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## TOTAL SERUM IgE LEVEL AND CRAB ALLERGY PATTERN IN YOUNG ADULTS WITH FOOD ALLERGY

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Crab allergy is one of a major cause of food-induced anaphylaxis, however the allergens are not well characterized. This study sought to analyze food allergy pattern in young adults with food allergy and subsequently identify the protein profiles and effects of heating (cooked) on the most popular crab species consumed in Malaysia, the blue swimmer crab (*Portunus pelagicus*). Data were obtained and analyzed from questionnaires distributed among 91 allergy subjects aged 18-32. Total serum IgE and crab's allergen concentration from 14 subjects with recent symptoms were measured to confirm their allergy. Most of the subjects were allergic to shrimps (74%), followed by crabs (55%) and squids (53%). A significant relationship was found between crab allergy subjects and asthma ( $p < 0.05$ ). A positive correlation was found between seafood allergy and itchy symptoms ( $p < 0.05$ ). Subjects with high ( $> 5$  k[IU]/L) level of crab allergen are 20% and 30% subjects with moderate level of crab allergen ( $1 - 4$  k[IU]/L). The size of proteins for heated and raw *Portunus Pelagicus* were compared between fresh and frozen condition by using SDS-PAGE. Proteins ranging from 28 to 188 kDa were found in raw and heated crab with some differences observed in both heated fresh and frozen extracts. As a conclusion, seafood allergy shows the highest frequency in young adults with positive correlation with asthma and itchy symptoms. Protein profiles of fresh and frozen raw *Portunus pelagicus* exhibit a little difference in their size. Further investigations are needed to determine whether it contributes to the symptoms of allergy.

### Biography

Nor Ezleen Qistina Ahmad has been graduated from National University of Malaysia (UKM), as researcher with specialities in Biochemistry. Later on she obtained his post-graduation from National University of Malaysia with subjects Molecular Medicine and then started working at Universiti Kuala Lumpur, Institute of Medical Science Technology (UniKL-MESTECH) where she has continued her career as academician and researcher.

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