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Message from the Editor

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Dear Colleagues and Friends,

It is with immense pride and excitement that I introduce this Spring 2026 Archive of the Hong Kong Institute of Allergy. As we celebrate the 30th anniversary of our Institute, this edition feels particularly special - a testament to three decades of dedication, collaboration, and scientific excellence within our allergy community.

This issue brings together a remarkable group of authors whose work reflects the breadth and depth of our field. In the Immunology and Drug Allergy section, Dr. Grace C.H. Ho presents an article on "Drug Allergy: Clinical Practices Across the Pacific," while Dr. James K.Y. Hooi and Dr. Philip H. Li address the important initiative of bringing penicillin allergy delabelling to the community. Both Dr. Ho and Dr. Hooi are valued new members of our Editorial Board, and we are delighted to have their expertise.

We are also proud to showcase the work of our HKIA Research Grant recipients. Dr. Wang-chun Kwok presents his project on phenotyping asthma by Th2 inflammation from mild to severe disease. Dr. O.M. Chan explores the impact of boiling versus other cooking methods on cashew IgE reactivity and oral challenge outcomes. Dr. Renee Wan-yi Chan (with Dr. Tony C.H. Lei) delves into the translational potential of small extracellular vesicles in paediatric allergic asthma, examining both local and systemic protein profiles. In addition, Dr. Christine Y.Y. Wai contributes her study on the role of choline acetyltransferase-expressing T cells in the pathogenesis of allergic diseases. Together, these studies exemplify the high-quality research supported by our Institute.

Beyond research grants, we are pleased to feature a clinical attachment report by Dr. Gordon K.H. Chu, another new member of our Editorial Board, who shares his experience at the Department of Allergy and Clinical Immunology, Seoul National University Hospital. His insights into international training and collaboration are a valuable addition to this archive.

Our 30th Anniversary Series highlights a selection of educational events that underscore our commitment to multidisciplinary collaboration, including the HKIA-HKUMed-HKSH seminar on drug allergy practices across the Pacific, the MASTER Certificate Course on multidisciplinary allergy services, the HKSH AIR Symposium 2026, the HKIA-HKUMed seminar on Trends in Anaphylaxis & Multiplex Testing and the HKIA Dinner Symposium on assessment and management of secondary immunodeficiency in adults.

I extend my heartfelt gratitude to all our authors, reviewers, and the Editorial Board. A warm welcome to our three new board members - Dr. Gordon K.H. Chu, Dr. Grace C.H. Ho, and Dr. James K.Y. Hooi—whose contributions will greatly enrich our work.

As we look back on 30 years of progress, let us also look forward with enthusiasm and determination. May this archive inspire continued innovation, collaboration, and excellence in allergy care and research. Stay tuned - there is much more to come!

Thank you all for your unwavering commitment.

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Drug Allergy: Clinical Practices Across the Pacific

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The seminar "Drug Allergy: Clinical Practices Across the Pacific", organised jointly by HKIA and HKSH was held in Queen Mary Hospital on 22nd Jan 2026. The two speakers, Dr Elaine Au from Hong Kong and Prof Elizabeth Phillips from the United States, offered lectures on contemporary approaches to drug allergies with particular focus on in-vitro testing and highlighting the differences in clinical practices around the world.

The lecture by Dr Elaine Au started with a concise summary on the diagnostic approach to drug allergies. In-vitro tests for the evaluation of delayed drug hypersensitivity reactions were discussed in detail. Dr Au introduced the general principles of the ELISpot test and lymphocyte transformation test, and further explored their sensitivities when being applied to different severe delayed drug reactions. The utilization of HLA assays in management of drug allergies in Hong Kong's public medical service was also addressed.

Dr Au then provided the recent data of drug allergies in Hong Kong. A territory-wide study published in 2022 revealed that antibiotics are the most common drug culprit in patients with drug allergy labels, and nearly 2/3 of which are related to beta-lactam. Subsequently efforts have be made to facilitate delabeling penicillin allergies, with one of the main strategies being triaging low-risk cases to non-allergist physicians, pharmacists and nurses (HK-DADI and HK-PAPI programs). These initiatives yielded successful results in terms of both efficacy in penicillin allergy delabeling and patient's safety. Another highlight of the drug allergy service in Hong Kong is the evaluation of perioperative anaphylaxis. Dr Au's team presented their 10-year data in the PAWS-HK cohort in 2023. The top three culprits were neuromuscular blocking agents, beta-lactam antibiotics and chlorhexidine. Interestingly, a surge in chlorhexidine allergy was noted during the COVID19 pandemic.

The lecture by Prof Phillips first addressed the challenges posed by over-labeling of antibiotic allergy, cross-sensitivity among beta-lactams and regional variations in culprit penicillin leading to reactions. The PEN-FAST, SUL-FAST and CEPH-FAST scores have been used to stratify the risk among patients with penicillin and cephalosporin allergies. A new framework, Multiple Antibiotic Allergy Evaluation Strategy (MAAES), was introduced. This novel approach allowed delabeling of multiple antibiotic allergies in a single clinic visit, greatly reducing overall clinic visits by around 60%.

Prof Phillips then devoted the second part of her lecture to drug-induced severe cutaneous adverse reactions (SCARs). Given the highly variable performance of skin tests among different drugs and that drug challenge is contraindicated in SCARs, the utilization of in-vitro tests played an important role especially when there are multiple suspected culprit drugs. Variations in immunogenomics among difference races should not be overlooked. An important example quoted was Allopurinol-induced SCAR. While pre-treatment HLA-B*58:01 screening is now a common practice in Hong Kong, nearly half of the US Blacks with Allopurinol-induced SCAR do not carry HLA-B*58:01. HLA-A*34:02 is on the other hand increasingly recognised as a risk factor for this dreadful adverse drug reaction. In addition, global migration over the years results in a shift of HLA carriages among different populations around the world. Clinicians should keep a broad mind when approaching patients from different ethnical background.

The seminar provided a comprehensive roadmap of the management of drug allergy across the Pacific. Proper risk stratification facilitates early drug allergy delabeling by triaging patients to different non-allergist channels or a more compact novel workflow. The utilization of different in-vitro tests and increased recognition of global variations in immunogenomics greatly enhances the evaluation of drug allergy by incorporating precision medicine and improves patient's safety.

Bringing Penicillin Allergy Delabelling to the Community

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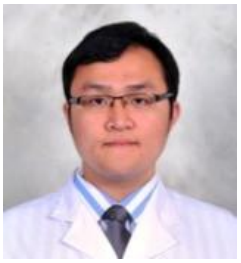

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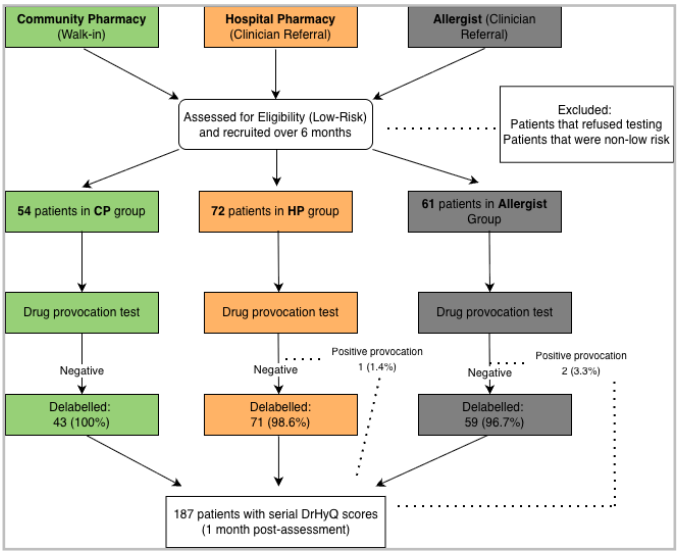
Penicillin allergy labels are among the most prevalent drug safety concerns globally, affecting approximately 1 in 50 individuals in Hong Kong [1]. Yet comprehensive evaluations consistently demonstrate that over 90% of these labels are incorrect [2]. Carrying an unverified penicillin allergy label has serious consequences: patients receive broader-spectrum antibiotics, face increased risks of antimicrobial resistance, incur higher healthcare costs, and experience significant impairment in health-related quality of life (HRQoL) [3,4].

The challenge is compounded by a critical shortage of specialist services. Hong Kong has historically had one of the lowest allergist-to-population ratios in the developed world, with approximately 1 allergist per 1.17 million adults [5]. Consequently, patients referred for specialist evaluation face waiting times often exceeding 12 months, creating a bottleneck that prevents most individuals with suspected penicillin allergy from ever receiving formal assessment.

