM scientific sessions, in which topics such as the characterisation of allergic asthma through component-resolved diagnosis were discussed. Furthermore, exceptional abstracts were submitted, and the best participants were awarded travel grants.

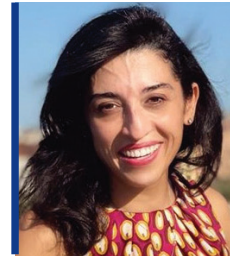
Our heartfelt thanks go to all participants, speakers, chairs and sponsors, and to the dedicated EAACI Headquarters team, whose collective efforts made EAACI ISAF 2023 in Rome a dynamic and enriching experience: the hard work and commitment of everyone involved in the organisation and delivery of the Forum were truly appreciated, as evidenced by the overwhelmingly positive feedback received. We trust that each participant deepened their knowledge of severe asthma, spanning its diagnosis, treatment, and prevention, and that they relished the networking opportunities and the thrilling experience of exploring Rome, just as we did. Together, let's continue to advance patient care and expand our understanding of asthma!





# PAAM Hybrid 2023

## A gateway to advancements in pediatric allergy and asthma



**Stefania Arasi**

*EAACI Pediatrics Section, Chair /  
EAACI PAAM 2023 President*

The Pediatric Allergy and Asthma Meeting (PAAM) Hybrid 2023, held from 2–4 November in the enchanting city of Porto, proved to be the gathering of a pivotal global congregation. With an impressive turnout of over 760 participants hailing from diverse corners of the world, this event brought together esteemed experts and professionals fervently dedicated to combating the escalating challenges in pediatric allergy and asthma.

The growing burden of allergic diseases and asthma among children has been an escalating concern in recent years, attributed to multifaceted factors such as lifestyle disparities, altered food introduction timelines, and rapid industrialisation. These conditions manifest as a spectrum of ailments, intertwining allergic rhinitis, asthma, eczema, food allergies, and anaphylaxis which significantly impede various facets of a child's daily life – from academic pursuits to social interactions, sleep, and dietary habits. The toll extends beyond the affected children, encompassing families grappling with anxiety and stress while adapting to the complexities of diagnosis, management, and treatment.

Addressing these challenges necessitates a collaborative approach involving clinicians, emergency services, regulatory bodies, industries, academia, schools, parents, and the affected children themselves. PAAM 2023, acting as a pivotal platform, aimed to bridge this gap by facilitating the dissemination of cutting-edge research and fostering a global exchange of insights among experts.

The comprehensive scientific program of PAAM 2023 encapsulated a spectrum of pressing topics in pediatric allergy and immunology. Sessions honed in on pivotal subjects including One-health perspectives linking environment and immunomodulation, diagnostics and risk assessment for food allergies, the trajectory of asthma from preschool to adulthood, the intricate domain of epigenetics in childhood allergy, updates on primary immunodeficiencies, and advances in managing skin atopic disorders. An imperative focus was also directed towards enhancing care for children vulnerable to severe anaphylaxis analysing current approaches and future directions. Much-anticipated primary data were presented, generating great interest and networking. What set PAAM Hybrid 2023 apart was its innovative hybrid format, accommodating both in-person attendance in the picturesque city of Porto and virtual access to plenary sessions and other tracks. This approach was designed to ensure widespread participation and engagement, enabling delegates to take part in discussions, gain insights, and network with peers and experts across various forums.

As we navigate the landscape of pediatric allergy and asthma, the collective vision remains grounded in securing a brighter future for our children. This demands the integration and dissemination of the highest standards of care within our specialty. PAAM 2023 emerged as a beacon of hope, fostering collaboration and knowledge exchange, paving the way for innovative solutions to mitigate the challenges faced by children battling allergic diseases and asthma.

In closing, PAAM Hybrid 2023 stands testament to the unwavering commitment of the global community towards enhancing the quality of life for children affected by these ailments. As we harness the insights and advancements shared at this gathering, we march forward with renewed vigour, steadfast in our pursuit of delivering optimal care and support to the young warriors combating pediatric allergy and asthma.



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# In Immunology Winter School 2024: Unifying immunology and bridging research across European borders

The EAACI Immunology Winter School has been taking place annually for the last 22 years as a platform for young researchers and clinicians in the field of basic and clinical immunology, allergy and asthma to present their data and discuss innovative science with world-renowned experts. **On 8–11 January 2024**, we will travel to **Zakopane** for the first winter school to be held in Poland. More than seventy young delegates selected from across Europe and beyond will attend keynote lectures on the newest discoveries in our field. For 2024 we will welcome excellent Keynote Speakers including: **Luke AJ O'Neill**, from Ireland, sharing the central role for metabolism in inflammatory disease; **Andreas Wack**, UK, an expert in respiratory viral infections; **Marc Veldhoen**, Portugal, who will discuss the role of resident T cells in barrier immunity; **Sara Lebeer**, Belgium, talking about the exciting potential for probiotics; **Jose Ordovas-Montanes**, USA, presenting on cutting-edge technologies for immunologic studies; and **Louisa James**, UK, discussing the role of resident B cells in controlling antibody responses. Moreover, participants will attend a practical course hosted by local organiser **Wojciech Feleszko** and our EAACI Working Group Chairs across AllergoOncology, Biologicals, Immunodeficiencies, Immunomodulation and Nutrition, and Infections.

Delegates will have the opportunity across the whole week to present their own data as oral or poster abstracts in welcoming and encouraging environments for their own professional development and to gain input from experts in the field. Additional educational, scientific and social activities – taking part in a friendly and highly interactive environment and led by the Basic and Clinical Immunology Section Board – are also planned, helping to establish new collaborations and networks, and even possibly leading to valuable awards!

*We are looking forward to another productive meeting for the Winter School 2024 and welcoming delegates in Zakopane!*



**Matthew Burgess**  
EAACI Basic & Clinical  
Immunology Section  
Board Member



**Milena Sokolowska**  
EAACI Basic & Clinical  
Immunology Section  
Chair; WS 2024 Organising  
Committee, Chair



**Wojciech Feleszko**  
EAACI Paediatrics  
Section Board Member;  
WS 2024 Organising  
Committee, Local  
organiser



**Inge Kortekass Krohn**  
EAACI Basic & Clinical  
Immunology Section  
Secretary; WS 2024  
Organising Committee,  
Co-Chair



**Tomás Chivato**  
EAACI VP Education &  
Specialty



**Cristina Gomez-Casado**  
EAACI Basic & Clinical  
Immunology Section  
Board Member; WS 2024  
Organising Committee,  
Secretary



# One Health

## Clinical care, research and congresses must also go «green»

Healthcare professionals (HCPs) in human and veterinary medicine, and researchers in the healthcare sector, dedicate their professional lives to maintaining and optimising the health of their patients. However, health care consumes significant amounts of resources and makes a large contribution to net greenhouse gas emissions. Current clinical practices with high hygiene standards, as well as high laboratory standards in research, have a negative impact on the environment and therefore, paradoxically, indirectly have a huge negative impact on the health of people and animals. Hence, health professionals and research groups urgently need to counteract these detrimental effects. when formulating guidelines for clinical practice.



**Isabella Pali-Schöll**  
EAACI "One Health"  
Working Group, Chair

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**A recent paper in the journal *Allergy* 1 by the EAACI «One Health» Working Group 2, in collaboration with international experts, addresses not only the negative impacts but also - more importantly - effective countermeasures.**

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The healthcare sector's contribution to net greenhouse gas emissions is estimated at 4–10%. Hospitals and research laboratories use large quantities of consumables, which require large amounts of raw materials and production energy. They are also partly responsible for polluting the environment when plastics, pharmaceuticals and chemicals are not disposed of properly. To attend international scientific meetings, thousands of participants travel long distances around the globe, often for just a few days.

Awareness of the negative impact of health care (including health research) on the health of the planet and of humans and animals should therefore be raised. At the same time, the authors of the paper propose simple and very effective countermeasures and encourage health professionals and researchers at all hierarchical levels to implement them immediately in their professional and private lives.

