

# 11<sup>TH</sup> WORLD PEDIATRIC CONGRESS

AUGUST 16-17, 2018 SINGAPORE



## *Abdulrahman S Al-Frayh*

King Saud University, KSA

### **A nationwide study of allergy and asthma sensitizers in homes of Saudi Arabia**

Prevalence of asthma and other allergic symptoms has increased in the pediatric populations in Saudi Arabia. Apart from traditional living in areas, the hot temperature forces the families to spend more time indoors. In order to evaluate the impact of indoor allergens in the community, a nationwide study of various allergy and asthma sensitizers and triggers, mainly inhabiting the indoor environment, was conducted simultaneously in several cities of Saudi Arabia in 2015-2016, including coastal and non-coastal regions. The project (RAC# 2170 023) was supported by NSTIP (13-BIO814-20) and approved by American Association for Advancement of Sciences (AAAS). This is the first ever simultaneous study of major indoor allergenic components nationwide. A total of 560 house dust samples from 164 patients and 396 control homes were collected from seven regions. Samples were sieved and extracted in PBS-PH-8 and analyzed by ELISA using different antibodies. The targeted allergens included *Dermatophagoides pteronyssinus* (Der p 1), *Dermatophagoides farinae* (Der f 1), *Blattella germanica* (Bla g 1: Group-1), *Blattella germanica* (Bla g 2: Group-2), *Flelis domesticus* (Fel d1), *Rattus norvegicus* (Rat n1) and *Blomia tropicalis* (Blo t 5). The analyses of data between patients and controls and coastal verses non-coastal regions revealed quantitative variations in their threshold values. Chi-square test and odd ratio to test the association between cases and controls as well as detection rate in coastal and non-coastal cities were conducted. Significant levels for Bla g 1 in Makkah ( $p < 0.0001$ ) and Riyadh ( $p < 0.0006$ ), Rat n 1 ( $p < 0.0001$ ) and Blo t 5 ( $p < 0.0038$ ) for Riyadh were obtained. The results will help health care directorates, allergists and hospitals in selection of appropriate diagnostic test panels and their therapeutic and preventive approach on regional basis.

### **Biography**

Abdulrahman S Al-Frayh has his expertise in Pediatric Allergy and Pulmonology. He is a respected Professor and also a Consultant at the same time. His research interest involved bronchial asthma, pediatric allergy and pulmonology, promotion of breast feeding and growth and nutrition/children in development countries. He has authored or co-authored, published and presented over 190 papers and meeting abstracts in the field of allergy and immunology in both national and international journals.

[alfrayh@hotmail.com](mailto:alfrayh@hotmail.com)