Pioneering local initiatives have demonstrated that non-allergist healthcare professionals can safely and effectively delabel low-risk penicillin allergies. The Hong Kong Drug Allergy Delabelling Initiative (HK-DADI) established a nurse-led "hub-and-spoke" model that drastically reduced waiting times [6]. Subsequently, the Hong Kong Penicillin Allergy Pharmacist Initiative (HK-PAPI) showed that hospital pharmacists achieved delabelling rates comparable to allergists, with significantly greater improvements in HRQoL [7]. These successes raised a compelling question: if it works in hospitals, can it work in the comm



The Drug Allergy Network for Community Evaluations (DANCE) study was a prospective comparative cohort study conducted over six months in 2025. We recruited consecutive low-risk patients from three contemporaneous pathways: a university-affiliated Community Pharmacy (CP) walk-in service (n=54), the Hospital Pharmacy (HP) service at Queen Mary Hospital (n=72), and the specialist Allergist clinic (n=61). All patients underwent standardized risk-stratification and delabelling according to APAAACI low-risk guidelines [8].

Key Findings

Safety and Effectiveness
The overall delabelling success rate was 98.4% (184/187), with no significant difference between pathways. The Community Pharmacy cohort achieved a 100% success rate with zero serious adverse events, demonstrating that community pharmacists, when equipped with appropriate training and protocols, are as safe and effective as hospital-based services [7,8].

Efficiency
The community pharmacy model eliminated waiting times entirely. Time to first assessment was 0 days in the CP group due to its walk-in nature, compared to 89.5 days in HP and 307 days in the Allergist group. Time to complete evaluation was similarly dramatic: 34.5 days in CP, versus 149 days in HP and 319 days in the Allergist group (both $p < 0.001$). This represents a transformation from months or years of waiting to resolution within weeks.

Health-Related Quality of Life
All three pathways produced significant improvements in HRQoL, measured by the validated Drug Hypersensitivity Quality of Life Questionnaire (DrHy-Q6). However, the magnitude of improvement differed markedly. The CP group achieved an 86.2% reduction in DrHy-Q6 scores, compared to 57.2% in HP and 42.9% in the Allergist group (CP vs. HP $p < 0.001$; CP vs. Allergist $p < 0.001$). Applying the recently established Minimal Clinically Important Difference (MCID) thresholds for the DrHy-Q6 [9], 88.9% of CP patients achieved at least a small clinically meaningful improvement, higher than the 73.6% in the HP group ($p = 0.035$).

Distinct Populations
Baseline characteristics revealed that the three pathways serve complementary populations. The Allergist cohort contained the highest proportion of recent labels (16.4% ≤5 years), immediate reactions (39.3%), and concomitant allergies (65.6%), complex cases appropriately referred to specialists. In contrast, the CP cohort consisted almost exclusively of patients with long-standing labels (98.1% >5 years), delayed-type reactions, and few concomitant allergies, "legacy" labels that constitute the vast majority of incorrect penicillin allergy labels in the population [1,2]. The community pharmacy model uniquely reaches this underserved population.

Implications for Hong Kong and Beyond

Our findings demonstrate that community pharmacy-led delabelling is not only safe and effective but delivers improved patient outcomes while dramatically improving access. This model aligns directly with Hong Kong's Primary Healthcare Blueprint, which recommends enhancing community pharmacy roles [10].

The implications extend beyond Hong Kong. Across the Asia-Pacific region, disparities in healthcare infrastructure and testing protocols create significant inequalities in access to evidence-based allergy care [11,12]. In Mainland China, where mandatory pre-emptive penicillin skin testing has resulted in β-lactams accounting for over 60% of all drug allergy labels, the need for scalable delabelling solutions is particularly acute [13]. The DANCE model offers a blueprint that could be adapted across the region to address this shared public health challenge.

Looking Forward

While our short-term results are compelling, long-term follow-up is essential to determine the durability of QoL improvements, rates of penicillin reuse, and whether the intensive education provided in community pharmacies translates into lower relabelling rates.

Conclusion

The DANCE study provides the first evidence that community pharmacists can safely and effectively delabel low-risk penicillin allergies, achieving outcomes equivalent to specialist care while delivering superior improvements in patient quality of life and eliminating waiting times. This model represents a scalable, patient-centered solution to the pervasive problem of incorrect penicillin allergy labels, one that deserves broader implementation across Hong Kong's community pharmacy network and consideration for adaptation throughout the Asia-Pacific region.

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Boiling Versus Other Cooking Methods: Impact on Cashew IgE Reactivity and Oral Immunotherapy Efficacy

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Background

In Hong Kong, a city where deep-rooted Chinese traditions coexist with Western influences, the consumption of nuts has long held cultural significance, serving both as popular snacks and as customary gifts, particularly during the Chinese New Year festivities. Cashew nuts, in particular, are also commonly incorporated into a variety of traditional Chinese culinary preparations.

Tree nuts are one of the most common food allergens. Tree nut allergies can result in severe and occasionally fatal reactions. A risking epidemiological trend has been shown, particularly among children under the age of 18. Self-reported prevalence increased from 0.2% in 1997 to 0.5% in 2002, reaching 1.1% by 2008. (1) A recent systemic review examining the prevalence of tree nut allergy in Europe reported a lifetime self-reported prevalence of 0.9% and a point prevalence of 2.4%. (2) The Asia-Pacific Research Network for Anaphylaxis (APRA) established a regional paediatric anaphylaxis registry, which identified nut-induced anaphylaxis as most common among school-aged children in Hong Kong and Singapore. (3) In Hong Kong, Leung et al. reported that tree nuts were the 6th most common food allergen, with a prevalence of 0.41% in the general population, accounting for 5% of adverse food allergic reactions. (4) Additionally, hospitalizations due to food-induced anaphylaxis have increased, with tree nut-related anaphylaxis contributing to 3% of these hospitalisations. (5)

Although numerous studies report the prevalence data on tree nut allergy, relatively few provide nut-specific estimates, such as for cashew. As with other tree nuts, the prevalence of cashew allergy varies by region, and recent data suggest an epidemiologic increase. In the Unites States, two studies identified cashew among the most common tree nut allergies, with reported prevalence of 15% in 1999 and 30% in 2010 among individuals with tree nut allergy. (6, 7) In Sweden, Johnson et al. estimated that cashew accounted for 6% of food allergies over a 10-year period (2001-2010) and noted rising frequency and severity of reactions. (8) Similarly, in France, Moneret-Vautrin et al. reported an increase in cashew-induced anaphylaxis from 3% in 2003 to 9% in 2007. (9) Collectively, these findings indicate a growing burden of cashew nut allergy across diverse settings.

Methods

We hypothesized that cooking treatments can modify cashew proteins and thereby improve tolerance in allergic individuals. Building on evidence that processing alters food protein allergenicity, the objective of our study was to determine how different cooking treatments affect cashew allergenicity.

Cashew Nut Preparation

Raw cashew nuts were purchased from local retailers and prepared by five cooking methods. Rolling boils at 100°C were applied for 60, 90 or 120minutes. Simmering at 85-92°C was performed for 60, 90 or 120minutes. Baking conditions were 120°C for 90minutes, 180°C for 20minutes, and 240°C for 11minutes. Stir-frying was conducted at low hear (130-158°C) for 60minutes, medium heat (260-280°C) for 1.5minutes, and high heat (300-320°C) for 30seconds. Air-frying was performed at 120°C for 90minutes, 180°C for 8minutes, and 200°C for 5.5minutes.

Protein Extraction

Raw and cooked cashews were grounded and defatted with petroleum ether (boiling range: 60–90 °C) at a 1:10 material-to-solvent ratio for 22 hours. The dispersion was filtered through a Buchner funnel at ambient temperature, and the residue was used for two additional extractions (three total). The defatted material was air-dried in a fume hood to remove residual solvent and reground to yield

defatted flour. Proteins were fractionated by the Osborne method. Defatted flour was dispersed in deionised water (1:10, *w/v*), stirred for 2 hours at room temperature, and centrifuged at 6000xg for 30minutes to obtain the albumin supernatant. The pellet was extracted with 1 M NaCl (1:10, *w/v*) for 2 hours and centrifuged to yield the globulin fraction. The residue was then extracted with 70% ethanol to obtain the prolamin fraction, followed by extraction with 0.1 M NaOH to obtain the glutelin fraction. Each extraction was performed twice to clarify supernatants. Fractions were dialyzed (6–8kDa cut off) against water at 4 °C for 72 hours, freeze-dried, and stored at 4 °C. (10)

Comparison of protein profile and allergenicity

Protein profiles and IgE reactivity were assessed using patient sera. Sera were collected from 13 children with cashew allergy confirmed by double-blind placebo-controlled food challenge (DBPCFC); normal human serum served as a negative control. The major cashew allergens evaluated were Ana o 1, Ana o 2 and Ana o 3. Soluble protein extracts from raw and cooked cashews were characterized by SDS-PAGE (sodium dodecyl sulphate-polyacrylamide gel electrophoresis) using 12% gel on a Mini PROTEAN system (Bio-Rad), and bands were visualized with SimplyBlue SafeStain (Thermo Fisher).