## New EAACI initiatives



### The following topics are considered in particular, and important priorities and goals are formulated:

- **Sustainable research/sustainable laboratories:** Reduction of energy consumption of freezers, heaters, water baths, fume hoods, or unused equipment, and reduction of disposable consumables.
- **Sustainable clinical care in practices and hospitals:** Reduction of energy use and resource consumption, optimised recycling, sustainable building practices, food waste prevention, and consideration of public transport accessibility for staff and patients.
- **Sustainability of asthma inhalers and other treatments:** Minimisation of impact of asthma inhalers, anaesthetic gases, and medical treatments on greenhouse gas emissions by switching to sustainable alternatives.
- **Sustainability through telemedicine:** Implementation of telemedicine care with benefits for patients or their caregivers as well as for medical professionals providing care, while also benefiting the environment.
- **Sustainability for scientific congresses:** Paying attention to considerable differences regarding energy consumption and travel impact between hybrid/hub & spoke meetings or completely virtual meetings, and in-person congresses.

Establishing sustainability management in healthcare facilities and research organisations to implement environmentally friendly practices while providing high quality healthcare should become common practice. The latest technologies, artificial intelligence, big-data analyses of existing data, high-throughput analyses from small sample volumes and samples from existing biobanks, and mathematical simulations can be of great importance in the implementation of sustainable healthcare and research.

The most current knowledge about sustainability in the respective fields must, of course, be integrated into education and training as well as the curricula of all degree programs.

It goes without saying that such efforts can only succeed on a large scale with political support and must be adapted to specific national/geographical circumstances. Industrialised countries must also support developing countries in this effort, whether technically, financially, or in terms of infrastructure.

Nevertheless, each and every medical professional can also take measures with immediate effect in his/her private and professional life – many small steps have a big effect in the end!

*Health care professionals, researchers and organisers of scientific meetings have multiple possibilities to lessen the impact on the environment and climate in their daily lives. A number of these opportunities are discussed in more detail in individual webinars on "green" hospitals, clinical care, laboratories, asthma inhalers and telemedicine 3.*

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2. See: <https://eaaci.org/working-group/one-health/>
3. See: <https://hub.eaaci.org/search-page/?search-go+green>





# EARL programme

## a new EAACI initiative for real-world evidence



**Stefano Del Giacco**  
EAACI President

It is crucial nowadays to advance the discussions on the value of real-world evidence (RWE). RWE has been defined as the information derived from the analysis of routinely collected real-world data (RWD) relating to a patient's health status that can lead to the delivery of health care from a variety of sources other than traditional clinical trials. The current landscape of RWE is a complex and evolving one. Enabling the use of RWE and establishing its value for regulatory decision-making on the development, authorisation, and supervision of medicines in Europe by 2025 is the vision of European and American regulators (EMA and FDA) to support the development and use of better medicines for patients.

An example of the actions taken is the European Network of Centres for Pharmacoepidemiology and Pharmacovigilance, a network coordinated by the European Medicines Agency (EMA) aiming to reinforce the monitoring of the benefit-risk balance of medicinal products in Europe by facilitating the conduct of high-quality, multi-centre, independent post-authorisation studies, bringing together expertise and resources across Europe and providing a platform for collaborations, and developing and preserving methodological standards and governance principles for research in the field.

The growing interest in "Real World Evidence" is also undeniable in several allergic and respiratory diseases. EAACI, within the Presidential initiative EAACI Real Life (EARL), is committed to the responsible use of data that provides a better understanding of medical practice in allergy and clinical immunology based on data collected with robust methodological procedures.

The EARL moved its first steps in March 2023 in Lisbon with a joint meeting with REG, the Respiratory Effectiveness Group; the second step took place in Rome in October 2023, in conjunction with the EAACI ISAF and with the involvement of essential sister Societies, Patient associations (EFA, GAAP) and other stakeholders and regulators (EMA, FDA, NICE, PEI, WHO).

The discussion was based on the background that well-planned and executed randomised controlled trials (RCT) are the cornerstone of evidence-based medicine. However, there is concern within the scientific and practice community that RCTs do not reflect the general population as they are performed on selected groups under controlled settings. To overcome this limitation, the working group concluded that non-randomised studies of interventions (NRSI) may be used as a source of complementary, sequential or replacement evidence for RCTs. Together or individually, these studies generate a body of evidence that should mimic real-life situations.

A consensus was attained on the relevance and standards for RLD and their integration into health guidelines. The next goal is to publish a first paper with an RWE glossary and further papers on how to report and evaluate them. An editorial in *Allergy* was also published, summarising the outcomes of the first meeting and the expected next steps.

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- [www.enceppeu.eu](http://www.enceppeu.eu)



# COVID-19 & Chronic Rhinosinusitis

## What have we learned?

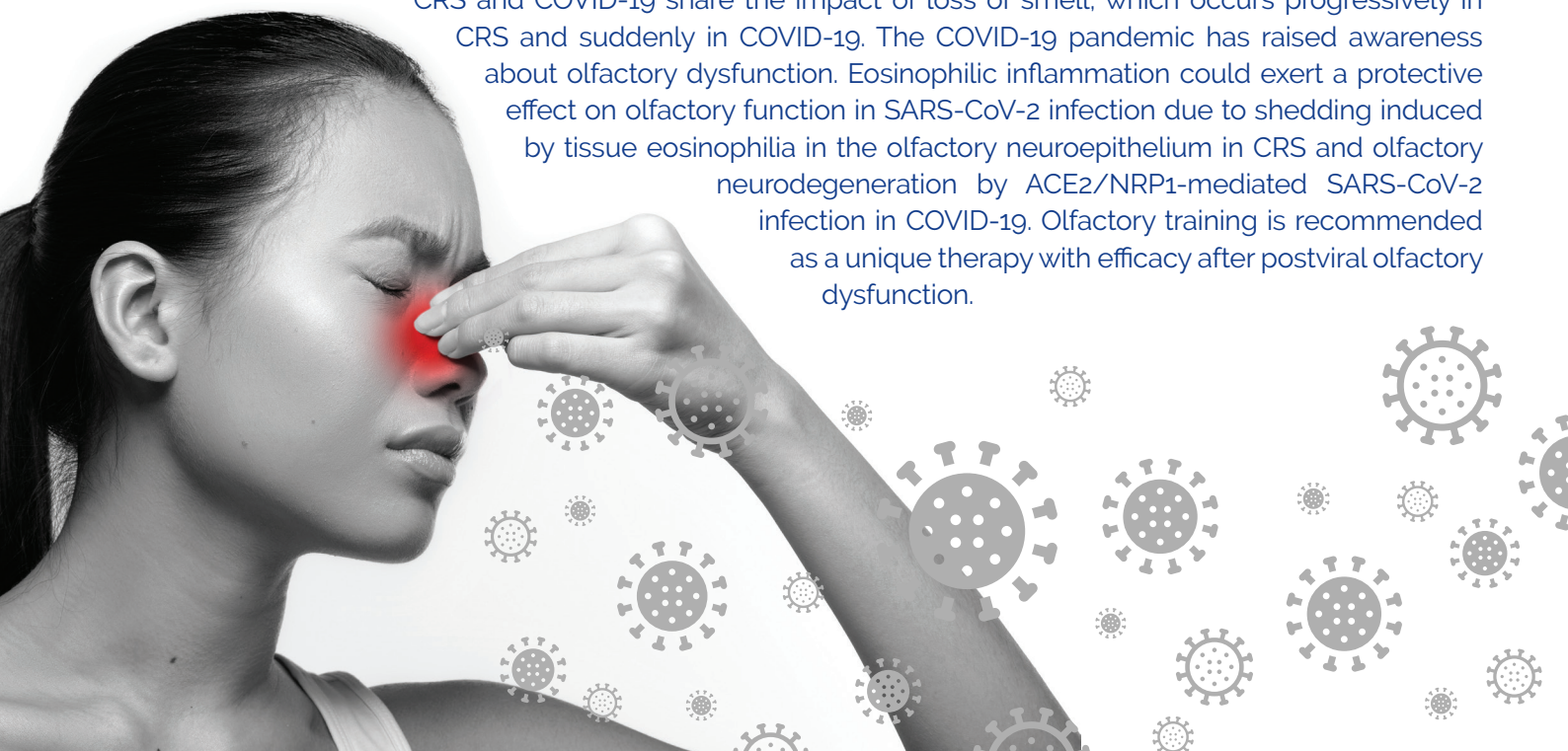
Chronic rhinosinusitis (CRS) affects approximately 5–12% of the general population worldwide. If associated by nasal polyps (CRSwNP), the inflammatory changes of the paranasal mucosa are predominantly of the type 2 (T2) inflammatory endotype. Recommendations for the management of CRSwNP during the COVID-19 pandemic were needed, since several standard treatment options were questioned during the pandemic.

