Congress Interviews

EMJ is delighted to present exclusive interviews with three leading figures from the European Academy of Allergy and Clinical Immunology (EAACI): María Torres, the EAACI President, who discusses the Congress theme of 'Vision Zero in Allergy' and the latest advances in precision medicine and allergen immunotherapy; Ian Adcock, Vice President of Science, who explores the future of asthma care, biomarkers, and AI-driven personalised treatment; and Aspasia Karavelia, Chair of the Junior Members Assembly, who shares her perspective on empowering the next generation of allergy specialists and advancing integrated airway care.

Featuring: María Torres, Aspasia Karavelia, and Ian Adcock

María Torres

President of the European Academy of Allergy and Clinical Immunology (EAACI); Head of the Allergy Department, Malaga Regional University Hospital, Spain

> **Our goal is to move towards a future with zero preventable deaths, zero avoidable severe exacerbations, and minimal disease burden for patients living with allergic conditions**

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Q1 As President of EAACI and of the 2026 Congress, how would you describe the scientific and clinical priorities shaping this year's programme? How does the 2026 Congress build on last year's focus, whilst still adapting to any changes occurring in the field over the past year?

As President of EAACI and of the 2026 Congress, I would describe this year's scientific and clinical priorities under a clear and ambitious theme: 'Vision Zero in Allergy'. Our goal is to move towards a future with zero preventable deaths, zero avoidable severe exacerbations, and minimal disease burden for patients living with allergic conditions. This vision is grounded in robust science and a strong commitment to clinical implementation. The central focus of the programme is allergen immunotherapy (AIT), not only as a disease-modifying treatment, but as a strategic tool capable of altering the natural course of allergy. We will highlight the latest advances in subcutaneous and sublingual AIT, emerging indications, predictive biomarkers of response, patient selection strategies, real-world evidence, and its role in early intervention and prevention. The 2026 Congress builds on the progress presented in 2025 by moving from innovation to practical integration, incorporating new clinical trial data, updated therapeutic algorithms, and the increasing role of precision medicine and digital tools in everyday care. At the same time, we continue to address severe and complex diseases, the impact of climate change, and the need for more integrated and sustainable models of care. In essence, this year's programme reflects both continuity and

evolution, maintaining the scientific momentum of last year while adapting decisively to the rapid advances shaping the field, always with the patient at the centre of our efforts.

Q2 Your work has consistently focused on improving diagnostic precision in allergy. How does the 2026 Congress reflect this shift from simply identifying sensitisation to defining clinically meaningful disease and treatment eligibility?

My work has long centred on improving diagnostic precision in allergy, and the 2026 Congress clearly reflects this evolution: from merely identifying sensitisation to defining clinically meaningful disease and treatment eligibility. In line with our 'Vision Zero in Allergy' theme and strong focus on AIT, we emphasise diagnostics that directly inform safer and more effective clinical decisions.

One important example is the progress in *in vitro* testing for drug allergy, including validated cellular and immunoassays that help confirm or exclude hypersensitivity reactions. These tools significantly reduce the need for high-risk drug provocation tests, improving patient safety while streamlining care. At the same time, more accurate laboratory diagnostics facilitate better risk stratification, allowing us to identify patients who can safely undergo desensitisation protocols when treatment with first-line drugs is essential.

In respiratory allergy, the Congress also highlights the growing role of nasal provocation testing to diagnose local allergic rhinitis. By distinguishing true local allergic disease from non-allergic rhinitis or asymptomatic sensitisation, we can more accurately select patients who are likely to benefit from AIT. This shift, from detecting IgE sensitisation to confirming clinically relevant, organ-specific disease, represents a fundamental step toward precision allergy care and ensures that advanced therapies are offered to the right patients at the right time.

Q3 Food allergy has traditionally been managed through strict avoidance, but this paradigm is clearly evolving. How is the 2026 Congress addressing the growing role of active treatment strategies, such as low-dose oral and sublingual immunotherapy, particularly regarding safety and patient selection?

Food allergy management is undergoing a profound transformation, and the 2026 Congress fully reflects this shift from strict avoidance toward active, disease-modifying treatment strategies. While avoidance and emergency preparedness remain essential, we are now entering an era in which oral immunotherapy (OIT) and adjunctive biologics are redefining standards of care.

