

## Asthma and Allergic Diseases in South East Asia - Studies from Singapore

On behalf of the contributing authors of this issue, we would like to thank Professor Wanpen Chaicumpa and members of the Editorial Board of the Asian Pacific Journal of Allergy and Immunology for this singular honor and privilege to have a journal issue dedicated to articles on asthma and allergic diseases from Singapore.

Through this issue, it is our intention to highlight the increasing importance of allergy and its diseases in this region. This is evident by our increasing clinical workload, as well as the need to carry out research to better define the unique features of allergic diseases in this region. It is also our intention to contribute internationally to the growing knowledge in this field. The original papers and reviews in this issue bring to light several poignant issues.

The house dust mite allergen is the most important aeroallergen in Singapore. An important characteristic of the dust mite fauna

is that Blomia tropicalis is highly encasing of bedding with allergen prevalent in this region.<sup>1-3</sup> As their allergens are distinct from the more ubiquitous Dermatophagoides pteronyssinus,<sup>4</sup> a greater understanding of this tropical mite, B. tropicalis, would be crucial for diagnostic and management strategies of mite allergy in this region. An article in this issue describes the laboratory culture characteristics of B. tropicalis.<sup>5</sup> These cultures have provided invaluable material for the evaluation of *B. tropicalis* allergy and its allergens. Kuo et al.<sup>6</sup> went on to demonstrate differences in the sensitization profiles to purified allergens of both dust mites between two populations where these mites prevail (Taiwan and Singapore), and these data underscore the importance of recognizing such differences between communities, particularly when allergen immunotherapy is being considered.

With regards to dust mite avoidance measures, the article by Goh *et al.*,<sup>7</sup> suggests that in the tropics, standard household hygiene measures and modalities such as

barrier covers may not efficiently reduce mite allergens for extended periods. In a more positive light, Lim<sup>8</sup> provides us with an evidencebased approach in developing cost effective asthma management strategies. As we face the challenges of providing cost effective treatment, this review provides us with a practical means of optimizing therapy for our patients. However, even as we look towards newer therapeutic strategies, we are reminded from data by Ng<sup>9</sup> that under-treatment and patient poor management skills are still important issues in our community. Additionally, Ng states that ethnic differences in the morbidity and mortality of the disease have to be understood so that we may optimize care. These measures would help towards containing the already substantial cost of this disease.<sup>10</sup> Under-recognition is also an important issue that we need to address.11

In a paper on food allergy,<sup>12</sup> the pattern of food allergens causing anaphylaxis in the Singapore population is unusual. The edible bird's nest, a Chinese delicacy, was the most common cause of anaphylaxis in children treated in the hospital. Furthermore, in that study peanut-induced anaphylaxis was nonexistent. In contrast, peanut allergy has become increasingly prevalent in western populations. The study into reasons for this wide disparity in incidence between populations may shed light on the mechanisms and environmental risk factors responsible for food-induced anaphylaxis.

The remaining articles deal with a diverse range of topics. The papers on clinical experiences in atopic<sup>13</sup> and contact dermatitis<sup>14</sup> emphasize the extent of this problem in this region. In particular, Goh and coworkers have done extensive work on contact dermatitis. with recent publications related to occupational contact dermatitis and the paradoxical problem of topical steroid-induced dermatitis.<sup>15,16</sup> The contributions in the realms of laboratory research, such as those involving tyrosine kinase signaling cascade in asthma,<sup>17</sup> and the genetics of asthma and atopy<sup>18</sup> have provided insight into the interests and expertise in this region.

In closing, we wish once again to express our gratitude to the Editor and his team for this opportunity to publish some of the work from Singapore in this issue. We sincerely hope that this attempt would provide the impetus, however small, towards the greater effort by clinicians and scientists in this region to provide us with a better understanding of this group of common diseases we face in our daily clinical practice.

## B.W. Lee, D.Y. Wang and F.T. Chew

National Universiity of Singapore, Singapore

## REFERENCES

1

- Zhang L, Chew FT, Soh SY, Yi FC, Law SY, Goh DYT, Lee BW. Prevalence and distribution of indoor allergens in Singapore. Clin Exp Allergy 1997; 27: 876-85.
- Baratawidjaja IR, Baratawidjaja PP, Darwis A, Yi FC, Chew FT, Lee BW, Baratawidjaja KG. Mite fauna in Jakarta homes. Allergy 1998; 53: 1226-7.
- 3. Chew FT, Zhang L, Ho TM, Lee BW. House dust mite fauna in tropical Singapore. Clin Exp Allergy 1999; 29: 201-6.
- Chew FT, Yi FC, Chua KY, Fernandez-Caldas E, Arruda LK, Chapman MD, Lee BW. Allergenic differences between the dust mite *Blomia tropicalis* and *Dermatophagoides pteronyssinus*. Clin Exp Allergy 1999; 29: 982-8.
- Yi FC, Chew FT, Jimenez S, Chua KY, Lee BW. Culture of *Blomia tropicalis* and IgE immunoblot characterisation of its allergens. Asian Pac J Allergy Immunol 1999; 17: 189-94.
- Kuo IC, Yi FC, Cheong N, Shek LPC, Chew FT, Lee BW, Chua KY. Sensitization to Blomia tropicalis and Dermatophagoides pteronyssinus - A comparative study between Singapore and Taiwan. Asian Pac J Allergy Immunol 1999; 17: 179-87.
- 7. Goh DYT, Chew FT, Lim SH, Zhang L, Lee BW. An evaluation of mattress encasings and high efficiency particu-

late filters on asthma control. Asian Pac J Allergy Immunol 1999; 17: 169-74.

- Lim TK. Asthma management: evidence based studies and their implications for cost-efficacy. Asian Pac J Allergy Immunol 1999; 17: 195-202.
- Ng TP. Adult asthma prevalence, morbidity and mortality and their relationships with environmental and medical care factors in Singapore. Asian Pac J Allergy Immunol 1999; 17: 127-35.
- Chew FT, Goh DYT, Lee BW. The economic cost of asthma in Singapore. Aust NZ J Med 1999; 29: 228-33.
- Chew FT, Goh DYT, Lee BW. Underrecognition of childhood asthma in Singapore: Evidence from a questionnaire survey. Ann Trop Pediatr 1999; 19: 83-91.
- Shek LPC, Lee BW. Food allergy in children - The Singapore story. Asian Pac J Allergy Immunol 1999; 17: 203-6.
- Tay YK, Khoo BP, Goh CL. The epidemiology of atopic dermatitis at a tertiary referral skin centre in Singapore. Asian Pac J Allergy Immunol 1999; 17: 137-41.
- Leow YH, Goh CL. Contact allergy in Singapore. Asian Pac J Allergy Immunol 1999; 17: 207-17.
- 15. Goh CL and Gan SL. Change in cement manufacturing process, a cause for decline in chromate allergy? Contact Dermatitis 1996; 34:51-4.
- Khoo BP, Leow YH, Ng SK, Goh CL. Corticosteroid contact hypersensitivity screening in Singappore. Am J Contact Derm 1998; 9:87-91.
- 17. Wong WSF, Tsang F, Li H, Ma B. Effects of inhibitors of the tyrosine kinase signaling cascade on an *in vitro* model of allergic airways. Asian Pac J Allergy Immunol 1999; 17: 229-37.
- Tay AHN, Tan EC, Chew FT, Goh DLM, Shek LPC, Lee BW. Ethnic differences in genetic susceptibility to atopy and asthma. Asian Pac J Allergy Immunol 1999; 17: 239-42.