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## **MEDIA RELEASE**

### **Egg Allergy Trial Aims to Induce Remission of Allergy Allowing Individuals with Egg Allergy to Safely Consume Egg**

Egg allergy is the most common food allergy among Singaporean children under the age of three<sup>1</sup>. It is also the third most common cause of food-triggered anaphylaxis in our adult population, after shellfish and peanut. In a cohort of National Service pre-enlistees evaluated for food allergy, 4.3% reported anaphylactic reactions from eggs<sup>2</sup>.

While many children do eventually outgrow this, recent overseas studies reported that up to 42% of them have experienced persistent egg allergy into adolescence<sup>3</sup>.

A person is less likely to outgrow an allergy if it is still there in later childhood.

Like other food allergies, an egg-allergic person may within seconds or minutes of contact with the trigger food, develop a life-threatening reaction. Locally, egg and its derivatives are ubiquitous in a wide variety of foods which makes accidental ingestion highly possible and common.

Dr Lydia Wong, Lead Principal Investigator for the PEAT (Probiotic and Egg Allergen Immunotherapy) Study, and Associate Consultant from the Division of Paediatric Allergy, Immunology and Rheumatology, National University Hospital (NUH) says, “The longer it takes to outgrow the allergy, the more prolonged the constraints on daily life for an egg-allergic person and caregivers. This can significantly impair the quality of life for those with egg allergy and their family because total avoidance is close to impossible.”

NUH will work closely with Prof Mimi Tang from the Melbourne’s Murdoch Children’s Research Institute on a probiotic and egg white allergy trial, with the eventual aim of helping individuals to safely consume egg without fear of allergic reactions.

Prior studies carried out by Prof Mimi Tang, the Principal Investigator in Murdoch Children’s Research Institute, Melbourne, Australia, showed that probiotic and peanut immunotherapy treatment induced long-lasting effects against peanut allergy, with protection continuing out to four years after completing treatment. The study team, together with doctors from NUH, is now extending this treatment approach to egg. Doctors believe that the combined probiotic food immunotherapy approach will be effective for treatment of other food allergies such as egg allergy, allowing patients to safely consume egg products freely in their diet, eating it if they wish or avoiding it if they prefer.

“If we can show that the probiotic food immunotherapy approach is effective in treating egg allergies as well, this will mean that we could perhaps extend this treatment to other food allergies,” Prof Tang said.

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<sup>1</sup> Lee, Alison Joanne, and Lynette Pei-Chi Shek. *Food allergy in Singapore: opening a new chapter*. Singapore Medical Journal 55.5 (2014): 244.

<sup>2</sup> Thong B et al *Asia Pac Allergy*. 2018 Apr;8(2):e18

<sup>3</sup> Savage, J. H., Sicherer, Scott, Wood, Robert. (2016). *The Natural History of Egg Allergy*. American Journal of Allergy, Asthma & Immunology.

Remission of egg allergy is achieved through combining a specific probiotic together with egg oral immunotherapy (OIT). Egg OIT given on its own (without the specific probiotic) has been shown to desensitize patients but only induces remission in a small subset of patients. Desensitisation is when there is a temporary increase in the amount of food a patient can eat before having a reaction. This protection is only maintained if the patient continues regular daily intake of the food. Remission on the other hand is when there is long-lasting protection that continues after treatment has been stopped and without the patient needing to eat the food regularly.

“The reduction of dietary restrictions will expand their lifestyle options and allow individuals to increase the range of their culinary experiences and nutritional intake, be it at work, school, travel or leisure,” says Dr Elizabeth Tham, Head and Consultant, Division of Paediatric Allergy, Immunology and Rheumatology, NUH.

The team is currently recruiting participants. For this trial, the participants will be randomly allocated into one of the two groups. Half the children will go into an active group (probiotic and egg oral immunotherapy) and half will go into a placebo group. The placebo group will not receive active ingredients. Neither families nor the doctors will know who is the active group and who is in the placebo group.

The total length of the study will span 20 months, with a treatment period of 18 months.