Allergenicity of rolling-boiled cashews across durations was compared by immunoblotting (surf-blot antibody system, Idea Scientific). Protein extracts (150µL) from raw or cooked cashews were separated on 12% SDS-PAGE and transferred to PVDF membranes using the Trans-Blot Turbo system (Bio-Rad). Membranes were blocked with 5% non-fat dry milk in TBS-T (0.05% Tween-20) for 1 hour at room temperature. Patient sera were applied at 1:10, 1:20 or 1:30 dilutions (adjusted for specific IgE levels), followed by HRP-conjugated anti-human IgE (Southern Biotech) at 1:2000 in blocking solution. IgE-binding proteins were detected with SuperSignal West Pico PLUS chemiluminescent substrate (Thermo Fisher), imaged on a ChemiDoc MP system, and quantified with Image Lab software (Bio-Rad).

Boiled cashew oral immunotherapy

We enrolled 12 children (3-14 years) with cashew allergy, each of whom developed age-appropriate, dose-limiting objective allergic symptoms during a screening double-blind, placebo-controlled food challenge (DBPCFC) to roasted cashew up to 3180mg cashew protein in eight steps.

Oral immunotherapy (OIT) with boiled cashew commenced with an initial "rush" escalation on day one, advancing from dose one to dose six at 20- to 30-minute intervals as tolerated, up to 19.25mg cashew protein at dose six. Subsequent up-dosing occurred every two weeks. After tolerating dose 14 i.e. 360mg of cashew protein of boiled cashew, participants underwent an open six-step roasted cashew exit challenge with the highest single dose of 115mg cashew protein (cumulative dose of 270mg).

Results

SDS-PAGE (Figure 1)

The SDS-PAGE analysis was performed to assess the impact of various cooking methods on the protein profile of cashew nuts, with particular emphasis on three major allergenic proteins: Ana o 1, Ana o 2 and Ana o 3. Molecular weight markers range form 10-95kDa, and the intensity and presence of protein bands were used to evaluate protein integrity and degradation. Ana o 1, a vicilin (7S globulin) protein, appeared as a monomer at approximately 50kDa. Ana o 2, a legumin (11S globulin) and the most abundant cashew allergen, was typically observed as two subunits of approximately 33 and 20kDa. Ana o 3, a 2S albumin, is a small protein with a molecular weight of approximately 13-15kDa.

Raw cashew served as the control, displaying the native protein profile. Stir-frying, simmering, and air-frying, despite variations in temperatures and duration, largely preserved Ana o 1, Ana o 2 and Ana o 3. In contrast, baking resulted in marked reductions in band intensity: Ana o 1 band and Ana o 3 weakened significantly, while Ana o 2 faded but remained detectable. Rolling boil produced the most pronounced degradation, with Ana o 1 and Ana o 3 nearly absent and Ana o 2 substantially diminished. Overall, cashew proteins did not consistently exhibit reduced fragmentation when exposed to high temperatures or prolonged cooking times.

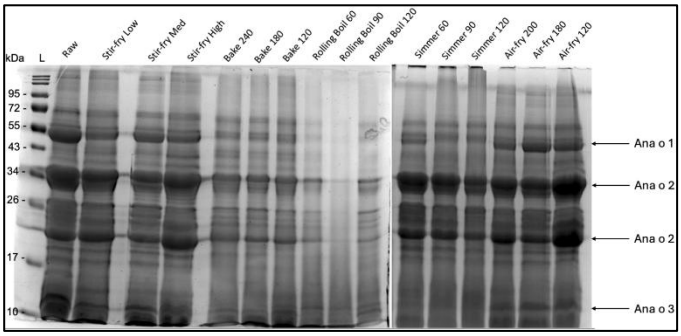


Figure 1. SDS-PAGE.

Western blotting

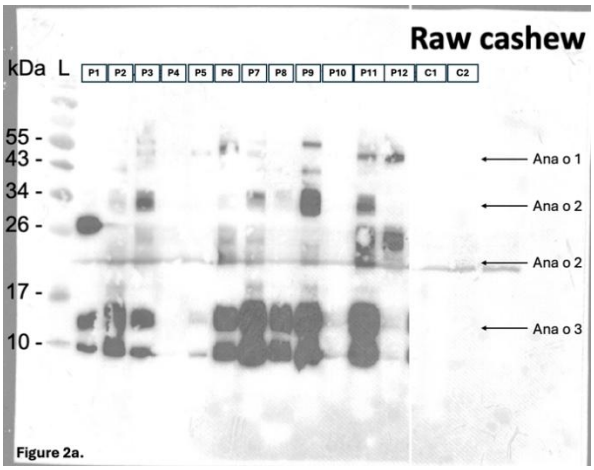
Raw cashew extracts showed robust protein bands with strong IgE immunoreactivity (Figure 2a). Predominant IgE-

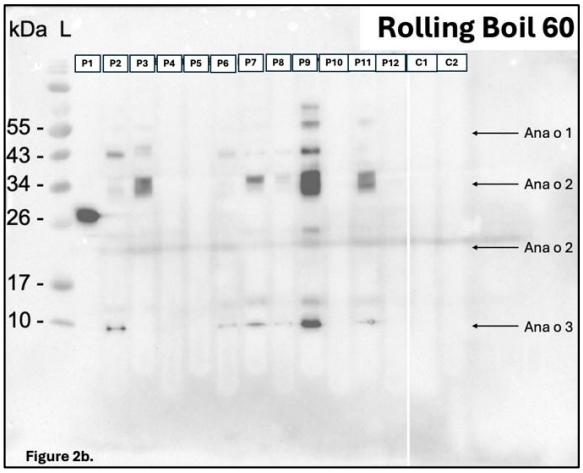
binding bands were observed: At 10-15kDa, consistent with Ana o 3, present in nearly all patient sera and representing the most consistently detected signal. At 20-33kDa, consistent with subunits of Ana o 2, showing frequent and intense IgE binding. Additional reactivity was variably observed around 55kDa, representing Ana o 1.

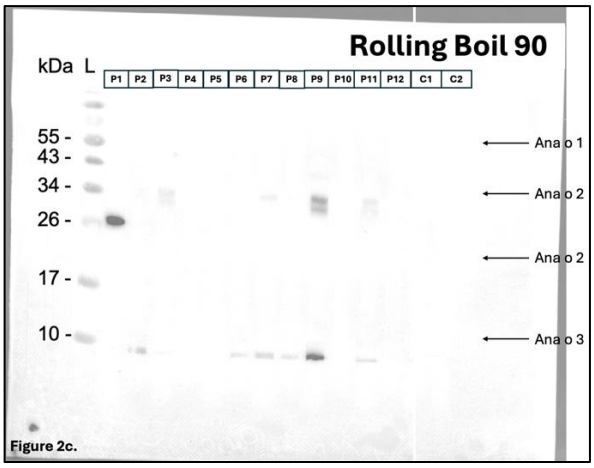
Thermal processing by rolling boil reduced the intensity of protein bands and attenuated IgE binding in a time-dependent manner. Rolling boil 60minutes (Figure 2b): Overall protein staining diminished compared with raw, with partial reduction in IgE reactivity at Ana o 1. Ana o 2 and Ana o 3 remained clearly detectable. Rolling boil 90minutes (Figure 2c): Further attenuation of protein bands in Ana o 1 region, with modest intensity remained with Ana o 2 and Ana o 3. Rolling boil 120 minutes (Figure 2d): Marked loss of IgE-reactive protein bands at Ana o 1 and Ana o 2, with minimal intensity detectable at Ana o 3 in the minority of patients sera.

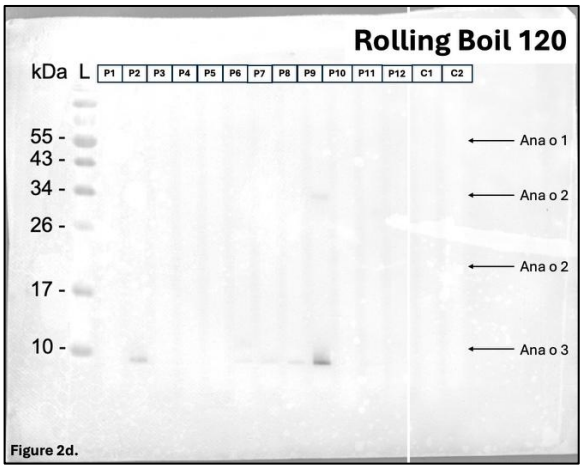
Inter-individual variability in band intensity was observed, but the pattern of Ana o 3 persistence under heat treatment was consistent. Several patients maintained residual reactivity at Ana o 2 at 60-90minutes, which largely diminished by 120minutes. Heat treatment by prolonged boiling progressively reduces IgE binding to Ana o 1 and Ana o 2, whereas IgE binding to Ana o 3 remains preserved, consistent with its known heat stability.