CRS diagnosis and examination should be performed carefully, including with the use of personal protective equipment, avoiding tools that induce airborne aerosol production and considering telemedicine. Intranasal corticosteroids remain the standard treatment for CRS in patients with concurrent SARS-CoV-2 infection. EAACI recommend the delaying of endoscopic sinus surgery during the acute phase of COVID-19, and surgical treatments of CRS alone should be kept to a minimum during a pandemic and should only be performed in patients with complications and those for whom no other treatment options exist. For this purpose, COVID-19 status should be known and, in case of unclear status in emergency cases, appropriate personal protective equipment is to be used. Systemic corticosteroids should be avoided. Treatment intervals with biologics can be extended in infected patients and continued after COVID-19 infections.



**Ludger Klimek**  
EAACI VP  
Communications

CRS and COVID-19 share the impact of loss of smell, which occurs progressively in CRS and suddenly in COVID-19. The COVID-19 pandemic has raised awareness about olfactory dysfunction. Eosinophilic inflammation could exert a protective effect on olfactory function in SARS-CoV-2 infection due to shedding induced by tissue eosinophilia in the olfactory neuroepithelium in CRS and olfactory neurodegeneration by ACE2/NRP1-mediated SARS-CoV-2 infection in COVID-19. Olfactory training is recommended as a unique therapy with efficacy after postviral olfactory dysfunction.

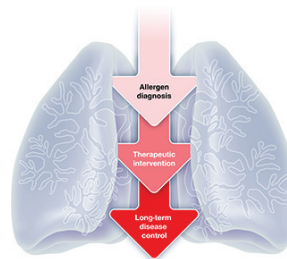


## EAACI International Severe Asthma Forum 2023 (ISAF)

Hybrid conference has concluded! Rome, October 5-7

After Thermo Fisher Scientific's attendance at the EAACI/ISAF 2023 Hybrid Conference, October 5th-7th 2023, in Rome, Italy, we were pleased to introduce an interactive e-Learning experience that is redefining asthma care.

With the guiding theme "**Never Too Early, Never Too Late**", Thermo Fisher Scientific's presence at the conference sought to illuminate a clearer path towards achieving improved asthma control by using an Aeroallergen Inclusive Review (AIR)<sup>1</sup> as part of the asthma care plan for all patients.



**Discover our interactive e-Learning module**



### **Discover Aeroallergen Insights:**

Unveil the role of aeroallergen components in asthma diagnosis, paving the way for more informed treatment strategies.



### **Experience Tailored Therapies:**

Immersive yourself in personalized therapeutic interventions that empower healthcare providers to craft treatments tailored to patient needs.



### **Explore Long-term Asthma Control:**

Beyond diagnosis, explore comprehensive strategies for sustaining effective asthma management, ensuring patient well-being.

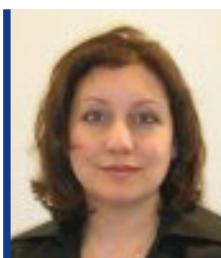
**Explore the e-Learning module on allergic asthma**





## Scientific advances in the field of AllergoOncology

# A year in review



Sophia N. Karagiannis



Heather J. Bax



Erika Jensen-Jarolim

The last year has been a very busy and productive one for our interdisciplinary AllergoOncology Working Group community, as our researchers drive novel investigations of the unique immunologic interface between allergy, IgE immune responses and oncology.

A key area of interest in AllergoOncology is studying the potential protective effects of IgE in the susceptibility and prognosis of cancer. A study, published in *Allergy*, investigating the protective role of IgE in glioblastoma, showed delayed engraftment of intracranial glioblastoma, and increased survival, in immunocompetent mice following allergic airway inflammation (AAI) [1]. AAI was associated with microglia reprogramming towards a pro-inflammatory state, together with increases in effector T cells in the circulation and tumour. In mice devoid of adaptive immunity, the survival benefit of AAI was lost. These data implicate the cross-talk between local and systemic adaptive immunity in allergy-induced protection against glioblastoma. This model will now support further study of the impact of allergy on glioblastoma risk and prognosis.

Studies by researchers in the the AllergoOncology Working Group previously showed that patients with IgE deficiencies (IgE < 2.5 kU/L) have high prevalence of malignancy. A recent retrospective analysis of IgE-deficient adults (IgE < 2.5 kU/L) aimed to provide clinical and laboratory characteristics associated with this susceptibility. The study revealed that non-atopic individuals who had negative environmental skin tests performed for allergic rhinitis-like symptoms were more likely to have a malignancy diagnosis than those patients with a positive skin test (atopic) [2]. IgE-deficient individuals who also have low IgG, IgA, or IgM (but not common variable immunodeficiency) were at greater risk of malignancy than those with normal levels of antibodies. These data suggest that some IgE-deficient adults may have higher risk of cancer. The findings support further studies to inform allergists how best to interrogate immunological parameters when considering malignancy risk in IgE-deficient individuals.

Another hypothesis of AllergoOncology is that IgE antibodies engineered to specifically target tumour antigens may mediate potent immune effector functions against cancer. The pre-clinical study published in *Nature Communications* showed that a melanoma-targeting antibody, CSPG4 IgE, specifically bound to melanoma and activated immune cells from cancer patients to kill human melanoma cells. CSPG4 IgE treatment restricted cancer growth in mice engrafted with human immune cells, including from patients with melanoma. The basophil activation test (BAT), used more widely for studying allergies, showed no basophil activation by CSPG4 IgE in melanoma patient blood, indicating absence of hypersensitivity [3]. This study was followed by the publication of the results of the first ever clinical trial of an anti-cancer IgE antibody, the ovarian cancer-targeting MOv18 IgE, pioneered by members of our Working Group [4]. This Phase I trial demonstrated that treatment with MOv18 IgE was well tolerated in almost all patients. Furthermore,

## Scientific update



the BAT, which was used as a monitoring companion alongside other safety parameters, predicted the single anaphylactic event following MOv18 IgE infusion. Importantly, resolution of ascites and tumour shrinkage in a patient with ovarian cancer was observed following treatment with IgE. Together these milestones pave the way for the development of this novel class of therapeutics across different cancers.

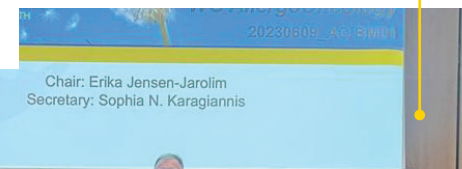
Research by members of our AllergoOncology community has shown that antibody-producing B cells in patients may be defective in responding to metastatic melanoma [5]. Memory B cells were enriched in melanoma lesions, compared to blood from the same patients and active B cells accumulating at the tumour edge were found to communicate with each other and with T cells. The presence of tumour-infiltrating B cells expressing specific IgG antibodies was associated with improved patient survival. However, B cells in patients with metastatic melanoma also expressed antibodies with characteristics similar to those of pathogenic antibodies seen in autoimmune diseases, such as the recognition of normal non-cancerous cells. These autoimmune features of B cells may prevent the immune system from mounting a strong response to eradicate melanoma. Such expansion of our understanding of abnormal B cell responses in metastatic melanoma may guide improvements to therapeutics and patient monitoring in future.

Our research and networking activities, and the impact achieved in 2023 by our ever-growing international EAACI AllergoOncology Working Group and its four thriving Task Forces mark the acceleration of interest in this expanding research field, spearheading further research as we look forward to the year ahead.



*The AllergoOncology Working Group at the EAACI Annual Conference 2023 in Hamburg.*

*AllergoOncology Working Group Business Meeting at the EAACI Annual Conference 2023 in Hamburg.*



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# Digital solutions in the management of food allergy at PAAM

In times of fast technological development and human adaptation, digital tools are on their way to becoming an integral part of healthcare. In allergy care, symptom diaries, (pollen) exposure apps, wearable smart devices, and clinical decision support algorithms are all evolving as useful routine clinical tools. Unfortunately, scientific validation of available tools is mostly only available in the area of respiratory allergic diseases. However, during the Paediatric Allergy and Asthma Meeting 2023 in Porto, several presentations focused on artificial intelligence and applications of digital health technologies in the realm of (food) allergies, shedding light on available innovations that may transform the landscape of patient care.