A major focus of the programme is the evolution of low-dose OIT protocols, which aim to improve safety while maintaining efficacy. Over recent years, we have gained important insights into optimal dosing

regimens, build-up schedules, and maintenance strategies that reduce the frequency and severity of adverse reactions. Real-world data and long-term follow-up studies presented at the Congress address sustained unresponsiveness, quality of life improvements, and the balance between desensitisation and true tolerance induction. Particular attention is given to patient selection, identifying those most likely to benefit from OIT based on clinical history, biomarker profiles, and comorbidities such as asthma.

Equally transformative is the advent of biologics in food allergy. Anti-IgE therapy and emerging biologics targeting Type 2 inflammation are reshaping how we approach high-risk patients. These agents can be used as monotherapy in selected cases or as adjuncts to OIT to enhance safety, reduce reaction rates, and facilitate more rapid up-dosing. The integration of biologics opens new possibilities for patients previously considered unsuitable for immunotherapy due to severe reactions or multiple food allergies.

At the 2026 Congress, we emphasise structured protocols, shared decision-making, and clear criteria for treatment eligibility. The goal is not simply to expand access to active therapies, but to implement them responsibly, safely, and based on robust evidence, moving food allergy care toward a more proactive and personalised future.

Q4 Which biomarkers or functional assays do you believe hold the greatest promise for guiding clinical decision-making?

In my view, the most promising biomarkers and functional assays are those that move us beyond simple sensitisation and help us quantify clinical risk, predict severity, and guide therapeutic decisions.

First, we must not underestimate the importance of clinical risk stratification. A detailed history, including reaction phenotype, timing, co-factors, comorbid asthma, and previous anaphylaxis, remains the foundation of precision allergy care. Clinical context is still the most powerful 'biomarker' when integrated systematically into structured algorithms.

Among functional assays, the basophil activation test (BAT) holds significant promise. By measuring basophil responsiveness upon allergen exposure, BAT provides a functional readout of IgE-mediated reactivity and correlates with reaction severity in food, venom, and drug allergy. It can reduce the need for high-risk provocation tests and may help monitor response to immunotherapy. Similarly, emerging mast cell activation tests, including *ex vivo* models assessing mediator release, may further refine risk prediction, particularly in complex or severe phenotypes.

Beyond cellular assays, omics sciences, including transcriptomics, proteomics, and metabolomics, are opening new avenues for identifying molecular endotypes, predicting treatment response, and stratifying patients for biologics or immunotherapy. While not yet fully integrated into routine practice,

they are rapidly moving from discovery to clinical applicability.

Finally, well-standardised *in vivo* provocation protocols remain indispensable. Oral food challenges, drug provocation tests, and nasal or bronchial challenges, when performed in controlled settings, continue to serve as reference standards. The future lies in integrating clinical risk factors, functional assays, molecular biomarkers, and carefully designed provocation protocols into cohesive decision-making pathways that maximise safety while enabling personalised therapy.

Q5 What steps is EAACI taking to integrate de-labelling pathways into routine care, and how will this improve antimicrobial stewardship and health system efficiency?

EAACI is taking concrete steps to integrate structured drug allergy de-labelling pathways into routine clinical care, recognising that inaccurate antibiotic allergy labels (particularly to beta-lactams) have major consequences for both individual patients and public health. A key pillar is risk stratification based on clinical history, allowing clinicians to distinguish low-risk patients who can safely undergo direct oral challenge from those who require skin testing or more complex evaluation. Standardised algorithms and educational initiatives are being disseminated across member countries to harmonise practice and ensure safety.