Figures 2a-d. Western blotting.









Boiled cashew oral immunotherapy

12 children were enrolled (mean age 7.9years ± 3.3years; 58% male). At the Dose 15 exit assessment following boiled-cashew OIT, seven of twelve participants (58%) tolerated 270mg of roasted cashew protein without dose-limiting symptoms. The median failing dose of roasted cashew at baseline DBPCFC was 30mg (IQR 10-100mg). After boiled cashew OIT, the median highest

tolerated dose at exit was 270mg (IQR 80-270mg). The median within-participant increase in tolerated dose was +127.5mg (IQR +65 to +170mg). These findings indicate that prolonged boiling reduces IgE binding to key cashew allergens and that a boiled-cashew OIT protocol can increase clinical tolerance to roasted cashew in the majority of participants.

Conclusion

Prolonged rolling boiling — most notably for 120minutes — reduces cashew allergenicity by decreasing the abundance and IgE reactivity of Ana o 1 and Ana o 2, while leaving the heat-stable Ana o 3 with some residual reactivity. Among common culinary techniques, boiling exerted the most consistent attenuation of IgE binding; simmering, stir-frying, air-frying, and typical baking conditions largely maintained the native allergenic profiles. Translating these findings to clinical practice, a boiled-cashew-based OIT protocol increased tolerance to roasted cashew in most children with confirmed cashew allergy.

These findings provide a practical rationale for incorporating boiling into desensitization strategies to facilitate OIT up-dosing. Future studies should refine protocols that integrate cooking methods while preserving nutritional quality and palatability, and potentially minimizing adverse events during OIT in subjects at high risk of anaphylaxis.

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Phenotyping in Asthma by Th2 Inflammation – From Mild to Severe Asthma

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Background

Thanks Hong Kong Institute of Allergy for supporting this study by offering. the HKIA Research Grant 2022. We are here to present the findings of our study.

Phenotyping asthma based is a hot topic in the recent years and it is a critical component to guide personalized treatment[1-6]. Asthma is broadly classified into Th2 and non-Th2 phenotypes, which is determined by the underlying inflammatory pathway involved[7].

The epidemiology of asthma phenotype is well reported in severe asthma. Th2 phenotypes are prevalent in 50–70% of moderate to severe asthma patients[8]. However, the prevalence and characteristics of Th2 phenotypes in mild asthma are less understood. This study investigates the prevalence and clinical features of Th2 and non-Th2 phenotypes across asthma severity levels, from mild to severe.

Methods

We conducted this cross-sectional study was conducted at Queen Mary Hospital, Hong Kong, from January 8, 2023, to November 7, 2023. Adult asthma patients were categorized by severity using the Global Initiative for Asthma (GINA) recommendation: mild (Step 1–2), moderate (Step 3–4), and severe (Step 5). Patients were followed until November 15, 2024, to monitor outcomes like exacerbations, hospitalizations, and treatment escalation.

Phenotypes were defined as:

- **Th2 phenotype**: Blood eosinophils ≥ 300 cells/mm³ or total IgE ≥ 100 IU/mL.
- **Eosinophilic phenotype**: Blood eosinophils ≥ 300 cells/mm³.
- **IgE-elevated asthma**: Total IgE ≥ 100 IU/mL.
- **Overlapping phenotype**: Both eosinophils ≥ 300 cells/mm³ and IgE ≥ 100 IU/mL.

Inclusion criteria: Adults ≥ 18 years with confirmed asthma diagnosis.

Exclusion criteria: Pregnant patients, recent respiratory infections, poor medication compliance and patients using biologics

Results

A total of 152 adult asthma patients were recruited. The cohort comprised 102 females (67.1%) and 50 males (32.9%), with a mean age of 58.6 ± 14.5 years. Most patients were non-smokers (82.2%), while 9.9% were ex-smokers and 7.9% were current smokers. Asthma severity was distributed as follows: mild asthma (33.6%), moderate asthma (32.9%), and severe asthma (33.6%).

Phenotype Prevalence

Th2-related phenotypes were more prevalent in moderate to severe asthma compared to mild asthma (Figure 1):

- **Th2 phenotype**: 62.5% overall (mild: 49.0%, moderate/severe: 69.3%, p = 0.015).
- **Eosinophilic phenotype**: 37.5% overall (mild: 25.5%, moderate/severe: 43.6%, p = 0.03).
- **IgE-elevated asthma**: 53.3% overall (mild: 41.2%, moderate/severe: 59.4%, p = 0.033).
- **Overlapping phenotype**: 28.3% overall (mild: 17.6%, moderate/severe: 33.7%, p = 0.038).

Clinical Characteristics by Phenotype

Mild Asthma:

- Patients with eosinophilic phenotypes were

younger (47.1 ± 14.9 vs. 58.9 ± 15.0 years, p = 0.023) and had better lung function (higher post-bronchodilator FEV1 and FVC). They also started controller therapy earlier (1.00 ± 2.45 vs. 7.95 ± 15.65 years, p = 0.012).

- Patients with overlapping phenotypes were more likely to have nasal polyps (33.3% vs. 4.8%, p = 0.009) and a history of ICU admission for severe asthma exacerbation (11.1% vs. 0%, p = 0.029).
- Th2 phenotype patients were younger (49.8 ± 15.0 vs. 61.7 ± 14.4 years, p = 0.006).

Moderate to Severe Asthma:

- Eosinophilic phenotype patients had a higher prevalence of nasal polyps (20.5% vs. 1.8%, p = 0.002) and lower post-bronchodilator FEV1 (87.87 ± 19.54% vs. 98.10 ± 19.77%, p = 0.018).
- Overlapping phenotype patients were more likely to be male (47.1% vs. 20.9%, p = 0.007), have atopic dermatitis (58.8% vs. 34.3%, p = 0.019), and nasal polyps (26.5% vs. 1.5%, p < 0.001).
- IgE-elevated asthma patients had a higher prevalence of nasal polyps (16.7% vs. 0%, p = 0.006).

Discussion

This study highlights significant differences in the prevalence and clinical characteristics of Th2 and non-Th2 phenotypes across asthma severity levels. Key findings include:

Th2 Phenotype Prevalence

Th2 phenotypes were more prevalent in moderate to severe asthma (69.3%) than in mild asthma (49.0%). Elevated IgE was the most common Th2 biomarker in mild asthma, suggesting that IgE-mediated inflammation plays a significant role even in milder disease. This contrasts with severe asthma, where eosinophilic inflammation is more dominant. The heterogeneity in phenotype prevalence underscores the need for tailored treatment approaches based on asthma severity and phenotype.

Clinical Characteristics

Nasal Polyps: The association between eosinophilic, overlapping, and Th2 phenotypes with nasal polyps was observed across all severity levels. This finding aligns with the literature, which highlights the systemic nature of Type 2 inflammation and its association with comorbid conditions like chronic rhinosinusitis with nasal polyps (CRSwNP).

Lung Function: Interestingly, mild asthma patients with eosinophilic phenotypes had better lung function (higher FEV1 and FVC) compared to their non-eosinophilic counterparts. This contrasts with severe asthma, where eosinophilic phenotypes are associated with worse lung function and more severe airflow obstruction. This discrepancy may be due to differences in the underlying pathophysiology or the timing of diagnosis and treatment initiation.

Treatment Initiation: Patients with eosinophilic phenotypes started controller therapy earlier, regardless of asthma severity. This suggests that the presence of eosinophilia and associated comorbidities (e.g., atopic dermatitis) may facilitate earlier asthma diagnosis and treatment. However, despite earlier treatment, moderate to severe asthma patients with eosinophilic phenotypes still had poorer lung function, highlighting the complexity of disease progression in these patients.

Limitations

This study has several limitations:

1. **Single-center design**: The findings may not be generalizable to other populations or healthcare settings.
2. **Small sample size**: The study may have been underpowered to detect subtle differences, particularly in the mild asthma subgroup.
3. **Short follow-up duration**: Longer follow-up is needed to assess long-term outcomes, such as changes in lung function over time.
4. **Ethnic homogeneity**: The study population was exclusively Chinese, limiting the generalizability of the findings to other ethnic groups.

Future Directions

Future studies should aim to:

1. Investigate the underlying mechanisms driving

the differences in clinical characteristics between mild and severe asthma phenotypes.