**Stephanie Dramburg**  
EAACI Allergy Diagnosis  
Interest Group,  
Board member

## Allergen tracking and dietary management

Innovative tools for allergen tracking and dietary management can support parents of children with food allergies in their daily lives. Mobile applications and online platforms allow users to easily input and monitor their dietary habits, receive personalised allergen alerts, and access a comprehensive database of allergen information. In addition, personal experiences and warnings can be shared via community channels integrated in some of the apps or social media networks. Scanner apps for food labels and ingredient lists help users to understand complex product compositions, and apps offering automated translation of the scanned content aim to support patients and caregivers during travel. The aim of these tools is to support individuals in making informed choices about their food consumption, reducing the risk of accidental exposure to allergens; however, it is important to state that no liability is taken by the manufacturers, and databases are only as reliable as food labels can be.

## Scientific Update

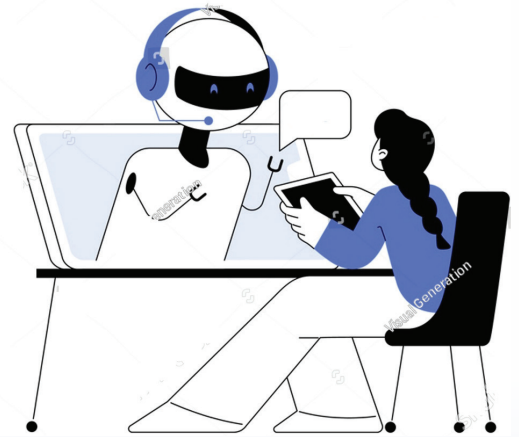


### Smart devices and wearables

The advent of wearable devices has ushered in a new era of continuous health monitoring. For individuals with severe food allergies, wearables equipped with biosensors can detect allergic reactions in real time. These devices can measure vital signs, detect skin changes and analyse physiological responses, providing immediate alerts to both the individual and their caregivers. Other portable devices have been developed to detect the content of a certain food allergen in a small sample of the food to be eaten. Although the number of available test kits is still very limited, clinical validation is ongoing and the real-time testing of foods may increase the safety as well as quality of life of people suffering from food allergies.

### Telemedicine and remote consultations

Access to healthcare services through telemedicine and remote consultations is continuously increasing and received an extraordinary boost during the COVID-19 pandemic. Individuals with food allergies can now consult with allergists and healthcare professionals from the comfort of their homes. This virtual approach not only saves time and resources but also ensures timely interventions and support for carefully chosen clinical scenarios. In these, patients can discuss allergy management strategies, receive advice on emergency preparedness, and gain access to expert guidance without the need for in-person visits.



### Educational platforms and resources

Education is a cornerstone of effective food allergy management and digital technologies support the distribution of valuable information. Online platforms and mobile apps offer a wealth of resources, including video tutorials, interactive guides and e-learning modules, to educate children, caregivers and healthcare professionals about food allergies. This democratisation of information has the potential to foster a better understanding of allergens, symptoms and emergency responses. Unfortunately, no quality control is performed in this free flow of information and non-validated recommendations may create relevant risks for patients with food allergies. Therefore, healthcare professionals should be encouraged to create reliable content and guide their patients towards reliable sources of evidence-based information.

### Community support and networking

Living with food allergies can be challenging, and the emotional toll is not to be underestimated. Digital platforms facilitate the creation of supportive communities where individuals can share experiences, advice and coping strategies. Social media, forums and dedicated apps connect people with similar challenges, fostering a sense of community and reducing the isolation often associated with food allergies. This interconnectedness not only provides emotional support but also serves as a valuable source of practical tips for navigating various aspects of daily life with food allergies.

In summary, digital solutions are gradually finding their way into the management of food allergies. From allergen tracking and continuous monitoring to telemedicine and community support, these innovations empower individuals to lead safer, more informed lives. Collaboration between healthcare professionals, technologists and the food allergy community bears great potential for future developments, and is essential to ensure the quality and safety of delivered content.



# Updating the roadmap for the allergology specialty: a CME Committee goal



**Dario Antolin-Amerigo**  
Spain, CME Committee,  
co-Chair



**Radoslaw Gawlik**  
Poland, CME Committee,  
co-Chair

As co-chairs of the Continuing Medical Education (CME) Committee, one of the main activities planned for this term is to update the 2019 position paper<sup>1</sup> on the roadmap for the allergology specialty and allergy care in Europe and adjacent countries.

In the last few years, EAACI, in collaboration with the Union Européenne des Médecins Spécialistes (UEMS) allergology section and board, have pointed out a substantial heterogeneity across Europe in the recognition of the full specialty, the number of practicing specialists or subspecialists, and training aspects.

We are now contacting the chairs of EAACI sections in preparation of a revised position paper and to implement the latest advances in the training aspects which aim to achieve the harmonisation of allergy services across Europe.

EAACI has invested human resources and planning in lobbying for the full specialty within the European Union. We are at an inflection point in gaining presence, awareness and relevance in the academic field. As CME Committee chairs, our commitment is to give the allergology specialty the excellence which it deserves.



## Selected bibliography

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From the EAACI Family



# Introducing the **Scientific Media Communications Secretary**

*EAACI Scientific Media Communications Secretary*



**Sylwia Smolinska** takes a moment to tell us about her background and experiences within EAACI, and talks about her focus as the new Scientific Media Communications Secretary.

I am a Postdoc, Assistant Professor and Lecturer in the Department of Clinical Immunology, Wrocław Medical University. I have been an EAACI member since 2011 and have a great interest in EAACI activities. In the first few years of my membership, I was able to gather in-depth knowledge of EAACI's scope and organisation when I assisted in a number of the activities of my mentor, Prof. Marek Jutel, who served as an EAACI ExCom Member for a number of years. In 2015, I was elected as a board member of the Infection and Allergy Interest Group, which helped me to build a further network amongst EAACI members. In January 2016, I began my duties as the EAACI Website Editor, a role I filled for 4 years and which gave me the opportunity to be part of the ExCom and therefore part of EAACI activities and strategy, bringing my own expertise and enthusiasms. I was also a coordinator of a joint online resources project between AAAAI and EAACI. As a member of EAACI I have presented my research during the annual EAACI summer congresses and focused meetings, such as the Immunology Winter Schools and EAACI/WIRM, where I have had a chance to build up a professional network within the Academy. In addition to this, since 2019 I have been a Chair of the Telemedicine Group, under the umbrella of the Research and Outreach Committee. Our first Position Paper on the status of telemedicine will be published in Allergy.

I am happy to serve as the Scientific Media Communication Secretary since I believe my educational background, scientific achievements in the field of allergy and immunology, as well my experience in EAACI activities make me a suitable person for the position. I have a reliable and resilient network in the scientific community and am interested in the topic of communication, as my past shows. For the last 10 years, I have had a strong commitment to EAACI's mission and vision. I am a competent strategic thinker with the goal of supporting the overall objectives of the Academy in a manner aligned with other communication channels. I have the ability to work and communicate in a structured and timely manner in order to coordinate with the EAACI leadership and all relevant teams. The biggest focus that I would like to give as Scientific Media Communications Secretary is to the optimisation of our communication channels to release the scientific content created within the Academy via corporate and patient websites, social media and the EAACI Review. There is an incredibly broad portfolio of scientific content within the Academy - such as position papers, guidelines, etc. - which deserves to reach EAACI members and the wider community. Optimal distribution of this scientific content is an essential aim for the Media Communication Committee, of which I am a part.



# Diversity, equity and inclusion: essential principles in research and science communication

Diversity, equity and inclusion (DEI) are fundamental principles essential for the progress of research and science communication. Embracing DEI principles in these fields is crucial in an increasingly interconnected and globalised world.

**Diversity** in research refers to the inclusion of individuals from various backgrounds, of different ethnicity, race, gender, age group, socioeconomic status, and capabilities. Research groups that are diverse benefit from a wide range of perspectives, ideas and experiences. Different standpoints challenge traditional thinking and furnish fresh insights. Diverse research teams are more likely to come up with creative and groundbreaking solutions, and are better at problem-solving and generating innovative concepts. Moreover, they can identify and challenge unconscious biases that may affect data collection, analysis and interpretation. Such diverse research units can better address complex and multifaceted issues by considering a wider spectrum of perspectives, thus enhancing the relevance of research to diverse communities.