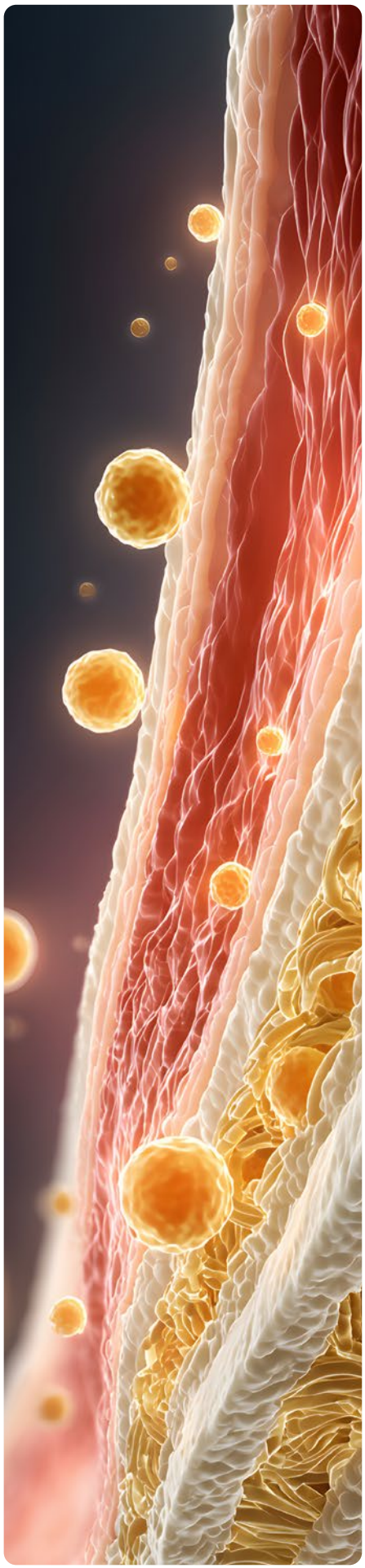
In parallel, EAACI is supporting the development and implementation of AI-based decision-support tools built on validated clinical risk factors. A recent example is the beta-lactam allergy predictor, which helps quantify the likelihood of true hypersensitivity and guide appropriate testing pathways. These digital tools aim to simplify triage, reduce unnecessary referrals, and facilitate de-labelling directly within hospital and primary care settings.

By safely removing incorrect allergy labels, patients can receive first-line, narrow-spectrum antibiotics instead of broader alternatives. This directly improves antimicrobial stewardship, reduces healthcare costs, shortens hospital stays, and lowers the risk of adverse drug reactions associated with second-line agents. Importantly, appropriate antibiotic use is a critical strategy in reducing antimicrobial resistance.

Through its ongoing campaign on antibiotic resistance, EAACI is actively raising awareness of the link between mislabelled drug allergy and antimicrobial resistance, promoting multidisciplinary collaboration between allergists, infectious disease specialists, pharmacists, and policymakers. De-labelling is therefore not only a clinical priority, but also a systemic intervention to improve health system efficiency and safeguard future antibiotic effectiveness.

Q6 Biologic therapies are now central to the management of multiple allergic and eosinophilic diseases. How is the Congress addressing the challenge of matching biologic treatments to inflammatory endotypes rather than traditional disease labels?

Biologic therapies have fundamentally changed the management of allergic and eosinophilic diseases, but the key challenge today is no longer access; it is precision. The 2026



Congress directly addresses the need to move beyond traditional disease labels such as asthma, atopic dermatitis, or chronic rhinosinusitis, and instead match biologics to the underlying inflammatory endotype driving disease in each individual patient.

A major focus of the programme is the development and validation of biomarkers derived from omics sciences, including transcriptomics, proteomics, and molecular profiling, to better characterise Type 2 and non–Type 2 inflammation. These tools allow us to identify dominant pathways, such as IgE-mediated mechanisms, IL-4/IL-13 signalling, or IL-5-driven eosinophilia, and to understand how these pathways overlap in complex cases. Many patients present with multimorbidity and multiple inflammatory mechanisms; therefore, the challenge is to determine which pathway is clinically most relevant and therapeutically actionable at a given time.

The Congress also highlights strategies for prioritising targets in patients with overlapping phenotypes and partial responses, including switching and sequencing approaches. Importantly, we are presenting growing real-world evidence demonstrating the effectiveness of biologics in broader or evolving indications, beyond those initially studied in pivotal trials. These data help refine patient selection, identify predictors of response, and inform cost-effectiveness discussions.

