

Allergic diseases in the Asia Pacific: path into the future

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Infectious disease used to be the most common cause of morbidity and mortality in the past. With improvement of hygiene and vaccination as well as other infection control measures, non-communicable diseases have taken over as the major causes of morbidity and mortality in most developed countries. Many of these non-communicable diseases are also increasing rapidly in developed and developing countries in Asia [1-3]. Among them, allergic diseases are the most common chronic diseases especially affecting the young population and children. Asia-Pacific is one of the most densely populated regions of the world and the population within the region is relatively younger as compared to countries in North America and Western Europe. Allergic diseases are known to be more common in highly developed countries where up to half of the population may suffer from one or more allergic conditions [4, 5]. The region is unique that there are highly developed regions such as Korea, Japan, Australia, and Singapore while other places are in different degrees of economic development. However, research on allergic diseases is rather limited in many of these places as it has been perceived to be uncommon in some of

these places. Community surveys also revealed that conditions like asthma and allergic rhinitis are sub-optimally controlled in a large majority of patients [6]. We must ask ourselves why allergic diseases are uncommon in some of these places and why the levels of control of sufferers of allergic diseases are rather poor across Asia. Environmental pollution, including indoor and outdoor pollution, is a major problem in many places in Asia associated with the rapid urbanization as people are moving away from their rural environment to move into the cities and the ever increasing number of motor vehicles in many Asian cities [7]. Indoor environmental pollution related to biomass combustion may be an important modifiable factor associated with allergic airway diseases in the developing regions across Asia Pacific [8]. Not surprising, prevalence rates of asthma and allergies are increasing rapidly as documented by several recent studies in the region [4, 9]. There is little doubt that changing environmental conditions are some of the most important reasons explaining the high prevalence of allergies in the developed world. The spectrum of food allergies is also very different within Asia when compared to what has been described in the Western literature.

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For example, peanut allergy is very uncommon in many Asian countries despite being widely consumed by many population groups in the region [10]. Due to the diversity of genetic background of the people and the varied environmental exposure in different parts of the Asia-Pacific, this region should be able to provide plenty of opportunities to determine the genetic and environmental causes of different allergic conditions. Furthermore, many of the research findings from Europe and North America may not be directly applicable to the populations in Asia as demonstrated by genetic studies of allergic diseases. There are certainly many talents in the research arena within the field of allergy in the region as illustrated by many original studies and reviews published in this issue of *Asia Pacific Allergy*. Their research spans from genetics, basic mechanisms, clinical and experimental treatment to epidemiology studies. Large consortium-based research along with better funding opportunities similar to those of NIH in the US or European Commission will be needed to solve some of the many puzzles of allergic diseases in the Asia-Pacific region.

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