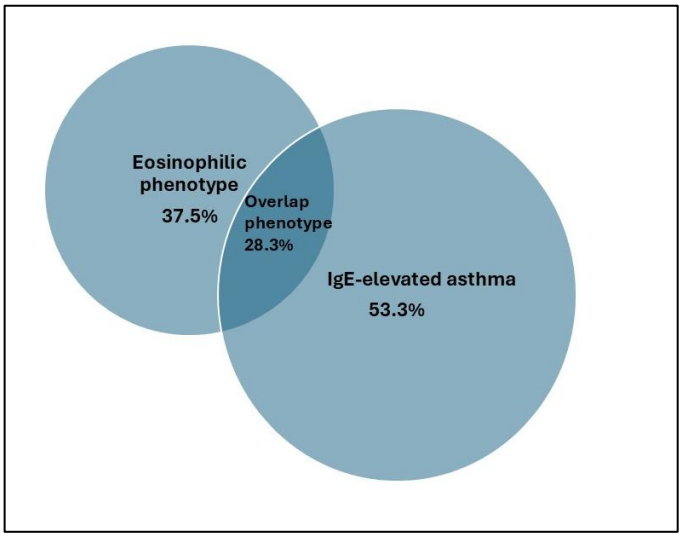
2. Explore the role of other biomarkers (e.g., fractional exhaled nitric oxide [FeNO]) in phenotyping and predicting outcomes.

3. Conduct multi-center, longitudinal studies with diverse populations to validate these findings and assess long-term outcomes.

Conclusion

This study demonstrates significant differences in the prevalence and clinical characteristics of Th2 and non-Th2 phenotypes across asthma severity levels. Th2 phenotypes are less prevalent in mild asthma but dominate in moderate to severe asthma. Eosinophilic phenotypes in mild asthma are associated with better lung function and lower exacerbation risks, contrasting with worse outcomes in severe asthma. These findings underscore the importance of phenotyping in asthma management and highlight the need for further research into the clinical implications of different asthma phenotypes.

Figure 1 Distribution of asthma phenotypes in the whole cohort



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The Translational Potential of Small Extracellular Vesicle (sEV) in Allergic Asthma in Children: The Local and Systemic Protein Profile

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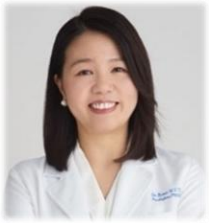

The Translational Potential of Small Extracellular Vesicle (sEV) in Allergic Asthma in Children: the Local and Systemic Protein Profile

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Introduction

Asthma is one of the most common respiratory diseases in Hong Kong, Asia, and worldwide, with a recent cross-sectional study in China reporting symptoms in 4.2% of the population [1]. International Study of Asthma and Allergies in Childhood (ISAAC) studies show a consistently high paediatric prevalence of 8–11% [2-4], and about 70% of these cases are allergic asthma, presenting with wheezing, shortness of breath, and chronic cough [5]. Clinical diagnosis in children, particularly those under six, is challenging, as spirometry and fractional expiratory nitric oxide (FeNO) can be difficult to perform reliably [6] and may vary across ethnic groups [7], reducing their value for diagnosis and treatment adjustment. Although soluble proteins such as Th2 cytokines [8] and alarmins [9] contribute to asthma pathogenesis [10], their wide overlap between asthmatic and non-asthmatic individuals limits their usefulness as diagnostic biomarkers [11]. Recent multiomic research highlights the airway epithelium as a key compartment for identifying predictive markers [12], but current approaches remain complex and not readily translatable to clinical practice.

Extracellular vesicles (EVs) encapsulate disease-relevant proteins and nucleic acids and overcome limitations of soluble proteins. EVs possess a lipid bilayer encapsulating proteins, lipids, mRNA, and miRNA fingerprints from their parental cells [13], providing a stable presentation of early disease cell states, predicting disease trajectories and overcoming limitations of free soluble proteins [14-16]. Advancements in EV isolation enable cost-efficient, standardised profiling, positioning EVs as transformative diagnostic tools. EVs are better biomarker alternatives compared to free proteins, due to their stability, capacity to reflect early disease status, and ability to predict the outcome of medical treatments [14-16]. Recent studies suggest that EVs play an important role in asthma pathogenesis and asthma exacerbation. EVs isolated from human asthmatic bronchoalveolar lavage fluid (BALF) had higher levels of vesicle membrane proteins than healthy controls [17]. BALF and lung lysate

exosomes in mice model with allergic airway also increased compared with control, with airway epithelial cells participating in the secretion of those inflammatory exosomes [18].

While EVs have been assessed as biomarkers for various cancers in adults, the EV protein profiles in patients with asthma are believed to unveil important information on asthma pathogenesis and diagnosis [15,19]. Twenty-five EV proteins were found to be up-regulated threefold in adult asthmatic serum, with five of them, Gal10, EPO, MBP1, EDN, and ALOX15, showing strong diagnostic potential, indicated by an Area Under the ROC value of 0.8 [16]. These EV proteins were significantly correlated with mucus production, wall thickening, and lung function in asthmatic individuals. Stimulation of eosinophils with IL-5, a cytokine produced by Th2 cells relevant to airway remodelling, triggered the release of Gal10 in EV through EETosis [20]. These findings suggest that EV proteins are expressed differently in asthma and non-asthma subjects and play active roles in asthma progression, highlighting their diagnostic and prognostic potential. Nevertheless, most EV studies focus on adults and the elderly, leaving a significant knowledge gap in paediatric EV profiles during normal development and disease progression, while limited studies were done to profile the EV in nasal fluid, an easily obtained sample via non-invasive means.

This study pioneered comprehensive EV profiling in children with and without clinically diagnosed asthma. Successful validation of EV panels could aid clinical practice, enabling non-invasive, precise stratification to guide early interventions.

Materials and Method

Subject recruitment

Children aged 6-11 were recruited in Prince of Wales Hospital (PWH). Specifically, the asthmatic group means those who were clinically diagnosed with allergic asthma patients were recruited in the chest clinics and allergy clinics while the non-asthmatic group means those who are not having malnutrition, obesity, and chronic disease, and visiting endocrine clinic for growth problems or general paediatric clinic. The study was conducted in accordance with the Declaration of Helsinki, and approved by the Joint Chinese University of Hong Kong (CUHK) and New Territories East Cluster (NTEC) CUHK-NTEC Clinical Research Ethics Committee (CREC) Ref: 2023.598.

Sample Collection and processing

Peripheral blood (3 mL EDTA) and nasal swabs (1 per nostril) were collected, stored at 4°C, and processed within 6 hours. Plasma was isolated by centrifugation, aliquoted, and stored at -80°C. Nasal swabs were flushed with Leibovitz's L-15 medium (Gibco 21083027), centrifuged, and stored at -80°C. All samples were processed within 12 hours of collection.

EV isolation

EVs were isolated using size exclusion chromatography (IZON, ICO-70), concentrated via ultrafiltration (Millipore, UFC800324) to approximately 0.2mL and stored directly at -80°C until use.

Statistical Analysis

GraphPad Prism version 10.0.3 was used for statistical tests. Unpaired Student's t-tests were be deployed to ascertain differences in protein expression values within EVs across distinct groups. Multiple comparisons were controlled using the Sidak-Bonferroni method for assessing proteins in patient-derived EVs, where the Benjamini-Hochberg adjustment was applied to control the FDR. Differences with p-values < 0.05 will be considered significant (*p < 0.05, **p < 0.01, ***p < 0.001), except for an FDR threshold of 0.001.

Results

Optimization of the technical pipeline of the EV isolation and purification

Our data demonstrated the successful isolation of EVs from nasal fluid and plasma, with Nanoparticle Tracking Analysis (NTA) and western blot confirming their quality, quantity, and purity (**Figure 1**). EVs were successfully isolated in a series of trials using nasal fluid samples collected from asthma patients (n=4) and non-asthmatic controls, along with plasma samples from non-asthmatic (n=5) subjects. We detected more particles in plasma than nasal fluid samples (**Figure 1A**) while the non-asthmatic nasal fluid contained slightly more particle than that in asthmatics (p=0.14). Moreover, the plasma EV has higher proportion of small EV (<150nm) than those in nasal fluid (**Figure 1B**). The EVs isolated from nasal fluids were larger and this observation aligns with existing literature. Additionally, heat shock protein 70 (HSP70), flotillin-1 (FLOT-1), CD81 and CD9 marker enriched in EVs, were detected in EVs isolated from both sample types, confirming the successful isolation of EVs (**Figure 1C**).