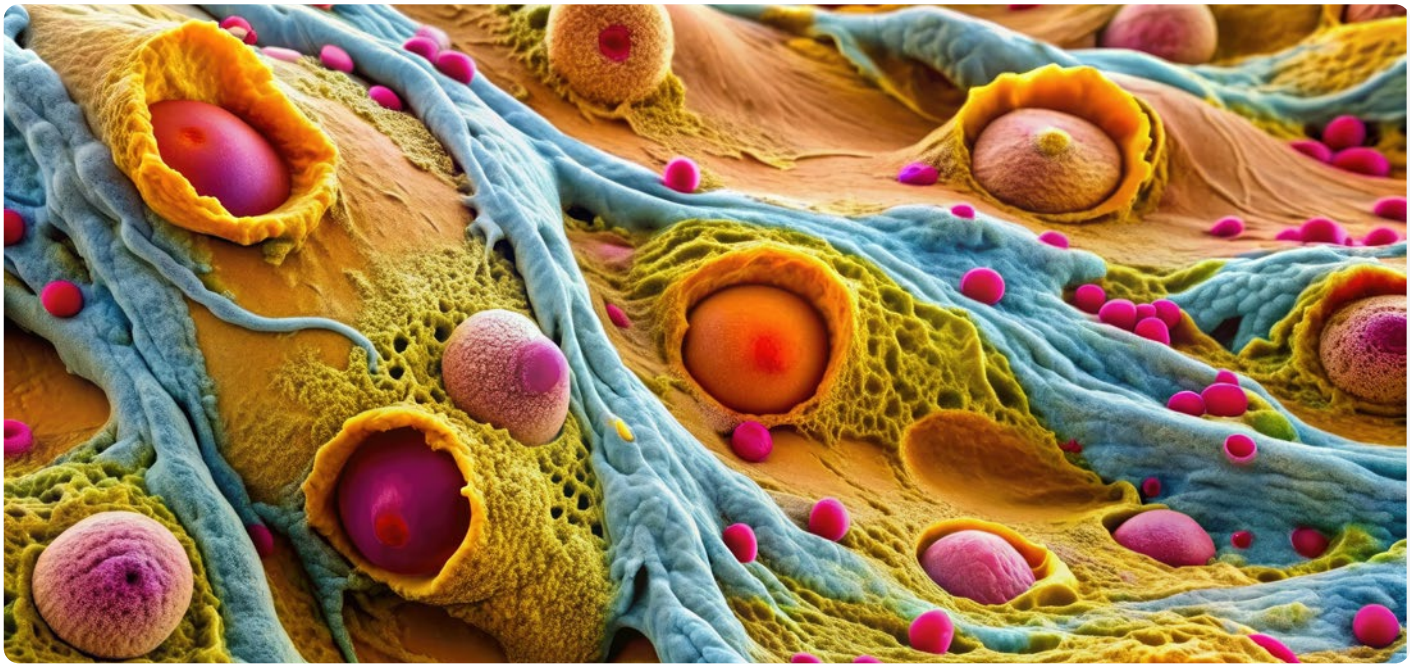
Ultimately, our goal is to integrate molecular biomarkers, clinical features, and real-world outcomes into a coherent decision-making framework, ensuring that each patient receives the biologic most aligned with their individual inflammatory signature rather than a one-size-fits-all approach based solely on diagnostic category.

Q7 There is growing recognition that epithelial barrier dysfunction links skin, gut, and airway disease. How is this concept influencing current research directions, and do you see it reshaping prevention or early-intervention strategies in allergy?

There is increasing recognition that epithelial barrier dysfunction is not simply a consequence of allergic inflammation, but a central driver linking skin, gut, and airway disease. This concept is profoundly influencing current research directions by shifting attention toward epithelial biology, barrier integrity, and the mechanisms regulating host–environment interactions. Rather than viewing atopic dermatitis, food allergy, and asthma as isolated conditions, we now understand them as interconnected manifestations of impaired epithelial homeostasis across different organs.

Current research is exploring how genetic susceptibility, environmental exposures, microbiome alterations, and pollutants disrupt epithelial tight junctions and immune signalling. The goal is to identify molecular pathways that can be targeted to restore barrier function and resilience. This includes investigating barrier-enhancing topical strategies, microbiome modulation, and biologics or small molecules that reduce epithelial inflammation and promote repair.

Importantly, this paradigm has major implications for prevention. Restoration and maintenance of epithelial health in early life may



help prevent allergen sensitisation and the onset of respiratory, skin, and food allergies, representing a true primary prevention strategy. If we can preserve barrier integrity before immune dysregulation becomes established, we may interrupt the atopic march at its earliest stages.

Even once allergic disease is established, improving epithelial homeostasis may reduce disease severity, prevent exacerbations, and limit the development of comorbidities. In this sense, barrier-directed approaches may also serve as secondary or even tertiary prevention strategies, preventing progression and multimorbidity.

Overall, the epithelial barrier concept is reshaping how we think about allergy, not only as immune dysregulation, but as a failure of tissue resilience, and opening new avenues for earlier, more preventive, and more integrated therapeutic interventions.

Q8 You have previously highlighted the potential of AI and digital health in allergy care. Where do you see digital tools making the most immediate difference and how is this reflected in the Congress programme?

I see digital tools and AI making their most immediate impact in areas where pattern recognition and data integration are critical. At the 2026 Congress, AI and digital health are fully embedded in the programme, not only within dedicated Innovation Hub sessions, but also integrated into plenary discussions, reflecting their transition from experimental concepts to practical clinical tools.