**Equity** in research emphasises objectivity and justice in the investigation process. It ensures that opportunities and resources are distributed equitably, regardless of an individual's background, identity, or circumstances. Achieving equity in research



Maria Beatrice Bilò  
Chair, Scientific Media  
Communication Committee



Florin-Dan Popescu  
EAACI Review Editor

## Diversity, Equity, Inclusion



is crucial for ensuring that all voices are heard and all researchers have an equal chance to succeed. Equal access to research funding, facilities and resources fosters a climate where competent individuals can thrive. Equity promotes the proper recognition of all researchers' contributions. It challenges biases that may affect how scientists are evaluated and rewarded, making the scientific community more inclusive. Research incorporating an equity lens is more likely to address pressing social issues, benefiting marginalised communities and the community as a whole.

**Inclusion** in science communication ensures that scientific information is accessible, comprehensible and relevant to a diverse audience. It goes beyond just disseminating information and focuses on engaging with the public and fostering bidirectional communication. Inclusive science communication considers the needs of individuals with limited access to technology or those with disabilities. It promotes the use of simple language and numerous communication channels to reach a broader audience. It respects and considers the cultural diversity of the audience, and welcomes diverse voices and perspectives. This means involving scientists from underrepresented backgrounds and addressing the problems and interests of marginalised communities.

In conclusion, the DEI approach is not optional but sets out essential principles in research and science communication. Embracing these principles leads to more innovative and unbiased research, ensuring that the benefits of scientific progress are accessible to all. In science communication, inclusion broadens the reach and impact of scientific findings, fostering a more informed and engaged public.







# Building great connections with EAACI from Canada and Australia!



**Ana Maria Copaescu**  
*EAACI Member; Assistant Professor in the Department of Medicine, Division of Adult Allergy and Clinical Immunology, McGill University Health Centre (MUHC), Montreal, Canada*

Ana Maria Copaescu provides some personal insights below into her experience as an active member of the wider EAACI family and the benefits she's gained from attending EAACI events.



**B**orn and raised in Romania, I had the privilege of pursuing my medical education in Canada. After finishing my internal medicine and allergy immunology training, I completed a specialised drug allergy fellowship in Australia. I now work as a Clinician-Scientist at the McGill University Health Centre (MUHC), Montreal, Canada, where the majority of my time is dedicated to clinical research. I hold an appointment as

## EAACI Beyond Europe



an Honorary Clinical Fellow in Immunology at the Centre for Antibiotic Allergy and Research (CAAR), Austin Health, Australia, which gives me the opportunity to collaborate with Prof Jason Trubiano and other world-renowned researchers. This empowers me to develop and validate risk-based challenge strategies for managing beta-lactam and other antibiotic allergies under specialist mentorship. As a researcher within the CAAR, I am also an associate investigator on several other drug and antibiotic allergy-related research clinical studies and immunopathogenesis studies.

The EAACI meetings have always been near and dear to my heart as I have the opportunity to interact with friendly clinicians, scientists and healthcare providers from all over the world. Indeed, attending the various sessions, workshops, and presentations has provided me with an excellent opportunity to network with leading experts in the field and learn about the latest advancements in allergy and clinical immunology, particularly drug allergy. The Drug Hypersensitivity Meeting (DHM) is a world-leading event providing the most up-to-date data in the field of drug hypersensitivity. As a presenter at EAACI meetings, I have engaged in discussions and shared knowledge with several researchers interested in drug allergy.

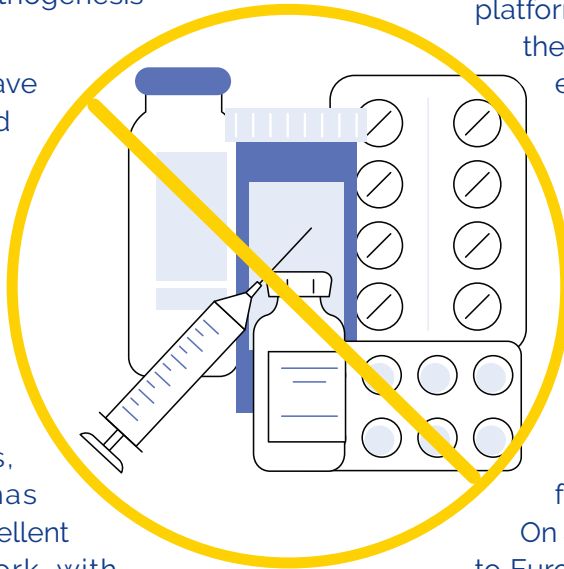
For example, during the last 2023 EAACI meeting in Hamburg, I had the opportunity to present data from the PALACE trial, our recent randomised trial on penicillin allergy. Following this talk, I exchanged with engaged clinicians and researchers on the important topic of drug allergy. This led to great ongoing collaborative research likely to advance knowledge and improve patient care.

Registration, abstract submission and all other online resources are easily accessible on the interactive and user-friendly EAACI platforms. Accessing and using

these tools from myEAACI is extremely enjoyable and straightforward. EAACI also provides a range of online resources and educational courses that can be accessed worldwide.

The EAACI meetings are always well organised in countries with easy travel access from Canada and Australia.

On a personal note, travelling to Europe for EAACI is always a great opportunity to visit friends and family in Romania, my home country. Your personal experience may vary depending on your interactions with colleagues and your involvement with EAACI but attending the annual meetings can lead to wonderful networking and collaboration opportunities. I am looking forward to seeing you in Spain next year!





# IMPACTS OF CLIMATE CHANGE ON HEALTH IN SOUTH AMERICA

South American countries collectively contribute less than 10% of global greenhouse gas (GHG) emissions, causing increased local heat waves, droughts, forest fires, vector-borne diseases and other hazards. These adverse effects of climate change are accelerating and disproportionately affect the most vulnerable people in South America who have seen their health increasingly affected by dangers related to climate change, and this trend will only continue without immediate measures being taken.

The LCSA report evaluated these impacts in five main areas: (i) risks, exposures and health impacts; (ii) adaptation, planning and resilience for health; (iii) the economic impact of climate change and its mitigation; (iv) economic impact of climate change and finance; and (v) public and political commitment.

The high danger of forest fires increases the risk of potentially fatal injuries, and allergic, cardio-respiratory and corneal injuries, while the loss of infrastructure, the interruption of essential services and additional environmental degradation cause indirect damage to health.

The ambient temperature and heat waves pose a high risk to health, which translates into an increase in heat-related mortality, with negative effects on the agricultural sector, being a great threat to crop yields and therefore to food security and nutrition.

Climate change threatens to further act as an amplifier of existing mental health risks, with populations also being affected by structural inequalities and marginalised groups being at greater risk of climate-related mental health impacts.

Dengue is endemic in most of South America with 16 million cases recorded in 2011–2021. Understanding and quantifying the economic costs of dengue in terms of the value of disease-related mortality can guide prevention policies and public health interventions that reduce the spread of the disease and the socioeconomic burden of this climate-sensitive disease.

South America also has important natural resources that, if preserved, could help sequester greenhouse gases more quickly than solely relying on reducing



**Marilyn Valentin Rostan**  
Latin American Society of Asthma, Allergy and Immunology, President Elect and member, Department of Pollution, Pediatrician, Allergist and Immunologist



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Latin American Society of Asthma, Allergy and Immunology, Department of Pollution, Adjunct Professor, Faculty of Medicine, Federal University of Pampa, RS, Brazil

## EAACI Beyond Europe



carbon emissions. Deforestation is a risk factor for health and can lead to: a greater risk of spreading infectious diseases; the exacerbation of food insecurity in surrounding communities; a reduction in the local availability of drinking water; and increased soil degradation and erosion. Preserving South America's natural resources enables healthier communities, improved food security, and cleaner environments for local and regional communities.

Until now, knowledge of the quantifiable effects of climate change on the health of South American populations has been limited amongst both politicians and the general public, and even in cases where knowledge exists, any action has not been proportional to the threats and opportunities.

Few countries in the region have carried out vulnerability analyses to guide adaptive interventions, which limits the articulation of specific health policies, intervention policies, and resource allocation capabilities. As a result, there is a profound lack of financing at the national level and limited implementation of adaptive actions, demonstrated in just a few countries. Resources for this could cascade down through large sectors of society.

The slow progress of action on health and climate is reflected in scarce levels of commitment to these interconnected themes by key actors in society. With regard to any committed coverage of health and climate change in the media (crucial to promote change at the individual and political level), the situation in South America is amongst the worst in the world.

The implementation of science, and cooperation with international entities, could help and support the planning of health adaptation in South America by identifying best practices and obstacles for the implementation of actions, as well as the benefits of stimulating further research.