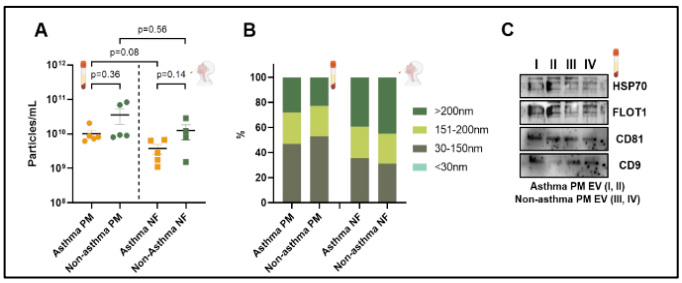

Figure 1. Characterization of EV: Zetaview® nanoparticle tracking analysis (NTA) and western blot (WB) confirmed the successful isolation of EV from nasal fluid (NF) and plasma (PM) (unpublished). (A) EV concentration measured by NTA of EV derived from the plasma (●, PM) and nasal fluid (■, NF) of the asthmatic and non-asthmatic groups (mean ± SEM). (B) Distribution of EV size in derived in plasma (PM) and nasal fluid (NF). (C) Representative western blot of EV markers HSP70 (70 kDa), FLOT1 (49 kDa), CD81 (25 kDa) and CD9 (25 kDa) from plasma (PM) derived EV from asthmatic (I, II) and non-asthmatic (III, IV) subjects.

Characterization of the EV proteins isolated in the local and systemic samples of asthmatic and non-asthmatic children

This study examined a cohort of three asthma and two non-asthmatic control. The asthma group comprised predominantly male subjects (66.7%), while the control group exhibited an equal sex distribution (50% male). The mean age of participants was comparable between groups, with asthma subjects averaging 8.33 ± 1.33 years and control subjects 9.5 ± 0.5 years (p=0.55), indicating no statistically significant age difference.

Anthropometric measurements revealed that asthma subjects presented with a mean height of 121.67 ± 5.78 cm compared to 135.3 ± 6.7 cm in controls (p=0.23). Similarly, weight measurements showed asthma subjects had a mean of 23.23 ± 3.21 kg versus 27.25 ± 0.75 kg in controls (p=0.41). Body mass index calculations yielded comparable values between asthma (15.57 ± 1.41) and control (14.95 ± 1.07) groups (p=0.78), suggesting similar body composition profiles despite the numerical differences in height and weight.

Analysis of inflammatory biomarkers demonstrated that asthma subjects exhibited elevated eosinophil percentages of 7.93 ± 3.32% compared to 3.5 ± 1.5% in controls, although this difference did not reach statistical significance (p=0.39). Neutrophil percentages were lower in the asthma group (43.83 ± 13.42%) compared to controls (56 ± 0%), but again without statistical significance (p=0.53).

For the discovery phase, proteomic analysis of paired nasal fluid and plasma samples from three asthmatic and two non-asthmatic children identified 5,749 proteins. Principal component analysis demonstrated clear differences in EV protein profiles between nasal and plasma samples (**Figure 2A**). Within each sample type asthmatic profiles were distinct from controls. Heatmap clustering further confirmed these compartment-specific and disease-related differences **(Figure 2B)**. Gene ontology analysis showed that asthmatic plasma EVs were enriched for processes related to cytoplasmic translation and cytoskeletal regulation (**Figure 2C**), while asthmatic nasal EVs were enriched for exocytosis, leukocyte migration, immune-related pathways, and antigen processing (**Figure 2D**). These findings indicate compartment-specific biological alterations in EV protein signatures between asthmatic and non-asthmatic children.

Limitation

Due to limited funding, a small number of samples can be included for the analysis, while another round of mass spectrometry will be conducted on a larger sample size for the validation phase. Correlations with clinical parameters, including lung function and eosinophil count, will also be assessed to confirm the diagnostic potential of the identified candidates.

Summary

A paediatric oriented pipeline for EV protein profiling from sample collection, processing, EV isolation and protein analysis is now in place. The EV profile demonstrated compartmental specific (nasal and blood samples) readout and provided clear differentials between non-asthmatic and asthmatic subjects. The enriched GOBPs are asthma relevant and reflect its potential for diagnostic application. The DEGs identified will be further validated for the development of a diagnostic kit.

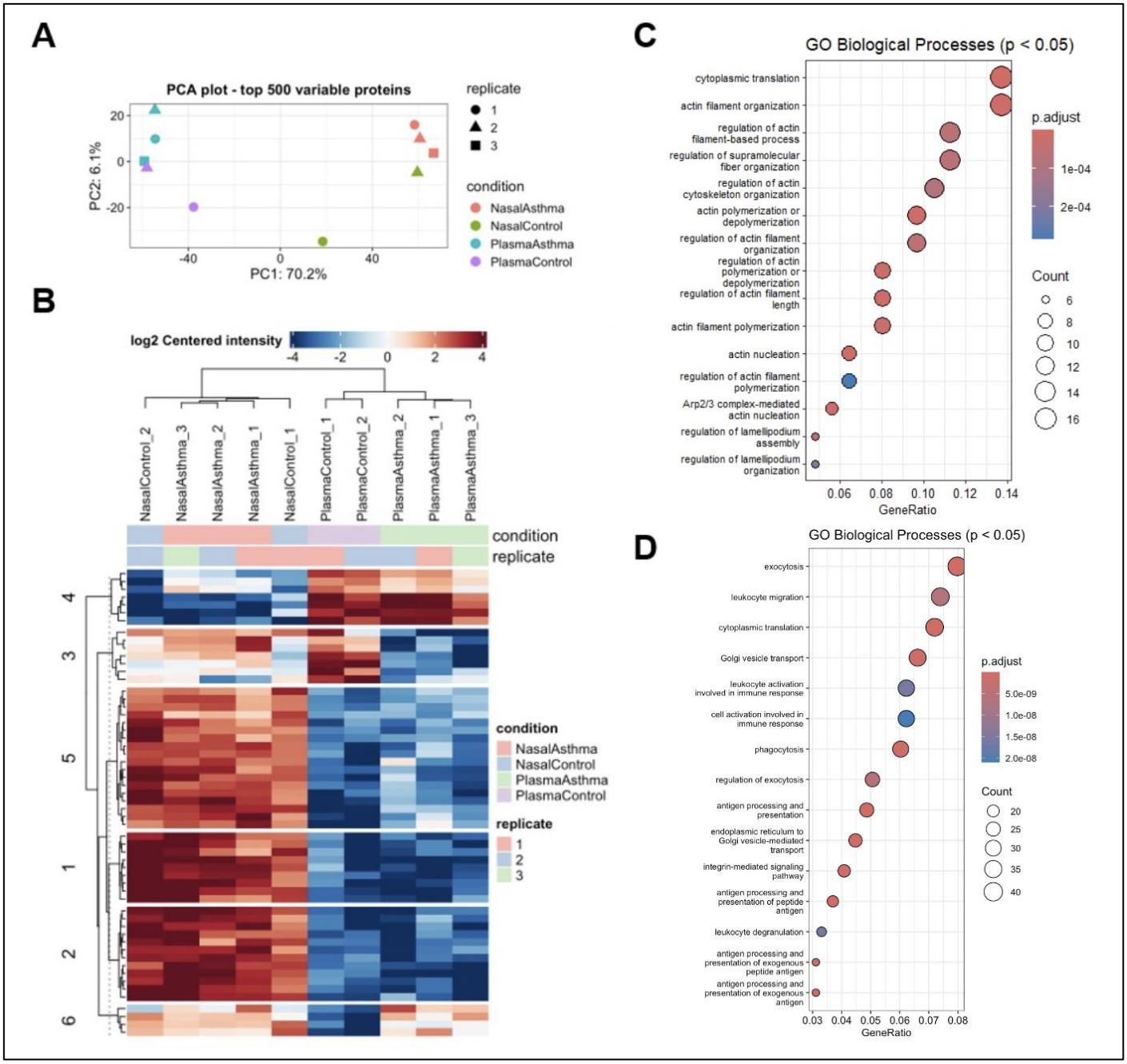

Figure 2: Mass spectrometry analysis reveals distinct protein profiles between asthma and non-asthma controls in extracellular vesicle (EV) protein profiles in nasal fluid and plasma samples (unpublished). The figure includes: (A) PCA of EV protein profiles of asthma and non-asthma from nasal fluid and plasma samples, (B) Heatmap of k-mean clusters of the differentially expressed proteins (DEP) comparing nasal fluid to plasma EV proteins. Bubble chart shows the result of Gene Ontology analysis in (C) plasma, and (D) nasal fluid in asthma compared with non-asthma controls.