In the short term, AI is already proving highly valuable in image-based diagnostics. Algorithms trained to analyse skin lesions, radiological images of the sinuses or lungs, and even histopathology slides can support more accurate and standardised interpretation. In allergology, where differential diagnosis may include inflammatory, infectious, or immune-mediated conditions, these tools can enhance diagnostic precision and reduce variability between observers. They also facilitate multidisciplinary collaboration, particularly in complex cases requiring dermatologic, pulmonary, or pathological input.

Beyond imaging, digital platforms for structured symptom monitoring, remote follow-up, and adherence tracking are improving longitudinal disease management. These tools generate high-quality real-world data that can inform clinical decisions and optimise treatment adjustments.

Looking ahead, the real transformative potential lies in AI-driven symptom-based diagnostic algorithms and prediction models for therapy response. By integrating clinical data, biomarkers, and patient-reported outcomes, digital systems may help identify the most appropriate biologic or immunotherapy strategy for each individual. Ultimately, the Congress reflects a clear message: digital health is no longer peripheral; it is becoming an essential pillar of precision allergy care.

Q9 Which under-recognised diseases or mechanisms do you feel deserve greater attention from the allergy community in the coming years, and why?

While Type 2-driven diseases have seen extraordinary therapeutic progress, I believe several non-Type 2 conditions deserve far greater attention from the allergy community in the coming years, precisely because major unmet needs remain.

First, non-Type 2 asthma represents a significant clinical challenge. These patients often lack eosinophilia or classical biomarkers and respond poorly to currently available biologics. The underlying mechanisms, whether neutrophilic inflammation, epithelial dysfunction, metabolic factors, or mixed endotypes, are still insufficiently defined. Without a clearer mechanistic understanding, we cannot develop targeted diagnostics or effective therapies.

Similarly, most non-immediate drug hypersensitivity reactions remain poorly characterised. Unlike IgE-mediated reactions, delayed T cell-mediated responses involve complex immunopathology that is not yet fully understood. Diagnostic tools are limited, *in vitro* assays are not standardised, and we still rely heavily on clinical history and, in selected cases, cautious re-exposure. This uncertainty directly impacts patient safety and antimicrobial stewardship.

Food protein-induced enterocolitis syndrome is another under-recognised condition. Although awareness has increased, its pathophysiology is not fully elucidated, reliable biomarkers are lacking, and diagnosis often depends on oral food challenges. This creates anxiety for families and variability in care.

Finally, allergic contact dermatitis continues to pose diagnostic and mechanistic challenges. Despite being common, it involves complex cellular immune pathways, and predictive testing and prevention strategies remain limited.

Across all these conditions, the core issue is the same: an incomplete understanding of mechanisms leads to suboptimal diagnostics and limited therapeutic innovation. Investing in mechanistic research, biomarker discovery, and translational studies in non-Type 2 diseases is essential if we are to deliver truly comprehensive and equitable allergy care in the future.

Q10 Finally, for early-career clinicians and researchers entering the field, what skills do you believe will be most critical for shaping the future of allergy and clinical immunology?

For early-career clinicians and researchers entering the field, the future of allergy and clinical immunology will be shaped not only by scientific knowledge but by mindset and skill set. Scientific excellence remains fundamental: a solid understanding of immunology, rigorous methodology, and a commitment to high-quality research and clinical standards are non-negotiable. However, excellence must be paired with critical thinking: the ability to question assumptions, interpret data cautiously, and distinguish true innovation from incremental change.

Equally important is networking and meaningful interaction. Allergy is an increasingly interdisciplinary specialty, and progress depends on collaboration between clinicians, basic scientists, epidemiologists, data scientists, and industry partners. Engaging actively in congress discussions, research consortia, and international task forces not only broadens perspective but accelerates impact. The ability to communicate clearly, across disciplines and cultures, is becoming a core professional competency.

Young professionals should also cultivate a strong sense of self-demand and continuous improvement. Seeking feedback, pursuing advanced training, and aiming for measurable quality in both research output and patient care are essential for long-term credibility and leadership. Professional progress should not be driven solely by career advancement, but by a commitment to raising standards and improving patient outcomes.

Finally, adaptability will be crucial. With the rise of biologics, omics sciences, and digital health, the next generation must feel comfortable integrating innovation into practice. Those who combine scientific rigour, collaboration, intellectual curiosity, and personal accountability will be best positioned to shape the future of our specialty.