We thank EAACI for the opportunity to expose this situation which could facilitate future scientific cooperation between our two societies (EAACI and SLAAI), to intensify efforts to create more resilient health systems, helping in the implementation of local policies to build a positive outcome.

## TRUST THE SCIENCE. NOW THAT WE KNOW, WE MUST ACT!

### Reference

- Hartinger SM, Yglesias-González M, Blanco-Villafuerte L, Palmeiro-Silva YK, Lescano AG, Stewart-Ibarra A, et al. The 2022 South America report of The Lancet Countdown on health and climate change: Trust the science. Now that we know, we must act. *The Lancet Regional Health - Americas* 2023;20: 100470. doi.org/10.1016/j.lana.2023.100470.



# EAACI

## World food day webinar

The United Nation Sustainable Development Goals (SDGs) aim to eliminate hunger and to end all forms of malnutrition by 2030. With a growing worldwide population, this can only be achieved by ensuring food security, improving nutrition and promoting resilient agriculture, and aligning this with climate action.

**World Food Day 2023 on October 16** was dedicated to raising awareness of the importance of adopting healthy diets.

The EAACI One Health Working Group, Immunomodulation & Nutrition Working Group, and Allied Health & Primary Care Section contributed to this effort by organising a joint-webinar titled "Sustainable diet meets immune health". During the webinar, malnutritional aspects and specific diets of the westernised world in regard to disease prevention, and diet management in persons with allergies were discussed in particular.

Tillman Kühn compared vegan, vegetarian and omnivore diets. He emphasised that the relatively largest carbon footprints derive from animal products. A planetary health diet consists of more vegetables, whole grains, unsaturated plant oils and low levels of animal products in the form of dairy and meat. A planetary health diet and a flexitarian diet are associated with lower risks of obesity and cardiovascular diseases. Though strict vegetarian and vegan diets may prevent particularly cardiometabolic diseases, they may impair bone health and are associated with increased fractures.



**Franziska Roth-Walter**  
Immunomodulation &  
Nutrition WG, Secretary



**Isabella Pali-Schöll**  
EAACI "One Health"  
Working Group, Chair



**Carina Venter**  
Immunomodulation &  
Nutrition WG, Chair

## Advocacy and Outreach



In the affluent westernised world, malnutrition is often an underestimated problem. An estimated 40% of hospital patients are inadequately nourished as a result of their illness, whilst the excessive consumption of ultraprocessed pro-inflammatory foods – rich in added sugar, but low in fibre, vitamins and minerals – results in a growing number of people being affected by malnutrition and poorer health in westernised countries.

**Berber Vlieg-Boerstra** focused on the dietary management aspects of allergic diseases. In standard care, “allergenic food” is avoided. She highlighted that in the dietary management of allergic diseases an immune-supportive diet has to be included, in which the combination of micronutrients (vitamins, minerals, fatty acids) has a synergistic health impact improving epithelial barrier integrity and microbial diversity. An immune supportive diet consist of no or minimally processed foods, an increase intake of omega 3, polyphenols and fermented food, as well as the consumption of full-fat dairy products to support the immune system.

**Franziska Roth-Walter's** talk focused on the mechanistical aspects of micronutritional deficiencies causing inflammation. Particularly problematic is the situation in subjects with chronic inflammatory diseases (also in atopic diseases), whose activated immune systems result in a mucosal block restricting the uptake of micronutrients. As a consequence, iron and Vitamin A deficiency is associated with an increased all-cause morbidity and mortality. In chronic situations, however, the dietary lymph path remains available, which is exemplified by whey proteins exploiting this path. Moreover, results have demonstrated that fostering dietary lymphoid uptake in allergic patients is accompanied by allergic symptom amelioration in a completely antigen-unspecific manner.

**Rosan Meyer** raised the valid concern of malnutrition in food allergic children, noting that most studies do not account for dietary elimination of food due to allergy. Moreover, most studies do not account for the higher nutritional demands in children - which differ from adults - requiring higher intake of proteins, fats, minerals and vitamins, but less fibre. Simultaneously there is a rising trend to wean babies as vegan/vegetarian. This puts them particularly at risk for deficiencies in iron, Vitamin B12, D and calcium due to the lower bioavailability of these nutrients via a plant-based diet. Some national nutritional societies have also raised concerns about iron and vitamin B 12 deficiencies in these children and consequent impacts on their cognitive development.

With a greater focus on new emerging allergies, **Isabel Skypala** pointed out that a sustainable diet involves consuming more legumes and that a vegan lifestyle in particular may promote the consumption of more ultraprocessed food in the form of vegan meat substitutes, vegan protein powders and gluten-free pasta. She emphasised that pasta made from lentils and chickpeas retain important allergens even after boiling, and that allergic reactions to lupin, fenugreek and hemp seeds now occur more frequently. The increased allergenicity of these foods may also be associated with pollution and climate change.

In her talk, **Isabella Pali-Schöll** (One Health WG chair, and one of the main webinar organisers) particularly emphasised environmental risk factors detrimental to allergy development. Human exposure to farms, animals, and green spaces is generally considered to be protective, but plant stress (from CO<sub>2</sub> exposure) can increase their allergen content. Medications such as antacids may favour allergic sensitisation by increasing the stability of an allergen, the cosmetic industry sometimes use enzymes that may compromise the epithelial barrier, and the food industry uses novel foods with cross-reactivity to common allergens.

**For anyone interested in a more detailed account of the webinar, the presentations are accessible via the EAACI Knowledge Hub.**



# Unveiling the mysteries of chronic spontaneous urticaria: A journey of translational research

**Marta Ferrer** offers some thoughts and reflections on her groundbreaking research and career, on receiving the **2023 Clemens von Pirquet award**

**M**y first presentation at an EAACI event in Madrid in 1995, under the guidance of Prof. Alain de Weck and Dr Maria L. Sanz, marked the beginning of an extraordinary journey in the field of allergy research. Little did I know then that my passion for understanding the intricacies of chronic spontaneous urticaria (CSU) would lead me to receive the prestigious Clemens von Pirquet award. Along my research pathway, EAACI has always accompanied my journey.

From the outset, my research endeavours have been centered on unraveling the complexities of CSU. During my time in the United States, under the guide, inspiration and vision of Professor Allen Kaplan, we made groundbreaking discoveries that not only elucidated the autoimmune mechanism underlying this previously idiopathic disease but also paved the way for the development of life-changing therapies. I vividly recall a conversation with Allen during an AAAAI meeting in Washington DC, where he prophetically envisioned the potential of omalizumab in treating CSU by targeting the IgE receptor. His vision proved prescient, as his seminal work demonstrated the efficacy of omalizumab in an autoimmune CSU patient population. Subsequently, I replicated this finding in a non-autoimmune CSU cohort, establishing the foundation for a treatment



**Marta Ferrer, MD, PhD**  
*Dean of the School of Medicine, University of Navarra, Spain  
2023 recipient of the Clemens von Pirquet award*

## EAACI awards



that has revolutionised the lives of CSU patients worldwide.

My research has also delved into the unique characteristics of CSU basophils, revealing abnormalities in cellular signaling that hold promise for novel therapeutic approaches. These findings have fueled the development of several ongoing treatment strategies. Additionally, I have spearheaded projects investigating the mechanisms of omalizumab action and the phenotypic and genotypic profiles of histaminergic angioedema finding unique features that differentiated this mast cell mediated angioedema from CSU. Notably, I secured funding for a double-blind, randomised, placebo-controlled trial, pioneering the first pilot study demonstrating the efficacy of omalizumab for cholinergic urticaria, and also demonstrating the need for new therapies for these types of urticaria.

Venturing into the realm of novel immunotherapies, we started a collaboration with members of the pharmaceutical New Adjuvants Department of Pharmacy and Microbiology of the Universidad de Navarra School of Medicine to develop animal models allergic to several allergens. This endeavour involved testing various nanoparticles and microparticles to determine their sensitisation capacity and to identify the optimal vehicle. Subsequently, we developed an animal model for phleum grass pollen allergens, evaluating not only sensitisation but also nanoparticle-mediated protection. Once the optimal animal model was selected, we sensitised it orally to peanut. Following successful sensitisation studies, we secured funding for a project to translate our findings into



a pharmaceutical product. This new peanut oral nanoparticle immunotherapy is currently undergoing a Phase I clinical trial.