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Role of Coline Acetyltransferase-expressing T Cells in the Pathogenesis of Allergic Diseases

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Hong Kong

Atopic diseases characterized by a Th2-skewed immune response and overproduction of IgE are affecting up to 10% of the general population. About 40% of children with food allergies are allergic to more than one food. The Centers for Disease Control & Prevention reports that the prevalence of food allergy in children has increased by 50% between 1996 and 2011, while >40% of children and adults with food allergies have experienced a severe reaction requiring emergency medical care. Such a high and increasing prevalence of food allergy, as well as the associated life-threatening allergic reactions greatly impact the quality of life of patients. Better understanding on the pathogenic mechanism underlying allergic diseases, in particular food allergy, would greatly impact on better diagnosis and treatment of these diseases.

Our current understanding on allergic diseases has focused on the pathological immunological environment. Yet, recent studies have highlighted the pathophysiological roles of the nervous system and neuro-immune interactions in the development of allergic diseases. While traditionally linked to neurons, recent studies showed that various non-neuronal cells, such as the antigen-presenting cells (APCs), dendritic cells (DCs), the group 2 innate lymphoid cells (ILC2s), T cells, B cells, monocytes and natural killer cells also express choline acetyltransferase (ChAT) that catalyze acetylcholine (ACh). [1, 2]. In general, T cells have significantly higher ACh content than B cells, and the ACh content in CD4+ T cells is also significantly higher than CD8+ T cells [3]. Studies revealed that ACh induces bronchoconstriction and promotes changes in the airways associated to Th2 responses [4]. For instance, ACh polarized DCs towards a Th2-promoting profile by stimulating the expression of OX40L to promote the production of IL-5, IL-4 and IL-13 by CD4+ T cells that contribute to the development of allergic inflammation [5]. Apart from receiving upstream ACh signal and acting as cholinergic cells by producing ACh that act on the AChRs on other immune cells to direct a neuro-immune communication pathway, ACh produced by CD4+ Th cells can influence their own proliferation, function and migration in an autocrine manner [6, 7]. While the cholinergic signaling in Th cells is acknowledged, its precise contribution to Th2 and regulatory T (Treg) cells modulation is incompletely understood. Supported by the Hong Kong Institute of Allergy Research Grant, we investigated the autocrine regulation mediated by ACh on the expansion and differentiation of ChAT-expressing Th2 and Treg cells to decipher the potential pathophysiological role of ChAT-CD4+ T cells and ACh in allergic diseases.

With the EasySep™ mouse naïve $CD4^+$ T cell isolation kit, we isolated the untouched $CD4^+$ T cells for T cell differentiation and in vitro polarization with appropriate cytokine supplementation. The differentiation of Th2 cells was significantly inhibited by the addition of non-selective muscarinic antagonist but not by non-selective nicotinic antagonist. Similarly, the differentiation of Treg cells was only inhibited by muscarinic inhibition but not nicotinic inhibition. The addition of acetylcholine chloride (exogenous neurotransmitter), on the other hand, further promoted the differentiation of Treg cells but did not exert significant effects on the differentiation of Th2 cells (Figure 1).

To further evaluate the effect of ACh on cytokine production in T cells, RNA were extracted from the differentiated cells and cDNA was prepared. The addition

of muscarinic antagonist and nicotinic antagonist remarkably down-regulated the expression of *IL-5* but did not exert detectable effect on *IL-4*. This is in concordant to a previous study that blocking the M3R prevented IFN-γ and IL-17A synthesis, while the effect on IL-4 remained unchanged [8].

Our results consistently demonstrated the non-dispensable role of ACh on the differentiation of Th2 and Treg cells via an autocrine manner. nAChRs and mAChRs expressed on T cells mediate the increase in Ca^{2+} through Ca^{2+} influx and Ca^{2+} release respectively [9]. This promotes Ca^{2+} oscillations and c-Fos gene expression, which in turn increases the synthesis of IL-2 and so T cell activation [10]. Although previous studies demonstrated that ACh regulates this Ca2+ signalling pathway through the nicotinic acetylcholine receptor [11], our results demonstrated that autocrine Ach-activated mAChRs are involved in the differentiation of Th2 and Treg cells. It is plausible that autocrine Ach does not elicit nAChR activation in T cells, by which previous studies reported that Th1, Th2 or Th17 cells do not express detectable levels of this receptor [12]. Interestingly, although ACh-mediated differentiation of Th2 was not hampered by blocking nicotinic receptors, but such blockage specifically impaired *IL-5* expression in Th2 cells. This suggested the induction of IL-5^- Th2 cells in the absence of nAChR activation.

In summary, understanding on the role of the cholinergic system in Th cells allows for the development of new strategies to control allergic diseases. The proof-of-concept findings from this study suggest the essential role of acetylcholine on the differentiation and expansion of Th2 and Treg cells for future therapeutic approach design.

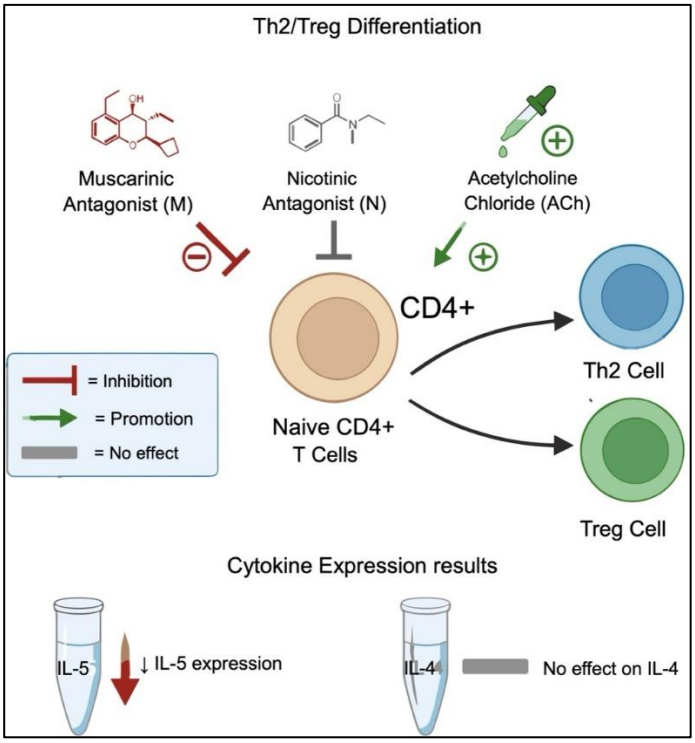

Figure 1 Summary of research findings.

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Clinical Attachment at the Department of Allergy and Clinical Immunology at Seoul National University Hospital

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I travelled to Seoul, South Korea for a 10-day clinical attachment at the Department of Allergy and Clinical Immunology of Seoul National University Hospital (SNUH) in September 2025. Located in the heart of the city, SNUH is a major tertiary centre and the teaching hospital of Seoul National University College of Medicine. It is also home to one of Asia's leading research institutes in allergy and clinical Immunology, making it an ideal place to observe how a well-developed service operates in practice.

Professor Kang Hye-Ryun, who leads the Drug Allergy Safety Centre, was my host during this attachment. Her work focuses on drug allergy safety, particularly contrast and chemotherapy-related hypersensitivity. Over the years, she has helped develop and refine the 1-bag desensitization protocol, which allows many oncology patients to safely continue first-line treatments despite previous allergic reactions. Coming from Hong Kong, where drug allergy services in oncology are still developing and often fragmented, I was keen to see how such a service could be structured and sustained in a busy clinical setting, and to reflect on how similar models might be adapted locally.

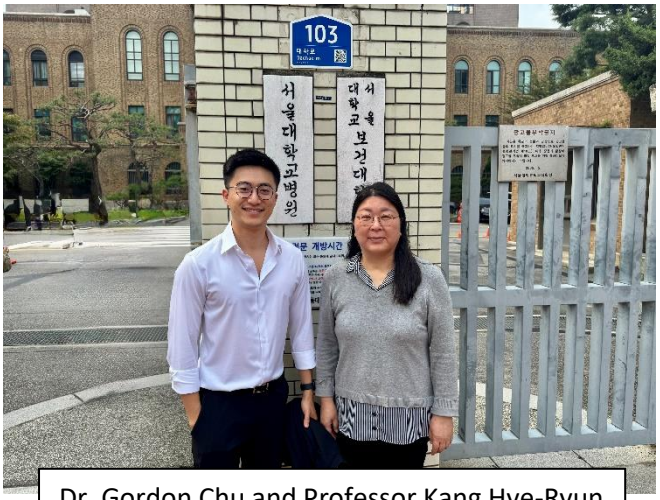
From the very first day, I was made to feel welcome. Their junior registrar Jiyeon greeted me at the entrance and introduced me to the rest of the team. Despite being a relatively small unit with two Professors, one Assistant Professor and two Registrars, the team worked with remarkable coordination and efficiency. Even before entering the clinic, I was struck by the hospital environment. The lobby was lively, with familiar food chains, juice stalls and doughnut shops. It felt less like a traditional hospital space and more like a shared community hub, which gave the entire place a warmer and more approachable atmosphere. There was even a barber shop specialised for oncology patients to have a trim!

One of the most memorable aspects of my visit was seeing how drug allergy assessment was organised. Unlike in Hong Kong, where we work within a largely unified electronic Clinical Management System, hospitals in South Korea each operate their own separate electronic health records. This means that when patients attend a new hospital, their drug allergy history often needs to be reviewed and clarified again. Rather than seeing this as a limitation, SNUH has developed a thoughtful and effective system around it. Pharmacists play a central role in this process. Each day, a dedicated team is stationed in the outpatient clinic to meet new patients and carefully document their drug allergy histories. I was impressed by their depth of knowledge and extent of involvement in drug allergy care. Watching this process in action, it became clear how much it improved the accuracy of records and streamlined the overall workflow, while allowing doctors to focus on clinical care.

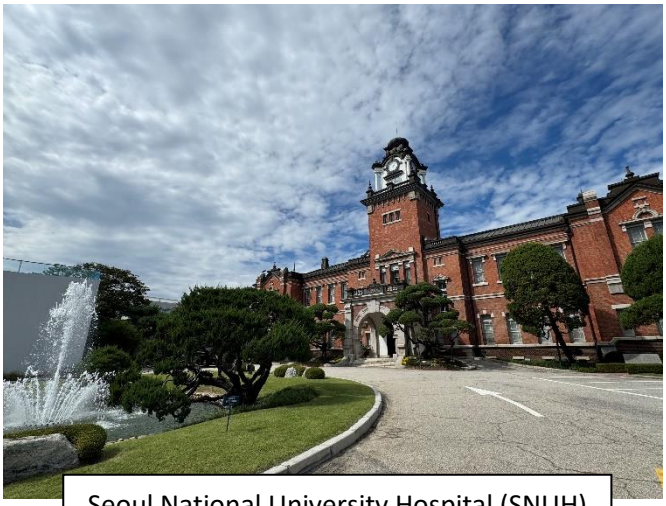
The clinical facilities were equally impressive. Within the clinic, there was a treadmill available for exercise provocation testing, allowing real-time assessment of exercise induced reactions. The chemotherapy desensitization service was particularly well established, supported by close collaboration with a local medical equipment company to develop an automated infusion device. This innovation helped standardise drug delivery and improve safety monitoring. What stood out even more was the confidence of the ward nurses. They were highly familiar with desensitization protocols and carried them out with calm assurance, which in turn reassured patients. It highlighted how important training of medical personnel is in delivering safe and effective desensitization care to oncology patients.

Outside of work, I was fortunate to experience the warmth and hospitality of the team. One evening, they brought me to Namsan Seoul Tower, where we enjoyed a panoramic night view of the city. It was a memorable moment, sharing stories about our training, our work, and life beyond the hospital. I was also kindly invited to a team dinner, where we had Korean barbecue together. These moments offered a glimpse into the strong sense of camaraderie within the team, and how relationships outside the workplace help strengthen collaboration within it.

Looking back, this attachment was more than just a clinical learning experience. It provided a deeper understanding of how a well-integrated allergy service can be embedded within oncology care through thoughtful system design, multidisciplinary collaboration and strong team culture. The experience at SNUH has given me valuable perspectives on how similar services might be developed in Hong Kong, and I am grateful to the team for their generosity in sharing both their expertise and their culture. I look forward to seeing them at future conferences and hopefully host them in Hong Kong when they come visit us!



Dr. Gordon Chu and Professor Kang Hye-Ryun



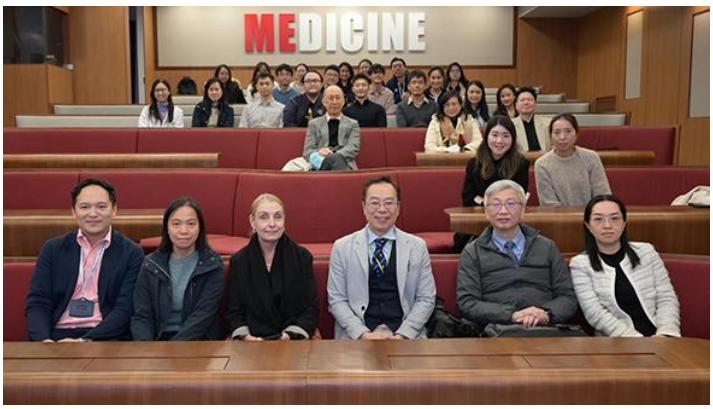
Seoul National University Hospital (SNUH)

A warm welcome from the team at the Department of Allergy and Clinical Immunology, Seoul National University Hospital (SNUH)

HKIA, HKUMed and HKSH Seminar:
Drug Allergy: Clinical Practices Across the Pacific
22 January 2026

The collaboration between HKIA, HKUMed, and HKSH co-hosted a seminar on "**Drug Allergy: Clinical Practices Across the Pacific**" on 22 January 2026 in Hong Kong.

This seminar brought together leading experts in the field of drug allergy to compare contemporary approaches to diagnosis and management, with a particular focus on in vitro testing. The seminar also highlighted state-of-the-art methodologies, regional differences in clinical practice, and emerging innovations in allergy diagnostics. Through open dialogue, industry experts Prof. Elizabeth Phillips from Vanderbilt University Medical Center, USA and Dr. Elaine Au from Queen Mary Hospital, Hong Kong shared real-world experience. They discussed the strengths and limitations of current testing strategies and explored opportunities for harmonization and collaboration in advancing safe, evidence-based care for patients with history of severe drug allergies.



MASTER Certificate Course:
Multidisciplinary Allergy Services: Treatment, Education and Research
7 March 2026

The **MASTER Certificate Course on "Multidisciplinary Allergy Services: Treatment, Education and Research"**, co-hosted by the Hong Kong Institute of Allergy and the Department of Medicine, School of Clinical Medicine, HKUMed, was successfully held on 7 March 2026, bringing together physicians and allied health professionals committed to advancing allergy care in Hong Kong.

Against the backdrop of a rapidly growing allergy disease burden and an ongoing shortage of specialist services, the course addressed an urgent local need by focusing on capacity building through multidisciplinary collaboration. Drawing on Hong Kong's successful experience in joint allergy clinics, the programme highlighted how coordinated care involving physicians, nurses and pharmacists can enhance service delivery and patient outcomes.

Participants benefited from a comprehensive programme combining didactic lectures and hands-on practical sessions. Experienced physicians and allied health leaders shared practical insights into the establishment and operation of multidisciplinary clinics across key allergy domains, including drug, food, paediatric, skin and airway allergy. Real-world case discussions and interactive sessions enabled participants to exchange experiences and translate evidence-based principles into clinical practice. The course also fostered meaningful cross-disciplinary networking, laying the groundwork for future collaboration and supporting the development of new and expanded allergy services across Hong Kong. Feedback from participants highlighted the course's relevance, practicality and timely focus on multidisciplinary service models.

HKSH AIR Symposium 2026

26 April 2026

The HKSH AIR Symposium 2026 was successfully held on 26 April 2026 at the HKSH Eastern Building. HKIA was honoured to serve as one of the supporting organisations for this interdisciplinary symposium, which brought together experts in allergy, immunology, and rheumatology to share cutting-edge clinical updates.

HKIA and HKUMed Seminar:
Trends in Anaphylaxis & Multiplex Testing
6 May 2026

HKIA and HKUMed will co-host a seminar entitled **"Trends in Anaphylaxis & Multiplex Testing"** on 5 May 2026 (Tuesday).

This seminar will emphasize how these advanced tools can enhance clinical decision-making, support personalized care, and improve patient outcomes.

HKIA Dinner Symposium:
Assessment and Management for Secondary Immunodeficiency in Adults: An Immunologist's Perspective
26 May 2026

HKIA will present a Dinner Symposium focusing on the **Assessment and Management for Secondary Immunodeficiency in Adults: An Immunologist's Perspective** on 26 May 2026 (Tuesday).

This evening symposium will feature expert insights and practical demonstrations from leading clinicians in immunology. Join our field experts **Prof. Suran Fernando (Australia), Dr. Philip H. Li (Hong Kong)** and **Ms. Candy Chan (Hong Kong)** at this symposium!

Overseas Meeting

EAACI Annual Congress 2026
12 - 15 June 2026 | Istanbul, Turkey (https://eaaci.org/events_congress/eaaci-congress-2026/)

Local Meeting

HKIA Annual Scientific Meeting 2026 (ASM 2026)
6 September 2026 | Hong Kong