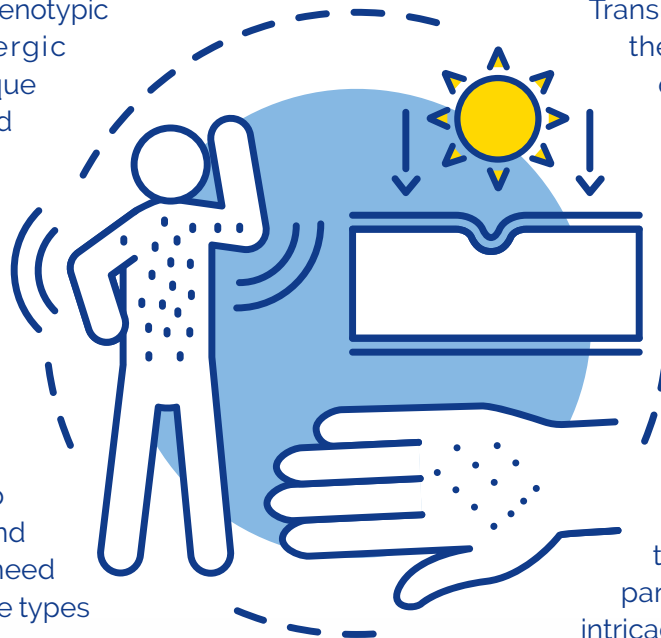
Throughout these research endeavours, I have been privileged to engage in truly translational research. This approach has allowed me to witness firsthand how research, often perceived as detached from clinical practice, can profoundly impact the lives of patients.

Translational research has been the driving force behind the development of effective CSU treatments.

When asked about my choice of specialisation in allergy, I invariably respond describing the profound impact it has on the lives of patients and their families. I vividly recall a patient who expressed heartfelt gratitude for my dedication to urticaria research, particularly for explaining the intricacies of her condition. When offering her an effective treatment that

brought her symptoms under control, she tearfully expressed her relief and newfound ability to enjoy simple activities like playing with her grandchildren.

Receiving the Clemens von Pirquet award from Stephano Del Giacco evoked a flood of cherished memories. I am deeply indebted to Prof. Albert Oheling, Dr Maria L. Sanz, Dr Margarita Fernandez, and Dr Isauro Dieguez for imparting the secrets and artistry of allergy science, and to Prof. Alain de Weck, my PhD mentor, and, very specially, to Prof. Allen Kaplan. I am also immensely grateful to my family, to my colleagues at the Clínica Universidad de Navarra, and all the patients who generously contributed their knowledge and experiences to our quest to unravel the hidden mechanisms of urticaria.







# #Must Follow **NEW** EAACI Knowledge Hub social media accounts

We are thrilled to announce the launch of the brand new EAACI Knowledge Hub social media accounts! The EAACI Knowledge Hub now has an active presence on **Facebook**, **X** (formerly known as Twitter), **Instagram** and **LinkedIn** and you'll find posts, updates and links to current content across all these platforms. Examples of the content are shown below. Please follow and share, and join the EAACI online community.



<https://www.facebook.com/eaaciknowledgehub/>



<https://www.linkedin.com/company/eaaci-knowledge-hub/>



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<https://twitter.com/eaaciKH>



**EAACI**  
@EAACI\_HQ

🎉 We are thrilled to announce the launch of our brand new EAACI Knowledge Hub Social Media accounts! 📱

- ✓ Facebook: [ow.ly/Bs1J50Q8qPr](https://ow.ly/Bs1J50Q8qPr)
- ✓ X: [ow.ly/6BzM50Q8qPs](https://ow.ly/6BzM50Q8qPs)
- ✓ Instagram: [ow.ly/Ecky50Q8qPt](https://ow.ly/Ecky50Q8qPt)
- ✓ LinkedIn: [ow.ly/tzmg50Q8qPq](https://ow.ly/tzmg50Q8qPq)

Connect with us and stay tuned! 🌍 🚀




**EAACI Knowledge Hub**

**Now you can find us on our new Social Media networks!**



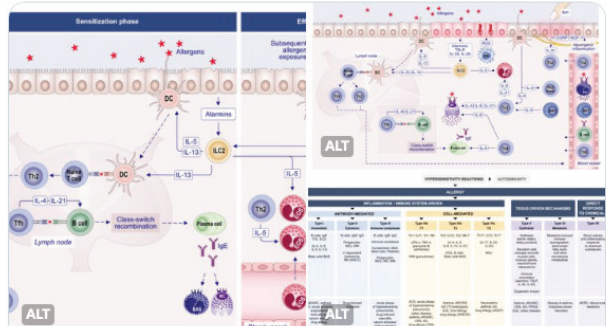



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**EAACI Knowledge Hub**  
@EaaciKH

The revision of the current allergic disease nomenclature based on symptoms and organ dysfunction has been awaited during modern patient-tailored treatments and precision medicine. A new classification is based on disease mechanisms, facilitating personalised disease management.





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@EaaciKH

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Discover our "New Insights in Allergen Immunotherapy (AIT)" course, featuring leaders and is a blend of theory and interactive discussions. Save the Date: Dec 13, 4 PM. Watch out for registration details! [hub.eaaci.org/education\\_cour...](http://hub.eaaci.org/education_cour...)

#NewInsight in AIT #AITEducationalCourse

**EAACI AIT module**

**Your questions answered by our experts!**

\* This module is supported by Unrestricted Financial support from Stallergenes Green and Immunok.

December 13th - live Q&A session [hub.eaaci.org](http://hub.eaaci.org)

**EAACI Knowledge Hub**

## AllergoOncology interview: Promising IgE-based immunotherapy for melanoma

- CSPG4 IgE's Precision:** Binding to melanoma tissues and inducing tumoricidal antibody-dependent cellular cytotoxicity in vitro.
- In vivo Impact:** Remarkable tumor growth restriction and enhanced survival observed across diverse melanoma models.
- Immunomodulation:** CSPG4 IgE stimulates pro-inflammatory responses in human monocytes, fostering a favorable tumor microenvironment in vivo.
- Safety Assurance:** Preliminary evidence suggesting the absence of type I hypersensitivity to CSPG4 IgE.
- Hope for Melanoma:** CSPG4 IgE emerges as a promising immunotherapy for melanoma.

New content on [hub.eaaci.org](http://hub.eaaci.org)

**Q&A - New insight in AIT**

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Exclusive EAACI Webinar Now Streaming! 🌟 "Nomenclature of allergic diseases and hypersensitivity reactions: Adapted to modern needs". 🌟 Join us on a comprehensive exploration of the EAACI position paper, a landmark ...see more

**EAACI Knowledge Hub**  
**Nomenclature of allergic diseases and hypersensitivity reactions: Adapted to modern needs: An EAACI position paper**

A webinar that explains in detail our latest position paper about the new classification of allergic diseases.

In collaboration with **Allergy** EUROPEAN JOURNAL OF ALLERGY AND CLINICAL IMMUNOLOGY

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**Application of Mobile Health Technology in AIT:**

Combination of AIT and Biologicals: Learn about the synergistic potential and future directions of combining AIT with biological treatments.

**Ioana Agache**  
Romania

December 13th - live Q&A session [hub.eaaci.org](http://hub.eaaci.org)

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We are thrilled to share a significant advancement in healthcare: the EAACI latest on the diagnosis of IgE-mediated food allergy. 🍎🍌🍌 This comprehensive document is a result of collaboration among global exp ...see more

EAACI guidelines on the diagnosis of IgE-mediated food allergy

		Likelihood of allergy from test results		
		Low	Intermediate	High
Likelihood of allergy from clinical history	High	Possible allergy	Probably allergic	Likely to be allergic
	Intermediate	Possible allergy	Possible allergy	Probably allergic
	Low	Unlikely to be allergic	Possible allergy	Possible allergy



## EAACI on Social Media



Juniors all over the world had the opportunity to present their work at the #EAACI2023 annual congress. It was such a pleasure to learn about your interesting studies!



@EAACI\_JM on



Dear Juniors! The JMA just celebrated their business meeting and more exciting projects are about to come. Stay tuned to learn about all of them! #eaaci2023



Dear Juniors! Welcome to #EAACI2023 Congress. We are now meeting some of the Allergy College applicants. Join us at Hall Y, 01 until 10am.



Juniors! We had such a wonderful time these past few days in Hamburg, Germany at #EAACI2023 and wanted to thank you all the nice moments we shared together. Stay tuned until the next @EAACI\_HQ Meeting!



# EAACI on Social Media



**EAACI JM**  
@EAACI\_JM

...

The JMA is pleased to announce the open business meeting virtually next Tuesday, Sept 12th, at 17h CET.

We'll have the opportunity to learn from our chair, Leticia de las Vecillas and Mohamed Shamji. Don't miss it! Register here:

[zoom.us/meeting/regist](https://zoom.us/join/9111111111) #EAACI

Enhancing precision healthcare - Where data science meets personalised medicine in allergy, asthma, and immunology.



Dr. Shamji is a translational researcher with his research group (Immunomodulation and Tolerance group) in Allergy and Clinical Immunology at Imperial College London.

His research focused mainly on respiratory allergies, especially disease-modifying treatments such as allergen immunotherapy, novel biologics, and novel immunomodulators, actively involved in evaluating novel approaches to allergen immunotherapy.

An active member of EAACI, he is currently the EAACI Vice President Congresses.



**EAACI JM**  
@EAACI\_JM

...

During the # SAC2023 we had a great time for networking and socializing with all the participants and the senior speakers. It was indeed enriching to have the opportunity to speak with more experienced professionals in a less formal way. #SAC2023



**EAACI JM**  
@EAACI\_JM

...

Junior Members had the opportunity to improve their knowledge about CPR, Hymenoptera venom allergy and #anaphylaxis in practical workshops during the Allergy School on Anaphylaxis! #EAACI #EAACIAS2023 #HymenopteraVenomAllergy #AS2023



**EAACI JM**  
@EAACI\_JM

...

Dear Juniors! The Skin Allergy Club (SAC 2023) started with an afternoon plenty of talks by Juniors about atopic and contact #dermatitis. #atopicdermatitis #AD #contactdermatitis #SAC2023 @EAACI



**EAACI JM**  
@EAACI\_JM

...

Dear Juniors! The #SAC2023 was a success, with outstanding presentations from our junior colleagues regarding different skin diseases in the allergy field, and had great discussions about different skin allergy diseases.



**EAACI JM**  
@EAACI\_JM

...

JM! During ISAF, we had two wonderful sessions. Learning about "Characterizing allergic asthma through component-resolved diagnosis" with Riccardo Castagnoli, Deniz Eyice Karabacak and Leticia De las Vecillas. And a productive Mentor Class - EAACI JMA Session. #ISAF2023





During three very productive days, the JMA got together to discuss activities, new plans and initiatives and understand what to improve to think about all #EAACI Juniors. Counting on the presence of our president Stefano Del Giacco. @EAACI\_HQ



Professor Ioana Agache speaks on #Asthma #Prevention at #APAACI2023 at the #EAACI sister symposium.

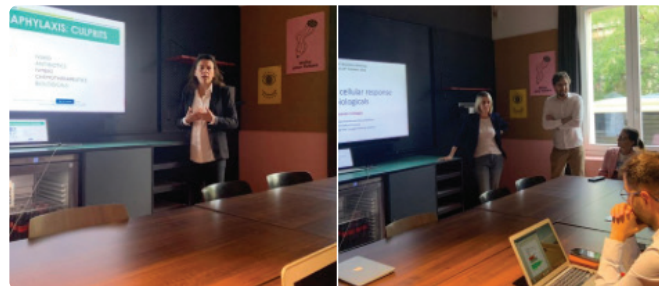


## EAACI on Social Media

@EAACI\_JM on



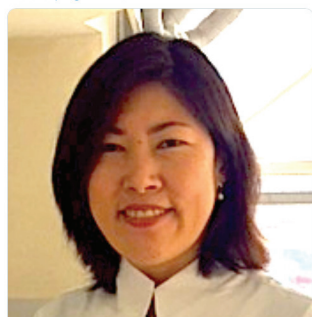
During our JMA BM, we counted on Alessandra Vultaggio discussing "Cellular and humoral immune response to biologics" and Francesca Mori about drug anaphylaxis in children. #EAACI



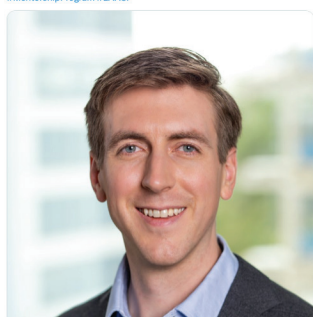
Dear JM! Immunology Winter School 2024 will be held on 08-11 January 2024 at Zakopane, Poland. For those who are successful abstract submitters, don't miss the chance to register for the event by clicking here: [eaaci.org/events\\_allergy..](https://eaaci.org/events_allergy..) #EAACIWS24



Dear Juniors! Let us introduce you to one of the most-voted mentors in our MP program. Luciana Tanno, thank you for your collaboration and support among the Juniors.



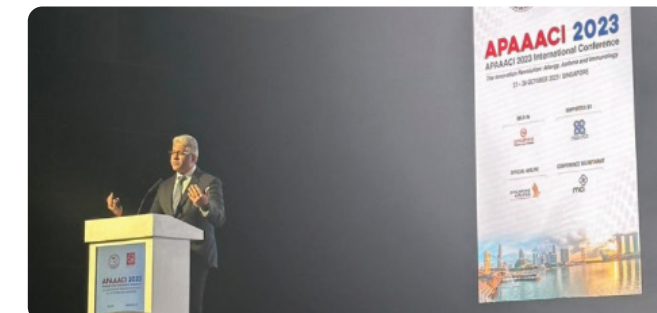
Dear Juniors! Let us introduce you to one of the most-voted mentors in our MP program. @DerekCroyle, thank you for your collaboration and support among the Juniors.



Dear JM! The #EAACI Annual Congress will occur on 31 May - 03 June 2024, at Valencia, Spain. The deadline to submit your abstract is Monday, 15th of January, 2024, 23:59 CET. Learn more by clicking here: [eaaci.org/events\\_congres](https://eaaci.org/events_congres). #EAACI2024 #allergy



Professor M Shamji lectures on #Asthma #Biomarkers at #APAACI2023 at the #EAACI sister symposium.





# Notes From the EAACI Review Editor Florin-Dan Popescu



**Florin-Dan Popescu**  
*EAACI Review Editor*

EAACI plays a crucial role in advancing allergy healthcare by fostering collaboration, knowledge sharing, and professional development. In the current online age, the EAACI Review is a useful digital tool for the EAACI family. By sharing messages from the organisation's board, and highlighting position papers, taskforce projects, scientific updates and news from the unique EAACI Knowledge Hub, the EAACI Review facilitates great knowledge exchange, keeping members well-informed and up-to-date with the latest trends and advances in allergy and clinical immunology.

In this issue, EAACI is proud to announce the release of a new classification system for allergic disorders founded on disease mechanisms, guiding in a new era of targeted and personalised disease management. This new nomenclature is a better way forward, empowering healthcare professionals and patients to find more effective ways to manage and potentially even cure allergic diseases. The major advantage of this immune response and tissue-based allergy nomenclature approach is helping to move the field towards precision and personalized medicine. Such a nomenclature is crucial for effective communication with more accuracy and clarity, reflects the evolution of understanding and must be an integral part of scientific education.

By gratifyingly announcing the new social media accounts of the knowledge hub, EAACI heralds an exciting opportunity to build anticipation, attract followers, and create engagement. These dedicated social media platforms will play a significant role in enhancing visibility, promoting high-quality updated content, facilitating engagement, and knowledge dissemination. This new strategic online tool for managing organizational knowledge will support the culture of learning and innovation within our professional organization.

By presenting various EAACI events and initiatives along with various articles about the EAACI family and our presence on social media, our Review reinforces the idea that every member is part of that large, supportive organisational community, with shared goals and values.

The Review also reflects how EAACI as an association ensures its members remain at the forefront of our work, reinforcing our sense of unity, and presenting diversity, equity, and inclusion strategies, ensuring that our members feel valued and respected as they interact with the organisation. Moreover, the Review celebrates important awards, advocacy and outreach, and reports on EAACI's interactions beyond Europe.

In this modern era of rapid information exchange and increased digital connectivity, the EAACI Review remains a valuable tool for members and friends of our organisation to build a cohesive family, growing sustainably whilst continuing to considerably expand our research and innovation portfolio, and our communication and educational tools.



# EAACI 2024

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EUROPEAN ACADEMY OF ALLERGY  
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#EAACICongress2024